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The Impact of Balanced Corporate Sustainability Reporting on Earning Classification Change

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Abstract
The general objective of financial reporting is to provide financial information about the reporting entity that is useful for stakeholders' decision-making. In this regard, corporate sustainability reporting is a qualitative characteristic that increases the usefulness of information and enables users to make better and more efficient investment decisions when evaluating alternative opportunities. The aim of this study is to investigate the effect of balanced corporate sustainability reporting on earning reclassification. To measure corporate sustainability, a model of creating interaction and balance between stakeholders' expectations and the company's capacities in relation to the disclosure of components related to corporate sustainability has been used. The statistical sample of the study includes 116 companies listed on the Tehran Stock Exchange during the years 2016-2022. The results show that corporate sustainability disclosure has a negative and significant effect on earning reclassification.

Keywords: Balanced Corporate Sustainability, Earning Reclassification

Introduction

Different stakeholders have different expectations from a company and therefore play different roles in their relationships with companies (Freeman, 2010). In general, stakeholders have different information needs, so they may be interested in different forms of information. Accordingly, economic entities should disclose information based on an agreed framework in order to achieve the goals of different stakeholders (Kline et al., 2017). One of these agreed frameworks in the field of organizational information disclosure is the Global Sustainability Report. Sustainability accounting and reporting is the process of measuring and declaring sustainability performance, as well as being accountable to internal and external stakeholders for the social, environmental and economic performance of the organization (Rosa, 2010). In general, sustainability reporting is described as the declaration and disclosure of the organization's sustainability performance. Accounting and sustainability reporting together form an accountability system that records information about sustainability performance and reports this information to stakeholders (Aktas et al., 2017). The necessity of reporting in order to develop transparency of the economic environment of companies and better decision-making of managers and investors is undeniable, but it seems that traditional reporting is not able to depict the true position of the company in society, industry and market (Horish et al., 2014). According to the research of Bonn and Fisher (2011), corporate sustainability has a positive impact on shareholder wealth. In their research, they examined sustainability and provided evidence that shows that economic sustainability in terms of company financial performance is the application of a set of strategies that, compared to focusing on current issues of the company such as maximizing short-term earnings, leads to an increase in share price, operating earning and market share in the long term (all of which result in an increase in stock returns). On the other hand, disclosing sustainability issues to stakeholders increases the accountability and transparency of the company's operations and helps investors to properly evaluate the company. In addition, this type of reporting also includes other benefits, including improving the company's overall image in society, strengthening social relations, and the legitimacy of the company's activities (Uyar & Kuzey, 2016).

According to the research of Loh et al. (2017), sustainability reporting reduces information asymmetry between managers and shareholders and, as a limiting factor, prevents opportunistic behaviors of managers. Jin and Myers (2006) show that the existence of information asymmetry between company insiders and external stakeholders increases the likelihood of using earnings management. Recently, one of the opportunistic behaviors of managers is the use of "earnings reclassification" (as one of the tools of earnings management). Accordingly, given that corporate sustainability basically seeks to reduce information asymmetry and increase accountability and transparency for stakeholders. This will probably limit the use of any earnings management (including changes in earnings classification) because it is difficult for stakeholders to recognize the change in classification (when this action is due to managers' opportunistic behavior) (Gu and Chen, 2004). On the other hand, according to stakeholder theory, which is based on the social perspective of the economic unit, companies should seek to meet social and political expectations. Therefore, by disclosing information in annual reports, companies have a direct impact on increasing the level of public confidence and improving the legitimacy of the company in society (Buallay & Ajmi, 2019). With the aim of identifying the stakeholders of organizations and their role in the strategic decision-making process, Mori (2010) concluded that stakeholders play an important role in the strategic decision-making of the organization and their presence on the board of directors enables the organization to achieve two main goals (i.e., financial sustainability and increasing the ability to compete in the industry). A suitable definition for corporate sustainability has hindered the progress of understanding the events and consequences of this activity. One of the innovations of this research is that in this regard, a model has been used that has attempted to create interaction and balance between the expectations of stakeholders and the capacities of the company, and also in relation to the discussion of earnings management, a new concept of its dimensions, which is the classification of earnings, has been considered. Accordingly, considering the role of corporate sustainability reporting on changing the classification of earnings, this research continues with the theoretical foundations and background, hypotheses, research method, models and how to measure variables, findings, and finally, the analysis of the results, suggestions and limitations of the research.

Theoretical foundations and research background

Disclosure of corporate sustainability information helps stakeholders in making financial and investment decisions and enables them to understand the company's performance in line with social, economic and environmental goals. This important point leads to stakeholders being able to understand the growth and profitability of the company using the disclosed information (Horisch et al., 2014). Schaltger and Wagner (2006) claim that the connection between sustainability accounting and sustainability reporting is vital and important for two reasons: first, it makes the communication of information effective and ensures that that information contributes to sustainable development. Second, the aforementioned connection prevents the superficial presentation of sustainability performance reporting, because only information is provided that is supported by real performance. It should be noted that corporate sustainability information is divided into general, economic, environmental and social aspects (Alvarez and Ortas, 2017). According to the discussions according to the research of Bryson (2011), it can be said that the reason for stakeholders' awareness of the company's management activities is the provision of information based on the corporate sustainability framework, but considering that managers in competitive situations also have different strategies, they may not consider the demands of some groups, which can lead to an information gap between the company and stakeholders (Ahmadzadeh et al., 2022). On the other hand, in the existing literature and foundations, the term balance has been used with specific concepts and with a similar purpose. In cases where the use of the term has been observed, the goal is to reach a suitable point for two aspects or two dimensions of the issue under consideration (Silva et al., 2019). In equilibrium models, we seek to create an optimal model by establishing interactions between different groups. Like the equilibrium of companies in relation to optimal financial leverage, which seeks to establish a balance between benefits and debt costs, the theory of sustainable equilibrium requires a precise understanding of the company's strategy and challenges in disclosing information. On the other hand, this theory must also consider the expectations of stakeholders because if the presented model is unbalanced, this is risky for the groups involved. Accordingly, this approach is used in this study to identify the sustainability ranking of companies.

In order to explain the relationship between corporate sustainability and earnings management, previous studies have proposed two perspectives: the ethical perspective and the perspective of opportunistic managerial behavior; the ethical perspective assumes that corporate sustainability is negatively related to earnings management, while the perspective of opportunistic managerial behavior argues that corporate sustainability and earnings management have a positive relationship. According to the ethical perspective, companies with strong commitments to social responsibility are less likely to manage earnings because they cannot hide the realization of earnings and therefore no classification shift in earnings is observed (Chih et al., 2008). In the following, based on existing perspectives, a related theoretical framework is presented. Agency theory is presented as the basis for the relationship between corporate sustainability and earnings management. According to Jensen and Meckling (1976), the separation of ownership from management leads to agency problems. Agency problems occur when managers take opportunistic actions such as earnings management to maximize their own interests, which increases agency costs. In this context, several researchers claim that corporate sustainability reduces agency problems and increases transparency in financial reporting (Wang et al., 2018). Therefore, managers who engage in earnings manipulation are likely to use more social responsibility costs to pursue their own interests (Emna & Jamel, 2022). On the other hand, according to the signaling theory, companies can use financial information to signal and convey good news (given the usefulness of the information) to their shareholders. In fact, managers using quality information have incentives to use corporate sustainability as a signal to attract existing or potential investors and enhance the positive image of the company. Whereas, companies with lower information quality choose not to disclose, especially when they try to engage in earnings management (Grogius et al., 2014).

In other words, companies with higher corporate sustainability activities not only have more information transparency regarding social responsibility, but also engage less in earnings management. In addition, corporate sustainability performance can improve the value of the economic unit, but when companies use corporate sustainability activities to cover up managers' opportunistic behaviors and to divert stakeholders' attention from managers' earning distortions, the value of the company decreases. Therefore, based on the notion that corporate sustainability is a useful tool to reduce information asymmetry, signaling theory assumes a negative relationship between corporate sustainability and "earnings reclassification" (as one of the tools of earnings management) (Chen and Hong, 2020). According to legitimacy theory, economic units are influenced by the society in which they operate, so they disclose information that is in response to various economic, social, and environmental factors, and these disclosures give legitimacy to their activities (Emna and Jamal, 2022). On the other hand, within the framework of stakeholder theory, corporate sustainability is a tool that manages information to provide to different stakeholder groups. Therefore, through corporate sustainability activities, an economic unit can create certain benefits such as improving credit and business reputation, attracting potential investors, and reducing opportunistic takeovers. In this regard, one of the opportunistic behaviors can be the reclassification of earnings, which is limited according to the aforementioned argument (Chen and Hong, 2020). Reclassification was first proposed by McVey in 2006. He considered this type of manipulation of accounts as a new method for earning management and acknowledged the importance of this issue. He examined reclassification through the difference between basic earning (revenue minus cost of goods sold and administrative expenses) and exceptional earnings and losses. He showed that companies cause basic earning to be overstated by moving between income statement items. Fun et al. (2010) also observed and reported evidence of companies' opportunism in reclassification. Their research results showed that companies are more inclined to use this method when faced with limitations in the use of accruals. Abernathy et al. (2014) also concluded by examining the limitations of other methods of earnings management that when the costs of using other methods of earnings management are high, companies use the reclassification method to achieve their goals. There are also several studies that show that there is a kind of balance between different methods of earnings management (Ewert and Wagenhofer, 2005; Bedrescher, 2011; Zhang, 2012). In order to project the main earning, managers move costs to lower classes, meaning that they will transfer as much of the cost of goods sold as possible to non-operating costs and non-continuous items, and in the same way, they will try to identify part of the operating costs as selling and administrative expenses or non-continuous items, or identify and record part of the selling and financial administrative costs as non-continuous items. Perhaps one of the main reasons for this can be found in the fact that accounting knowledge and the focus of experts in this field have been more on the method of identification and less on the method of classification. In addition, there are no clear boundaries for the method of reflecting financial data, and therefore it has remained out of the sight of internal and independent observers (Saghafi and Jamalianpour, 2018).

Bradshaw and Sloan (2002) show that the components of earnings do not uniformly reflect the economic profitability of a firm. While some components arise from a firm's core operations and are therefore relatively more permanent, others relate to the firm's ancillary operations and are driven by transitory shocks. Accordingly, market participants react differently to core and non-core earnings. Lipe (1986) shows that core earnings are typically the primary driver of higher valuations than non-core earnings. Kinney and Trezevant (1997) show that market participants tend to assign greater weight to core earnings than to non-GAAP earnings. In addition to different market reactions to core versus non-core earnings, managers may have different incentives to report core earnings. In particular, previous studies have shown that most compensation (bonus) programs are directly linked to core earnings (as well as non-GAAP earnings) (Adot et al., 2003). In determining the "compensation components," Baber et al. (1998) show that the weight of specific items is always lower (due to low persistence). Adot et al.'s (2003) findings also showed that managers have a strong incentive to report corporate expenses, including operating expenses, as restructuring costs for compensation incentives. Overall, faced with different incentives, managers are likely to report strong core earnings by exercising their reporting discretion. In this case, managers are likely to use reclassification as a potential means to better portray a company's economic profitability. Given the arguments and theories put forward regarding the role of corporate sustainability on managers' opportunistic behaviors, this study examines the impact of balanced corporate sustainability reporting on earnings reclassification. The following is a summary of related research. Jelink (2007) examined earnings management by reclassifying operating expenses to specific revenue-reducing items. He concluded in his study that managers do not have an incentive to report earnings lower than analysts' forecasts due to managerial biases, and they opportunistically manage earnings in their own direction by reclassifying operating expenses to specific revenue-reducing items.

In a study titled Earnings Management Using Reclassification of Operating Expenses to Non-Operating and Specific Expenses, Fun et al. (2010) concluded that managers have a greater incentive to reclassify operating expenses to non-operating expenses in the middle of the fourth financial period and in the middle of financial periods when their ability to manipulate accruals is more limited. Uyar & Kuzey (2017) examined the determinants of sustainability reporting and its impact on firm value. The aim of this study was to examine the determinants of the Global Reporting Initiative (GRI) based on sustainability reporting, the acceptance of assurance statements in sustainability reports, and the application of sustainability reporting levels. The findings of this study indicate a growing awareness of the Global Reporting Initiative (GRI) based on sustainability reporting among the companies under study and also an improvement in the quality of sustainability reports (Mounir et al., 2022). Swarnapalli and Lee (2018) examined the relationship between sustainability reporting and firm market value in a sample of 220 companies listed on the Colombo Stock Exchange in Sri Lanka during the years 2012 to 2016. The results of the study showed that there is a positive relationship between sustainability reporting and the company's market value. Monier et al. (2022) studied the relationship between corporate governance, corporate sustainability, and financial performance in their study. In this study, data from 425 firms on the Australian Stock Exchange were used. Using a structural equation modeling approach, they concluded that corporate governance is positively related to corporate sustainability performance and that corporate sustainability performance leads to improved financial performance. The results also showed that corporate sustainability performance mediates the relationship between corporate governance and financial performance. Emma and Jamal (2022) studied the relationship between social responsibility and earnings management in banks. They examined whether CEO power can moderate this relationship. The results of their study show that social responsibility has a positive and significant effect on earnings management and CEO power moderates the relationship between social responsibility and earnings management. Gaiman et al. (2023) studied the effect of changing earnings classification on the risk of stock price decline. Their research findings showed that reclassification is positively associated with the risk of future stock price declines, even if the final net earning remains unchanged. The observed positive relationship between reclassification and stock price decline risk is also due to opportunistic behaviors of managers. Mezzanot (2024) conducted a study to examine the reasons for the importance of impact in EU corporate sustainability reporting. In this study, he identified the key components discussed and influential, and found that 1- Strengthening the alignment of corporate actions with sustainable development, as framed by the European Green Deal and the Global Reporting Initiative. 2- Promoting corporate responsibility through effective corporate due diligence and impact management processes. 3- Developing markets and products for sustainable investments is the third reason for disclosing impact-related information. Ahmadzadeh et al. (2022) studied a sustainability reporting framework based on creating a balance between stakeholders' expectations and company capacities. Their research findings show that out of a total of 169 components studied (classified into 11 groups), 85 components (regarding sustainability disclosure) were expected by stakeholders, and in all groups except the organization profile category, there was a significant difference between the current situation and the expected status of stakeholders. Finally, after creating a balance between the components, a model including 60 components was presented in the form of a balanced corporate sustainability report. Mohammadi et al. (2023) studied the relationship between social responsibility and bank earnings management, emphasizing the moderating role of CEO power. The results of testing their research hypotheses showed that social responsibility has a negative and significant effect on bank earnings management. This means that increasing social responsibility reduces information asymmetry and reduces the lack of transparency of financial information, and as a result, reduces bank earnings management. The research findings also showed that the power of the CEO does not play a role in moderating the relationship between social responsibility and earning management in banks.

Research Hypothesis

According to the theoretical foundations and background of the research, the following hypothesis is presented:

Research Hypothesis: Corporate sustainability disclosure affects the change in earning classification.

Research Method

This research is inferential and analytical (correlation) in terms of method. Descriptive research describes and interprets what is without interference. This type of research involves collecting information in order to test the hypothesis or answer questions related to the current state of the subject under study. In terms of the type of research design, it is a post-event research type. In this type of research, the goal is to examine the existing relationships between variables and data is collected and analyzed from an environment that has existed naturally or from past events that have occurred without the direct intervention of the researcher. Excel spreadsheets were used to summarize the required data and calculations, and the latest versions of Eviews software were used for final analysis. The time period of the present research is 2016 to 2022, and its statistical population is companies listed on the Tehran Stock Exchange. In order to increase comparability, the fiscal year of the companies under study should be the end of March of each year. They should not be investment and financial intermediation companies due to the specific nature of their activities. Also, during the mentioned period, the trading symbol of the companies should not have a trading break of more than three months and should not have changed their fiscal period. In addition, the information required for the research variables (financial statements, accompanying notes and the board of directors' report to the assembly) should be available. Considering the above conditions, a sample of 116 companies was selected from the statistical population of companies listed on the Tehran Stock Exchange.

Models and variables

The hypothesis testing model based on the research of Emma and Jamal (2022) and Giman et al. (2023) is as follows:

Hypothesis testing model

$$ECS_{it} = \beta_0 + \beta_1 CSD + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \beta_4 LIQ_{it} + \beta_5 Profit_{it} + \beta_6 SG_{it} + \beta_7 CFO_{it} + \beta_8 AGE_{it} + e_{it}$$

In the above models, the *CSD* and *ECS* variables represent the total corporate sustainability disclosure index and earning classification change, respectively, and the *SIZE*, *LEV*, *LIQ*, *Profit*, *SG*, *CFO*, *AGE* variables represent company size, financial leverage, liquidity ratio, profitability, sales growth, net operating cash flow, and company age, respectively.

In this study, the reporting framework presented in Ahmadzadeh et al. (2022) is used to calculate the corporate sustainability score (as an independent variable). In their study, they used the balance theory to create an interaction and balance between stakeholders' expectations and the company's capacities in relation to the disclosure of components related to corporate sustainability. It should be noted that in their presented model, the theories of Bryson (2011) and Silva et al. (2019) regarding strategic balance and John Nash (1944) regarding Nash equilibrium in game theory have been used. The reporting framework is as follows:

Table 1. Balanced Corporate Sustainability Reporting Framework

Row	Corporate Sustainability Components
	Disclosure of corporate sustainability components and sectors from a general perspective:
	Disclosure of components related to the organization's profile
1	Organization name
2	Activities, brands, products and services
3	Geographical location of the organization's main center
4	Geographical location of the place of operation
5	Ownership and legal structure
6	Markets for product and service provision
7	Organization size
8	Characteristics related to employees and other workers
9	Supply chain
10	Significant changes in the organization and supply chain
11	Membership in associations
	Disclosure of components related to the organization's strategy
12	Statement of the organization's chief decision maker
13	Main impacts, threats and opportunities
14	Values, principles, standards and norms of behavior
	Disclosure of components related to corporate governance
15	Corporate governance structure
16	Authority references in economic, environmental and social issues
17	Executive level responsibility for economic, environmental and social issues
18	Conflict of interest
19	The role of the highest governance body in determining the goal, values and strategy

Row	Corporate Sustainability Components
20	Remuneration policies
	Disclosure of components related to the organization's stakeholder engagement
21	Identification and selection of stakeholders
22	Approach to stakeholder engagement
23	Key issues and concerns raised
	Disclosure of components related to the content of the organization's sustainability report
24	Determining the content of disclosure and segregation of issues
25	List of material issues
26	Reporting period
27	Reporting cycle
28	Reference for responding to questions regarding the report
	Disclosure of components related to the organization's board of directors
29	Board of Directors' Action on Documenting and Establishing Effective Corporate Governance Mechanisms
30	Board of Directors' Profile
31	Number of Board of Directors' Members
32	Number of executive and non-executive members of the board of directors
33	Number of non-executive members with financial education and relevant experience
34	Board of directors' actions regarding approving and executing transactions with related parties and obtaining reasonable assurance of appropriate control of conflicts of interest and protection of the interests of the company and shareholders
35	Board of directors' actions regarding establishing effective internal control mechanisms
36	Board of directors' actions regarding at least annual review of the internal control system
37	Board of directors' actions regarding establishing and monitoring the performance of the audit committee and appointments under the supervision of the board of directors
38	Convening board of directors' meetings
	Disclosure of components related to accountability and information disclosure
39	Significant information
	Disclosure of other components related to public aspects
40	Material matters
41	Management approach and its components
42	Evaluation of management approach
	Disclosure of corporate sustainability sectors and components from economic aspects:
43	Direct economic added value produced and distributed
44	Infrastructure investments and support services
45	Evaluation of operations related to corruption risk
	Disclosure of corporate sustainability sectors and components from environmental aspects:
46	Amount of materials required based on weight and volume
47	Use of recycled materials as materials entered into the production cycle
48	Total fuel consumption of the organization from renewable and non-renewable sources
49	Amount of energy consumption
50	Water withdrawal from resources
51	Direct greenhouse gas production
52	Non-compliance with environmental laws and regulations
53	Activities carried out regarding the establishment and development of specialized strategic and environmental monitoring committees
54	Implementation and compliance with domestic and international environmental standards
55	Operations carried out regarding the management of impacts on natural resources
56	Any operations related to the management of the optimization of the use of natural resources
57	Activities related to the necessary culture building and training regarding the environment
58	Activities related to research and development to create innovations in environmentally friendly product production methods
	Disclosure Corporate sustainability components from a social perspective:
59	Benefits offered to full-time employees that are not offered to temporary or part-time employees
60	Official joint management committee on occupational health and safety

After we have achieved the corporate sustainability reporting framework based on the balanced model, we calculate the disclosure performance of sustainability information items in the following way: if the company has disclosed the desired component, a score of 1 (one) is given, and otherwise a score of 0 (zero) is given. The

unweighted disclosure model for calculating the disclosure score of each company based on the research of Pourkhani et al (2021) is expressed as follows.
Relationship number (1)

$$Docs = \sum_{j=1}^{n} \frac{Dj}{n}$$

Docs = Disclosure score of a company
Dj =Total value of the number of disclosed items of a company
N = Maximum score that a company can obtain, which is 60.

How to calculate the change in earning classification

In this study, the McVey (2006) model is used to calculate the change in earning classification. It should be noted that Saghafi and Jamalianpour (2018) also used the same model in their research. The operational definition of the model is presented below. To measure the change in earning classification, the amount of unexpected principal earning Ɛt and the changes in unexpected principal earning Vt are used. For this purpose, related models are used to estimate the amount of expected principal earning and changes in it:
Relationship No (1).

$$CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACC_{t-1} + \beta_4 ACC_t + \beta_5 \Delta SALE_t + \beta_6 NEG\_\Delta SALE_t + \varepsilon_t$$

Relationship No (2).

$$\Delta CE_t = \lambda_0 + \lambda_1 CE_{t-1} + \lambda_2 \Delta CE_{t-1} + \lambda_3 \Delta ATO_t + \lambda_4 ACC_{t-1} + \lambda_5 ACC_t + \lambda_6 \Delta SALE_t + \lambda_7 NEG\_\Delta SALE_t + v_t$$

All equations related to measuring the level of classification change are fitted at the level of "market industry category" and the remaining terms are considered as the amount of classification change. It should be noted that after obtaining the remaining terms, we encounter positive and negative values. Accordingly, the higher the residual value of the model, the greater the "earning classification change" and vice versa. The variables used in the above equations are as follows.

Table 2. Variables used in earning classification change models

Row	variable symbol	definition
1	CEt	Core earning, which is net income minus cost of goods sold minus general, selling, and administrative expenses divided by net income
2	ΔCEt	Changes in core earning, which is CEt+1– CEt
3	UE_CEt	Extraordinary core earning or loss (residual from the first equation)
4	UE_ΔCEt	Changes in extraordinary core earning or loss (residual from the second equation)
5	ATO	Net operating asset turnover ratio, where net operating assets are the sum of operating assets minus operating liabilities. Operating assets are equal to total assets minus cash and short-term investments. Operating liabilities are equal to total assets minus total liabilities minus the book value of common and preferred stock and minority interests.
6	ACC	Operating accruals are equal to operating earning or loss minus net operating cash flow.
7	ΔSALE	Percentage change in revenue from the previous period.
8	NEG_ΔSALE	Percentage decrease in revenue, or zero if there is no decrease.

Control variables

Company size: The natural logarithm of total assets is used to measure this variable.

Financial leverage: The ratio of long-term debt to total assets is used to measure this variable. It should be noted that economic units are more under pressure from long-term debt. Because these debts are often bank facilities and their failure to approve them on time will result in financial costs (delay interest or non-repayment penalties) for the economic unit.

Liquidity ratio: Total cash and quasi-cash assets/total assets

profitability: According to the research of Pourkhani et al. (2021), the ratio of changes in net earning compared to the previous year is used to measure profitability.

Net operating cash flow: Net operating cash flow divided by the book value of total assets.

Sales growth: Percentage of changes in sales of the current year compared to sales of the previous year.
Company age: Natural logarithm of the years the company has been listed on the stock exchange.

Findings

Descriptive Statistics

In this section, first the results of descriptive statistics are presented, followed by the results of the model estimation using the mixed data method.

Table 3. Descriptive statistics of research variables

Variable	Mean	Median	Max.	Min.	STD	Skewness	kurtosis
(UE_CE)	0.000	-0.001	0.253	-0.477	0.074	-0.539	2.560
(UE_DCE)	-0.000	0.001	0.417	-0.556	0.084	-0.629	2.585
(CSD)	0.201	0.183	0.563	0.061	0.087	1.103	4.239
(SIZE)	14.069	13.924	19.249	10.166	1.404	0.709	3.503
(LEV)	0.074	0.043	1.486	0.000	0.103	5.849	60.709
(LIQ)	0.059	0.034	0.479	0.000	0.070	2.484	10.368
(Earning)	0.092	0.075	0.621	-0.350	0.140	0.379	4.470
(SG)	0.203	0.148	3.165	-0.564	0.413	2.294	13.870
(CFO)	0.110	0.095	0.642	-0.387	0.130	0.418	4.607
(AGE)	3.729	3.806	4.248	2.639	0.316	-0.699	2.816

According to Table 3, the number of observations per year - company based on balanced composite data was 812 observations, equal to 116 companies in 7 years. According to descriptive statistics, the above indicators can be divided into central, dispersion and other indicators, where the central indicators are the mean and median indicators, dispersion indicators are the standard deviation indicators and other indicators are the maximum, minimum, skewness and kurtosis indicators. In short, the sustainability disclosure variable shows that the sample companies have disclosed on average 20.1%, and the average financial leverage of the companies shows that the average ratio of long-term debt to total assets of the sample companies during the research period is 7.4%. In addition, the average liquidity of companies shows that the average ratio of cash and quasi-cash assets to total assets of the sample companies during the research period is 9.5 percent, and the profitability of companies shows that the average change in net earning compared to the previous year of the sample companies during the research period is 9.2 percent. Regarding the negative skewness coefficient of some variables, it can also be said that this indicates the existence of a rightward skewness and the tendency of these variables to smaller values. Also, the positiveness of the skewness coefficients indicates that they are higher than the normal distribution and the data is concentrated around the mean.

Normality test of the distribution of dependent variables

Since the ordinary least squares method is used in this research to estimate the model parameters, and this method is based on the assumption that the dependent variable of the research should have a normal distribution, the Kolmogorov-Smirnov (K-S) test is used to check normality.

Table 4. Results of the normality test of the distribution of dependent variables

Variable	**K-S test results**					
	Mean	Std.	Positive	Negative	K-S	Sig.
(UE_CE)	0.000	0.074	0.253	-0.477	1.089	0.107
(UE_DCE)	-0.000	0.084	0.417	-0.556	1.082	0.105

According to the table 4, the significance level of the Z statistic of the KS test for the dependent variables has increased to above 0.05, so the hypothesis H0 that the distribution of the dependent variables is normal is accepted, indicating that the dependent variables of the study have a normal distribution, so parametric statistical methods are used to test the hypotheses.

Model Estimation by Mixed Data Method

Chow Test

To test the research hypothesis, first the fixed-time effects model is estimated. Then, to determine whether these variables are statistically significantly different from each other, the Chow test is used.

Table 5. Chow test results for research hypotheses

Earning reclassification calculation models	Statistics Amount	sig
Unexpected core earning	2.033	Prob. 0.000
Unexpected core earning changes	1.404	Prob. 0.006

In Table 5, due to the significance level (below 5%) obtained in the research hypothesis, the null hypothesis based on the equality of the width of the origins in the hypothesis is not accepted. Therefore, the panel model (composite) is preferable to the pooled model.

Hausman test

As it was determined in the results of the Chow test, the research hypothesis is based on the selection of the panel model. Now, the fixed effects model must be tested against the random effects model. For this, the Hausman test is used.

Table 6. Results of the Hausman statistic for the research hypotheses

Earning reclassification calculation models	Statistics Amount	Sig
Unexpected core earning	114.154	Prob. 0.000
Unexpected core earning changes	91.800	Prob. 0.000

In Table 6, since the significance level of the Hausman statistic is less than the acceptable error level (5 percent), the fixed effects regression method is preferable to the random effects regression method. The results of the hypothesis test are presented below. It should be noted that in the test of the research hypotheses, the relevant controls for the absence of variance heteroscedasticity, serial autocorrelation, and collinearity between variables (variance inflation factor) have been carried out.

In this hypothesis, we seek to investigate the effect of corporate sustainability disclosure on the change in earning classification, the results of which are as follows:

Table 7. Model estimation results for the research hypothesis

Variable Name and Symbol	Unexpected Core Earning		Unexpected Core Earning Changes		VIF
	Regression coefficient	Sig.	Regression coefficient	Sig.	
(CSD)	-0.466	0.000	-0.440	0.000	1.033
(SIZE)	0.009	0.376	0.009	0.469	1.035
(LEV)	-0.024	0.570	-0.067	0.257	1.137
(LIQ)	-0.062	0.129	-0.078	0.098	1.193
(Profit)	0.166	0.000	0.220	0.000	1.472
(SG)	-0.013	0.112	-0.017	0.087	1.098
(CFO)	-0.196	0.000	-0.212	0.000	1.314
(AGE)	0.194	0.012	0.183	0.064	1.046
Fixed value	-0.793	0.000	-0.754	0.002	-
F-statistic Sig.	3.741 (0.000)		2.777 (0.000)		
Durbin-Watson statistic	2.078		2.086		
R-squared	0.400		0.331		
Jarque-bera test Sig.	8.272		6.886		

Based on the results of the hypothesis test, given that the F statistic (0.000) has a significance level below (5 percent), therefore the regression has explanatory power. The coefficient of determination of the model also indicates that 40 and 33.1 percent of the changes in the earning classification variables are explained by the variables entered in the model, respectively. Also, in examining the assumptions of classical regression, the results of the Jarcobra test indicate that the residuals obtained from the model estimation have a normal distribution at a confidence level of 95%. So that the significance level of this test is greater than 0.05 (0.088 and 0.105). Also, given that the value of the model's Durbin Watson statistic is between 1.5 and 2.5 (2.078 and 2.086), it can be said that the model does not have a problem of autocorrelation of the residuals. Finally, considering the significance level of the corporate sustainability disclosure variable (independent variable), which is below 0.05 (0.000 for unexpected core earnings and 0.000 for unexpected core earnings changes, respectively), the research hypothesis is confirmed, stating that corporate sustainability disclosure has a negative and significant effect on earnings classification change. Among the control variables, profitability and company age have a positive and significant effect on unexpected core earnings, and net operating cash flow has a negative and significant effect on unexpected core earnings. In addition, profitability and net operating cash flow have a positive and negative significant effect on unexpected core earnings changes, respectively. Finally, with the collinearity test between the research variables, the VIF (variance inflation factor) statistic value for all variables is smaller than 5, indicating that there is no severe collinearity problem between the research variables.

Discussion and Conclusion

Corporate sustainability reporting has an increasing role for the usefulness of information and causes users to make better and more efficient investment decisions when evaluating alternative opportunities. In this regard, the aim of this research is the effect of balanced corporate sustainability reporting on the change in earning classification. The results of testing the research hypothesis show that corporate sustainability disclosure has a negative and significant effect on the change in earning classification. Regarding the interpretation of the results of this hypothesis, it can be said that, based on the perspectives of moral theory and signaling theory, corporate sustainability can be used as a tool to reduce any type of earnings management (including changes in earning classification). Therefore, companies that regulate their activities based on corporate sustainability have more disclosures regarding economic, environmental and social aspects. In the following, this important issue, on the one hand, leads to greater information transparency regarding the obligations of the economic unit, and on the other hand, it strengthens interaction with stakeholders and is used as a tool to reduce information asymmetry. All these factors lead to companies engaging in less earnings management in order to obtain higher earnings quality. The findings agree with the results of the research of Mohammadi et al. (2023) and the theoretical foundations of the research of Giman et al. (2023) and disagree with the results of the research of Emma and Jamal (2022). The following are the research suggestions. Given the negative impact of corporate sustainability disclosure on changing the classification of earnings, potential shareholders are advised to consider measures related to corporate sustainability as a factor in reducing information asymmetry, improving the quality and transparency of information, in order to make optimal investments and allocate resources at their disposal. According to the results obtained, it is suggested that investors invest in companies with more disclosures regarding economic, environmental, and social aspects in order to obtain sustainable earnings and reduce agency costs resulting from the separation of ownership from management. Because according to agency theory, when managers are required to disclose corporate sustainability information as a control mechanism, it helps investors discipline managers of investee companies and encourages managers to act in the interests of shareholders (including not changing the classification of earnings). On the other hand, it is suggested that boards of directors of companies, economic policy-making institutions, and legislative institutions should put on their agenda an idea to reduce information asymmetry and disclose as much quality information as possible, which is the necessary basis for corporate sustainability activities as a factor in reducing information inequality of future earnings. On the other hand, the research limitations section in academic works is of key importance, and referring to them guides readers in understanding and applying the results. One of the most important limitations of this research can be considered the number of sample companies, which, due to the lack of attention of companies listed on the Iranian Stock Exchange to corporate sustainability reporting (especially in terms of environmental and social aspects), led to a decrease in the number of sample companies.

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