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Impact of climate change risk disclosure on financial reporting in Oman – A study based on investor's perception.

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ABSTRACT

Climate change risk disclosure is critical for stakeholders to make appropriate decisions about a company, and financial statements are considered a key source of disclosure. Many companies focus on providing certain information while hiding others, which can affect their performance and prospects. This study aims to determine the impact of climate change risk on investors' confidence, transparency in financial reporting and sustainable financial reporting in the Sultanate of Oman. Using a structured questionnaire, data were collected from investors across Muscat, and the results indicate no significant correlation between climate-related disclosure in financial statements and investor confidence. The correlations between sustainable financial reporting and investor confidence, as well as transparency, reveal that there is no significant correlation between sustainable financial reporting and investor confidence. However, there is a significant correlation between sustainable financial reporting and transparency.

Key words: Climate change disclosure, Transparency, Investor confidence, Sustainability reporting

Introduction

Investor interest in understanding how organizations handle climate-related risk has grown in recent years. Due to its potential impact on businesses, investors and other stakeholders are becoming increasingly interested in the issue of climate change (Marina, 2019). The growing awareness of the effects of climate change has created a need for useful information on the subject. Investors and other stakeholders are calling for more transparency by disclosing climate risk-related information on financial statements. In recent years, demand for climate change disclosure has become stronger, as companies that fail to disclose the required information may risk damaging their reputation (Zinkula, 2018). The disclosure of climate change-related information will help companies prepare for climate change and related risk exposure. It will also help investors understand this risk, thus enabling them to make informed investment decisions. Firms are therefore required to evaluate these information and report these risks (Innovations, 2017).

Although most discussions on climate risk occur outside of financial statements, the International Accounting Standards Board stipulates that the external factors in which companies operate, as well as the expectations of investors, may make these risks material and warrant their disclosure while preparing financial statements, regardless of their monetary impact (Ellili, 2022). These disclosures are not limited to major companies, but are applicable to all issuers, regardless of size, and provide relevant and material information to investors so they can make better-informed decisions (Zinkula, 2018). While climate-related issues are not specifically included in the IFRS criteria, entities must consider these issues when using IFRS standards if their impact on the financial statements as a whole is material.

Climate change is expected to affect the majority of industries, but some companies, sectors, and activities will be more vulnerable than others. Climate change is considered a threat to the sustainability of society and has significant impacts on the value of a company, such as regulation and reputational risks (Ameli, 2019). Many investors are beginning to show interest in the information companies provide regarding greenhouse gas emissions and climate change. However, disclosures related to climate risks in both environmental and financial reports are insufficient for making investment decisions. Although many companies disclose their greenhouse gas emission data in environmental reports, the range of emissions covered varies from company to company, making the information less useful (Mizuguchi, 2008)."

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Investors must grasp the current regulations and recommendations on materiality and their relation to climate and other risks. (Nick, 2019). To make informed investment decisions and improve financial reporting transparency, it's crucial to have clear and quality disclosures on how climate threats impact a company's strategy and financial indicators. Researchers are currently studying the effects of climate change on corporate reports on the transparency of financial statement

The transparency of financial statements reflects the effectiveness of fund management as well as the identification and management of risks. Investor confidence refers to the willingness of investors to participate in investment opportunities and related intermediary channels based on their assessment of risk and return (KO, 2017). Sustainability reporting is the practice of companies communicating their performance on environmental, social, and governance parameters. It helps businesses be more transparent about the risks and opportunities they face, providing stakeholders with a better understanding. Moreover, sustainability is described as fulfilling the current needs without negatively affecting future generations.

Statement of the Problem and Significance of the study

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Risks associated with climate change can significantly impact a company's financial statement. As an investor, it's important to consider these risks when choosing investments to maximize revenue and preserve capital. According to KPMG (2019), climate-related risks have been studied and identified, but companies are not effective enough in communicating these risks to investors. Poor management of climate risks can lead to decreased investment levels and ultimately, bankruptcy. However, in recent years, there has been increasing global attention paid to climate-related risks by companies (Li, 2019).

Recently, new guidelines have been developed in the TCFD status report that include an "Artificial Intelligence Review" to facilitate the identification of different types of risks, but the quality of information disclosure has not been evaluated (TCFD, 2021). Researchers are trying to answer several significant questions, such as the relationship between climate change risks and the transparency of financial statements of Omani companies. This study also emphasizes checking the association between climate change risk disclosure in financial statements and Omani investors' decisions on investment. Furthermore, the research tries to find the relationship between climate change-related disclosure and sustainable financial reporting.

Corporations are at risk of being affected by climate change, which can have a material impact on their financial statements, potentially affecting their true and fair presentation. Therefore, both current and potential investors are interested in understanding how organizations evaluate the effects of climate change in their risk assessment strategies and the procedures they have in place to mitigate those risks. Investors are increasingly demanding both financial and non-financial information, which could impact their investment decisions.

As a result, an increasing number of companies are providing narrative reporting on climate-related issues. Although minimum legal requirements are being met, investors are calling for additional disclosure to inform their decision-making process. While there is no single IFRS standard that directly addresses climate change, IFRS standards provide a framework for incorporating climate change risks into companies' financial reporting.It is important for companies to consider climate-related matters when their effect is material on the financial statements. By doing so, they can provide a more accurate and complete picture of their financial performance, which in turn can benefit both the company and its investors.

This study offers multiple benefits for both investors and business owners, including identifying, assessing, and addressing actual and potential risks related to climate change. By doing so, it leads to better investment decisions, protected assets, increased business continuity, improved business reputation among stakeholders and increased profits.

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Moreover, businesses can reduce the risks associated with climate change and even seize the opportunities offered by a greener future by taking action now. Companies that identify and deal with climate risks will have a better chance of not only surviving but thriving as well (Rahman, 2021)

Objectives of the study

1. To understand how climate change related disclosure impacts the transparency of financial reporting in Omani companies.
2. To study the various forms of climate change related disclosure in the financial statements of Omani companies.
3. To examine the impact of climate change related disclosure on the investment decisions of Omani investors.
4. To explore how climate change related disclosure contributes to sustainable financial reporting among Omani companies.

Review of related literature and hypothesis development

Climate-related disclosures:

According to Shan Zhou (Zhou, 2022), investors have realized the significant importance of addressing the financial risks associated with climate change. Consequently, the Financial Stability Board has enhanced disclosures to be globally comparable and to improve the disclosure of climate-related factors.

Tarca's (Tarca, 2016) studies have focused on the impact of climate change. Companies are now following frameworks to ensure that the issue of climate change is comprehensively covered in financial reporting. Therefore, Intentional Financial Reporting Boards have obligated companies to discuss the risks related to climate change with stakeholders to facilitate better decision-making.

Anderson, (Anderson, 2019) a member of an IFRS board, believes that climate change risks can impact the recognition, measurement, and disclosure criteria in accounting standards. Lack of materiality judgment may mislead users of financial statements by omitting significant financial information or including irrelevant non-financial information. (Scholten, 2019) Scholten argues that investors need more disclosure to make informed decisions, even if companies have policies like 'net zero'. Many companies are including climate change in their sequential reporting as it is an emerging issue. Anderson emphasizes the implications of climate change for finance and economic policy, including its impact on the disclosure of recognized contingent liabilities and assets. Climate change could increase economic costs and cause frequent disruptions to normal business operations.

Investors' confidence:

The issue of climate change is becoming increasingly important to large investors, according to a report published by Manifest (Manifest Climate Inc, 2022). Investors are interested in learning how companies manage risks and opportunities related to climate change, as well as the actual value of their holdings. The Task Force on Climate-Related Financial Disclosures (TCFD) provides a framework for businesses to create and present their strategy in a uniform and comparable manner, allowing investors to evaluate a company's stance on climate change. A

study conducted by CDSB (CDSB, 2021) focuses on supporting the provision of decision-useful information to investors, ensuring that investors can have confidence in the accuracy of the data by understanding how it is corrected or restated.

Sullivan (Sullivan, 2012) found that investors have encouraged companies to report risks and opportunities related to climate change, but criticized investors for not using the information provided. He argues that mandatory reporting is at best a partial solution and that a combination of voluntary and mandatory reporting offers the greatest potential for investors. Gandía (Gandía, 2008) proposes a new strategy that considers the applicability of technology, particularly the internet, to corporate governance research. The study finds that the level of disclosure affecting investor confidence is influenced by the degree of analyst coverage, age of listing, vision, and industry membership.

H01: There is no significant impact of climate change risk on investor confidence.

Transparency of financial statement:

Ellili (2022) conducted a study to explore the effects of financial reporting quality (FRQ) and environmental, social, and governance (ESG) disclosure on investment efficiency. The findings indicated that ESG disclosure enhances transparency, reduces information asymmetry, and improves investment performance, thus highlighting the significance of incorporating ESG data into financial reporting. The results of this research can aid regulators in the UAE to promote the inclusion of ESG information in corporate reporting frameworks.

Demaria (2021) developed the Climate Compliance Index (CCI), which is a tool that analyzes enterprise reference papers from 2015 to 2018 to measure the disclosure of climate risks and opportunities by organizations. The study revealed that the CCI has been steadily increasing across various sectors and geographic regions, indicating a growing trend of companies recognizing the importance of reporting on climate-related information.

Alsaifi (2021) found that due to the impact of climate change and energy transformations, which are critical factors affecting the confidence of stakeholders, companies have a significant responsibility to focus on improving their strategies and prioritizing the assessment and reporting of associated risks and opportunities. This emphasizes the need for companies to disclose information on climate risks and opportunities to ensure transparency and build trust with stakeholders.

Nadia Ameli (Ameli, 2019) found that companies are facing challenges due to the 2008 financial crisis, and lack of transparency in financial reporting is a significant issue for investors. To address this, Ameli and her team worked on climate-related recommendations that, if the risks were clearly disclosed, would enable a more reasonable response to the risks in line with stakeholders' interests.

Philip Mclkenny (Mclkenny, 2014) conducted a study to examine the relationship between the performance of the board of directors and climate change disclosures. The research has discovered a connection between the two, indicating that the board of directors is responsible for making decisions and preparing sound reports, which is reflected in its role in promoting transparency, disclosure, and business impacts related to climate change.

H02: There is no significant impact of climate change on transparency of financial reporting

Sustainability of financial reporting:

According to Habiba (Habiba 2022) there have been noticeable changes in the information requirements of stakeholders, which obliges companies to respond by preparing sustainability reports. These reports have become important performance indicators for communicating with stakeholders and providing comprehensive information about financial performance.

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Battiston (Battiston, 2022) provide an overview of the need for trustworthy climate information from the business and financial sectors. They examine the possibilities and restrictions of such data considering what climate change models can and cannot now offer. Understanding how the climate will change at different times and spatial dimensions for different economic organizations is necessary for assessing future disaster risks.

According to Pizzi (Pizzi 2020) the financial system is now aware of climate change as a new source of concern. Shareholders and banking institutions are advised to evaluate the business risks associated with climate change. Central banks and financial regulators have developed simulations for climate stress testing to determine how sensitive the financial sector is to global warming.

Zohu studied (Zhour, 2022) and summarized that the results of reported from sustainability data and other information that related the climate changes. Moreover, The International Financial Reporting Standards 'IFRS' are decided the ISSB which is the International Sustainability Standards Board due to disclosure the standards of related sustainability, which published two

standers to public comment .This is to identify the requirements of financial information related to sustainability disclosure and to provide more data about the companies sustainability risk .Also, to get the market a full of set through sustainability financial disclosure.

According to Mr. Silva (Silva, 2019), there are many objectives that have a threat of sustainability standards with the rising trend of green washing, which means misleading 'green' credentials. ESG provides a high level of transparency and comparability. Additionally, the complexity of ESG will be reduced, resulting in minimizing the risk of green washing

There have been many studies in the past that examined the impact of climate change risk on financial disclosure. However, researchers have not been able to determine how this will impact the confidence of shareholders and contribute to transparency in financial statements. The Sultanate of Oman has witnessed frequent catastrophes due to climate change in the recent past, resulting in the government agencies spending millions of rials. This shows that Omani companies are vulnerable to climate change-related risks. Researchers are trying to find out whether Omani companies are aware of this increased risk and to what extent they are disclosing it to investors. Most studies analyzed the extent of climate-related disclosure by conducting a content analysis in financial statements, but in this study, researchers are examining the issue through the perspective of investors.

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H03: There is no significant impact of investor confidence and transparency of financial reporting on sustainable financial reporting.

Data and Methodology

The primary data was collected by preparing a structured questionnaire which had two parts. The first part included demographic profile questions such as age, gender, experience, qualifications, etc. The second part included statements related to the research area with five-point Likert scales. The questionnaire also had three open-ended questions about investors' opinions on climate change disclosure. The questionnaire was sent to 150 investors, and 125 responses were received. Three responses were incomplete, and two responses had extreme values, leaving 120 responses suitable for data analysis. Secondary data was collected through journal articles, websites, etc. The authors used statistical techniques such as correlation and regression analysis to analyze the data.

Validity of the questionnaire

The content validity was verified by using review of literature and by conducting a pilot study with nearly 10 investors.

FINDINGS AND DISCUSSION

Demographic profile:-

The collected data shows that 61% of the respondents are male, while 59% are females. Most of the respondents have invested in the services sector, representing 55% of the total. The second largest investments were in the mining and manufacturing sectors, representing 20% and 17% respectively. However, the lowest percentage of respondents invested in the telecom sector, which accounts for 8.3%. In general, according to the collected data, investors tend to prefer the services sector over other sectors for investment. The highest percentage of respondents belongs to the age group of 20-30 years, accounting for 48.3% of the total. This is followed by the age group of 31-40 years, which represents 20% of the respondents. There are 18.3% of the respondents who belong to the age group of 41-50 years. The remaining 13.3% of the respondents are above 51 years old.

Correlation analysis

Correlations

		Climate disclosure	Transparency	Sustainability	Investor Confidence
Climate disclosure	Pearson Correlation	1	.273**	.024	.009
	Sig. (2-tailed)[U1]		.003	.798	.925
	N	120	120	120	120
Transparency	Pearson Correlation	.273**	1	-.006	.176
	Sig. (2-tailed)	.003		.949	.054
	N	120	120	120	120
Sustainability	Pearson Correlation	.024	-.006	1	.662**
	Sig. (2-tailed)	.798	.949		.000
	N	120	120	120	120
Investor Confidence	Pearson Correlation	.009	.176	.662**	1
	Sig. (2-tailed)	.925	.054	.000	
	N	120	120	120	120

**. Correlation is significant at the 0.01 level (2-tailed).

The study observed that there is no significant correlation between climate-related disclosure in financial statements and investor confidence. This indicates that a company's climate-related disclosure has no effect on investor confidence. This finding contradicts the

observation made by Sullivan (Sullivan, 2012), who's study revealed that investors supported companies in disclosing risks related to climate change.

The study also shows that there is low positive correlation between climate-related disclosure and transparency. This indicates that the transparency of climate disclosure does not have a significant impact on the amount of disclosure in financial statements. According to investors, climate-related disclosure did not play a significant role in the level of transparency in financial statements, as the correlation is very low. Transparency has less significant correlation between sustainable financial reporting and investor confidence. However, there is less significant correlation between sustainable financial reporting and transparency.

REGRESSION ANALYSIS

H01: There is no significant impact of climate change risk disclosure on investor confidence

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.001	1	.001	.009	.925[b]
	Residual	18.998	118	.161		
	Total	19.000	119			
a. Dependent Variable: Climate disclosure						
b. Predictors: (Constant), Investor Confidence						

The correlation between investor confidence and disclosures related to climate change shows no significant relationship. The coefficient between climate disclosure and investor confidence indicates no significant relationship between the two. The study shows that at a 5% level of significance, the p-value of 0.925, accepted the null hypothesis, suggesting that climate risk related disclosure has no impact on the investor confidence.

H02: There is no significant impact of climate change on transparency of financial reporting

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.756	1	2.756	9.522	.003
	Residual	34.150	118	.289		
	Total	36.906	119			
a. Dependent Variable: Transparency						
b. Predictors: (Constant), Climate disclosure						

The study examines the relationship between sustainable financial reporting and transparency. It has been concluded that there is a high significant relationship between transparencies of financial statements. With a p-value of 0.003, which is less than 0.05% level of significance, null hypothesis is being rejected. This can be interpreted that there is significant impact of climate change on transparency of financial reporting.

H03: There is no significant impact of investor confidence and transparency of financial reporting on sustainable financial reporting.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.306	2	22.653	48.600	.001
	Residual	54.535	117	.466		
	Total	99.842	119			

a. Dependent Variable: Sustainability

b. Predictors: (Constant), Transparency , Investor Confidence

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The table shows that the p-value is 0.001, which is below the 5% level of significance. Hence, the null hypothesis is being rejected, and the alternative hypothesis will be accepted. This can be interpreted as indicating that investor confidence and transparency of financial reporting have an impact on sustainable financial reporting.

CHALLENGES FOR REPORTING CLIMATE RISK RELATED DISCLOSURE

Some investors suggest that to improve climate-related disclosure and achieve transparency goals, companies need to utilize more accurate tools for predicting climate changes. They also recommend that IFRS should implement specific standards related to climate risks. Additionally, investors believe that there are several significant challenges in reporting climate-related disclosure, including the measurement of climate changes and obtaining accurate disclosure

The majority of investors agree that predicting the climate situation is one of the challenges in reporting climate change-related risk disclosure. Some investors have pointed out the importance of revising the risk assessment process and identifying the tools used to measure climate change as significant challenges. Another important perception of investors regarding climate change-related disclosure on financial statements is obtaining accurate disclosure and scenario analysis that helps investors make informed decisions.

Furthermore, investors suggested that the IFRS has to establish specific standards related to climate disclosures. Moreover, companies should employ more accurate methods to estimate climate change impacts and disclose the actual and potential effects of climate-related risks and opportunities on the organization's business, strategy, and financial planning, particularly when such information is material

CONCLUSION

The study shows that at a 5% level of significance, the p-value of 0.925, accepted the null hypothesis, suggesting that climate risk related disclosure has no impact on the investor confidence. However, these findings contradict Sullivan's observations (2012) that investors support climate change risk disclosure.

Secondly when it comes to climate change related disclosure and transparency of financial statement, the data analysis shows that there is significant impact of climate change on transparency of financial reporting. Although increased investor confidence improves sustainability, and has a significant impact on transparency. Investor confidence has a weak relationship with climate change and transparency but strongly influences sustainability.

Thirdly the result of data analysis shows that investor confidence and transparency of financial reporting have an impact on sustainable financial reporting.

Many investors consider predicting the climate situation a major challenge in reporting climate change-related risk disclosures. Obtaining accurate disclosures and conducting scenario analyses for informed decision-making are crucial aspects of climate change-related disclosures on financial statements. The correlation between investor response to climate disclosure and transparency is positive but not highly significant. Similarly, the correlation between investor response to climate change-related disclosure and investor confidence is not highly significant.

Furthermore, investors suggest important measures to enhance climate-related disclosure and transparency. One significant suggestion is for the International Financial Reporting Standards (IFRS) to establish specific standards for climate disclosures. Companies should also employ more accurate methods to estimate climate change impacts and disclose the actual and potential effects of climate-related risks and opportunities on their business, strategy, and financial planning, particularly when such information is material.

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