

Proactive Accounting Disclosure about Climate Change and Credit Ratings Firms: The Modifying Role of Accounting Earnings Quality

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Abstract:

This paper investigates the role of proactive accounting disclosure on climate change and its influence on the quality of accounting earnings and corporate credit ratings. Rising environmental costs due to climate change require companies to embed environmental strategies into their operations and disclose related information timely and transparently. The study emphasizes shifting from annual to interim financial reporting to provide more predictive and relevant information for investors, creditors, and other stakeholders. It also examines how earnings management—through accrual-based and real activities—impacts reported profits and, consequently, credit ratings. Managers often manipulate earnings to maintain or improve credit ratings, which affect borrowing costs, investor confidence, and market value. The global credit rating market is primarily dominated by Moody's, Standard & Poor's, and Fitch, agencies that place significant weight on accounting disclosure quality. Moreover, proactive and voluntary climate change disclosures enhance corporate transparency and legitimacy, helping firms communicate risks, demonstrate environmental responsibility, and gain competitive advantages. Improved disclosure quality increase's earnings reliability, ultimately benefiting credit ratings. The paper concludes that proactive financial and environmental reporting is essential for companies to effectively manage climate-related risks, meet stakeholder information needs, and sustain favourable credit ratings. These



practices help firms increase market value, reduce financing costs, and strengthen resilience in a competitive and environmentally conscious business environment.

Keywords: Accounting Disclosure - Climate Change - Credit Ratings - Earnings Quality

1. Introduction

Environmental protection costs for companies have increased significantly and are expected to increase further in the coming years due to climate change. Therefore, companies must integrate environmental efforts into their business strategy, and then proactively disclose any information about environmental and climate changes. Although, historically, environmental decisions were often made with little support from a cost management information system and were made simply as a reaction to compliance with environmental regulations, successfully addressing environmental concerns has become a major competitive issue, achieving sound business objectives and solving environmental problems. The concerns are not mutually exclusive (Peter et al., 2011).

The nature of accounting is naturally responsive to the rapid economic changes represented by the opening of financial markets and heading towards its globalization in recent years. Despite the complexity in business which is provided by truthful and appropriate information that deals with the necessity in having that information to be a timely and appropriate inputs in making a successful rational economic decision. The essence of accounting is integrated financial information system that does financial reporting of the economic events by providing useful accounting information to its users that are presented in statements and annual financial reports. In order to the accounting system fulfill its duties towards users and achieve the required synchronization and the need for a fast, proactive and predictive information, the accounting system should make a change in the financial reporting series that represented by the time of accounting disclosure to move from the annual accounting disclosure to the interim accounting disclosure which reduces the degree of uncertainty and activate predictive and proactive ability of the accounting information (Ali, et al., 2018).

Improving environmental risk management practices in turn alleviates societal pressure, mitigates the threat of government regulation, reduces market risk, and reduces the company's cost of capital. Environmentally active companies are also expected to have "several potential revenue-generating benefits: (a) reducing their exposure to potential environmental costs, (b) opening new markets, (c) developing competencies that provide a competitive advantage, (d) creating new revenue streams from Excess credits," and (e) improving the quality of accounting profits (Christensen, et al., 2020).

There is no doubt that the profit index still ranks high among the indicators used to judge the current and future revenue and credit capacity of the economic unit, and to measure the efficiency of using its available resources, but what raises doubt is the decisions taken by management through which it controls the published accounting information. With financial reports, which play a fundamental role in guiding investors and evaluating their future trends (using profitability and liquidity indicators in particular), with the presence of different

alternatives for accounting measurement and evaluation, the multiplicity of accounting policies and methods, the freedom of management to choose, and the freedom of management to choose between those available alternatives in a way that suits its vision, this may lead to... This has a positive or negative impact on net income, which is known as earnings management or gains management.

There are many reasons that drive management to such behavior, and it can be said that the debt ratio is one of the most important motivations for management to adopt accounting methods and policies that lead to the inflation of its profits and the improvement of its credit efficiency, thus alleviating the severity of the restrictions and conditions imposed by loan agreements and debt contracts on those companies. These restrictions are often related to the size of ownership rights.

Many investment decisions rely heavily on the financial statements issued by companies because they are considered one of the most important sources of financial information about economic results and events and reflect the financial position of the company, especially if they are presented in a fair and honest manner that provides the opportunity for its users to make appropriate investment decisions. The accounting numbers included in these the lists are considered valuable due to their strong connection to the value of shares on the stock exchange, and the net profit figure is one of the most important of these elements, as changing the form and content of the financial statements using accounting data management methods by controlling the level and timing of accounting profits would influence investment decisions. Thus, affecting the company's profitability and thus affecting the company's credit rating (Siddiqui & Boukar, 2020).

the high credit rating granted by credit rating bodies is a goal in itself that many companies seek to obtain, as this rating is an international certificate confirming the good performance of the company and the strength of its financial position, as the credit rating of companies is considered one of the important factors for the company due to its direct impact on the evaluation of... The shares and bonds of these companies, and thus its direct impact on investors' decisions regarding whether or not to invest in these companies, and thus its direct impact on the value of the company, as credit rating bodies play a fundamental role in rationalizing the investment decision through their evaluation of the shares and bonds of these companies, where rating bodies play The credit sector plays a pivotal role in supporting transparency in financial markets by providing information and data to determine the degree of risk through the credit ratings it issues in the form of credit rating grades (HE, 2018).

Credit rating bodies rely heavily on the quality of accounting disclosure when determining and evaluating the credit rating of companies. Credit rating bodies believe that the quality of

accounting disclosure is an important factor used in assessing information risk, which helps in directly evaluating the company's credit rating. The higher the quality of accounting disclosure, the better. The credit ratings of these companies increased and improved (Bonsall & Miller, 2017).

The researchers will address the accounting dimension of proactive accounting disclosure and its advantages by discussing the concept of proactive accounting disclosure, its requirements, and the benefits that users of financial statements can benefit from proactive accounting disclosure and its relationship to the quality of accounting profits. The researchers will also discuss the relationship between the quality of accounting profits and the quality of companies' credit ratings.

2. Literature review

2.1 Accounting disclosure of climate change & quality of accounting profits

Monteiro & Ribeiro (2023) defined a proactive environmental strategy as companies fully integrating environmental issues into their decision-making and management processes through a genuine commitment to environmental protection. Proactive environmental behavior assumes anticipating changes in the environment and setting an agenda for environmental actions (such as recycling and waste reduction). The goal is not only to solve problems or reduce environmental impacts, but also to prevent them and provide additional value to the company. These companies then seek to obtain competitive advantages that anticipate the development of competitors' actions, legislation, and customer needs.

The concept of proactive financial information is linked to providing financial information that has a planning value and shows the expected results of economic activities. It depends mainly on what has been disclosed in the interim financial reports and what is expected from the results of future economic activities (Ali, et al., 2018). It is a mixture of financial reports and internal administrative reports concerned with plans and financial statements planned for a specific accounting period. It is considered a type of voluntary accounting disclosure that shows preliminary financial statements of the expected result of the company's activity at the end of the current fiscal year. The preparation of these statements is based on what has been disclosed. Through the company's interim financial reports for the previous period and what the company's management plans to achieve for the remainder of the year, useful financial information is provided to the company's direct stakeholders and investors to help them make their economic decisions (Al- Tamimi & Al-Nafi'i, 2022).

In the same context, (Haider, 2022) defined proactive accounting disclosure as: "A form of voluntary, innovative disclosure resulting from the need of users of financial statements to

obtain financial and non-financial information that helps them make investment decisions in a timely manner, which is prepared by the organization based on recognized scientific foundations, in order to provide useful and appropriate information to meet the needs of users of financial statements to make their investment decisions, Which affects the quality of the company's profits”.

Proactive accounting disclosure aims to provide the minimum level of knowledge for users of financial statements and meet their needs for information necessary to make timely decisions through the following:

- Addressing the deficiency in traditional accounting disclosure, which relates to the timing of disclosure of financial and non-financial information, so that it is disclosed immediately before or at the end of the financial year so that the information does not lose its value and its ability to meet the needs of users of the financial statements.
- Providing appropriate accounting information to rationalize investment and credit decisions taken by current and prospective investors, credit grantors, and creditors in a timely manner and throughout the financial year.
- Proactive accounting disclosure helps users of financial reports estimate the size and timing of expected cash flows and the degree of certainty related to them, as net cash flows are an indicator of the organization’s ability to fulfill its external obligations. These flows also reflect the organization’s ability to finance its operational needs, which leads to improving the quality of accounting profits.
- Proactive accounting disclosure provides information about evaluating the organization's performance and earning capacity during the period for which the proactive financial reports are prepared and helps investors estimate future expectations for the organization's performance.

Investors are the parties most closely linked to the organization and its financial reports. Therefore, current and prospective investors need useful information to make their decisions related to the organization, which may be investment or supervisory decisions, or both. It is known that investment decisions are often based on a trade-off between the cost of investment (such as purchasing shares) and the return. The future of distributed profits and the sale of shares. Investment decisions often focus on choosing a portfolio of securities that is compatible with the investor’s inclinations toward financial risk, return, and liquidity. In addition to investors' interest in information related to investment decisions, supervisory decisions are no less important, as the interest of these investors is focused on information that enables them to follow management's behavior and try to influence that behavior and direct it in accordance

with the organization's objectives. Based on this, it can be said that the investor class, represented by current and potential shareholders, is interested in obtaining the following information:

- Information about organized willpower, present and future.
- Information about the expected continuity of the organization and its expected growth rates.
- Information about the extent of the efficiency of the organization's management in drawing up its financing policies (financing) and then the extent of its efficiency in exploiting the economic resources available to the organization (investment and asset management).
- Indicators of the risks surrounding their investments in the organization if it were subject to liquidation or bankruptcy.

To obtain this information, quantitatively measured data must be used to analyze, evaluate, and interpret information in financial statements and reports. Among the most important quantitative indicators that investors can use in making investment decisions are (profitability indicators, financial leverage indicators, performance indicators, and market indicators). As for the lender, it differs from the investor in terms of return, risk, goal, approach to analyzing future possibilities, and degree of reliance on financial reports, as the lender obtains a fixed return, which is the interest rate, no matter how prosperous the organization achieves, while the loan and its benefits are exposed to risk in the event of bad conditions or exposure to bankruptcy. The lender is mainly concerned with obtaining what guarantees the repayment of his loan and its interest, while the investor is concerned with future possibilities for profits, and the lender is more conservative than the investor in relying on financial reports.

The information needs of different categories of lenders vary according to the duration, guarantees and purpose of the loan, and thus analysis methods and evaluation criteria for the information contained in the financial statements and reports vary. For example, in the case of short-term credit, creditors are primarily concerned with the financial situation, the liquidity of current assets, and their turnover rate, while in the case of long-term loans. term, including bonds. Lenders demand detailed financial information about the organization's financial position and the extent of its ability to pay the fixed interest arising on the debt and the principal. The statement of financial position is particularly important for creditors as it allows them to evaluate liquidity as well as the value of mortgaged assets and additional assets. It can be said that the needs of Lenders' category of information needed to make credit

decisions, whether in the long or short term, is generally as follows:

- Information about the organization's ability to fulfill the principal and pay its interest when due.
- Information about the financing policy followed and its impact on the organization's capital structure.
- Information about the extent of the risk surrounding their debts to the organization and related to the lender's priority in obtaining its rights if the organization is subjected to liquidation or bankruptcy.
- Information about the extent of objectivity in the policies followed by the organization in evaluating its assets, especially those provided as guarantees.

Among the most important indicators that lenders rely on in determining the loan value and interest rate are (short-term liquidity indicators, long-term strength of financial position indicators, financial leverage indicators, and cash flow in the short and long term). It can be said that the information needs that are disclosed through proactive financial reports do not stop at the needs of investors and lenders only, but there are various other categories that always need financial and non-financial information from the organization. The information needs of each category differ from the other, but they may all agree on the following:

- Information about the extent of the organization's success in investing the funds it manages and achieving a rewarding return for shareholders, as well as the extent of the organization's success in its financing policy and the success of its executive departments.
- Information about the organization's ability to continue and its contribution to the national economy, represented by the value added or the amount of social costs it bears.
- Information about the extent of truthfulness and fairness of financial reports in expressing the results of the organization's activity and its financial position, and the extent to which relevant and applicable laws are considered, such as corporate and tax law, when preparing and preparing these reports.

The researchers believe that management must adopt the optimal method to enhance the quality of accounting information by emphasizing the availability of qualitative characteristics of accounting information. Corporate management must also activate the time value and predictive value of accounting information by providing valuable information related to owners that is disclosed in data or reports, such as Various planning budgets, cash flow statements, and supplementary clarifications in financial reports. This helps provide a

proactive advantage for decision makers by relying on that information in planning and forecasting future economic and environmental events and phenomena and making decisions that enable them to use these phenomena usefully and effectively.

2.2 Accounting earnings quality & credit rating firms

Credit rating for companies is defined as a process through which the company's ability to fulfill its obligations to the lender is measured. It is also known as a process that aims to provide information and independent evaluation regarding the extent of the company's financial suitability and its ability to fulfill its contractual obligations. Credit rating is defined as It is the opinion of a specialized analyst or specialized body regarding the general creditworthiness of the company, that is, its ability and desire to fulfill its financial obligations and the degree of financial risks it faces, or the creditworthiness of a specific issue of bonds or any other financial obligations, depending on the relevant risks (Hung et al., 2020).

There are 150 credit rating bodies operating in 32 countries around the world, but only two of these bodies monopolize 80% of the global rating market, namely Moody's and Standard & Poor's, followed by Fitch, which dominates 14% of the global rating market. The value is estimated at about \$250 billion, while the rest of the credit rating bodies compete for a market share whose value does not exceed 6% of the market size. This tripartite monopoly in the global credit rating bodies market has often raised many question marks about the lack of competition, to the extent that the US Congress The issue began to be discussed to facilitate the granting of licenses to new rating bodies and to drop all barriers to the establishment of more credit rating bodies, in order to reduce the almost complete control enjoyed by Moody's, Standard & Poor's and Fitch, especially since the scandal of the American energy company Enron is still fresh in our minds, a scandal that Resulting from the credit rating bodies downgrading Enron, which led to the bankruptcy of the famous company and the loss of its shareholders billions of dollars (Simon & Simon-Andr'as, 2019). International credit rating bodies use letters to indicate credit quality, which falls into two types of credit risk levels (Abu Al-Ela, 2020): Investment grade: It is an indicator of low risk and takes the symbols (A, AA, AAA, BAA) for Moody's, and the symbols (A, AA, AAA, BBB) for the Standard & Poor's and Fitch credit rating agencies; The degree of speculation: It is an indicator of the high degree of credit risk, and it takes the symbols (C, CA, CAA, B, BA) for Moody's, and bananas (C, CC, CCC, B, BB) for the Standard & Poor's and Fitch credit rating agencies.

Credit rating agencies also add numbers or signs to the right of the rating grade to indicate the level of credit quality within each rating grade. Moody's adds numbers to the rating grades from Aa to CAA, which are 1, 2, or 3. The number 1 indicates the highest end within the rating score, and the number 2 indicates the middle of the rating grade, and the number 3 to the

lower end of the rating grade, while Standard & Poor's and Fitch Ratings add + or - to the credit rating grades from AA to B to express the level of credit quality.

The credit rating is concerned with several aspects, including the following (Gabriel, 2022):

- The investors: Investors use credit ratings to help know the strength and position of the company to make the decision to invest in its shares, as well as to evaluate credit risks, and compare different issuers of stocks and bonds when making investment decisions and managing investment portfolios, but investors should not rely entirely on the results of the credit rating in an absolute manner, but rather They have to consider a variety of other factors, including their own analyses.
- Issuers of stocks and bonds: Issuers include companies, financial institutions, national governments, states, cities, municipalities, and other issuers. These issuers use credit ratings to provide independent views on the merit and quality of their credit, in order to expand the base of their clients as well as read future expectations.
- Intermediaries: Investment bankers play the role of facilitators in the flow of capital from investors to issuers, and they use credit ratings to measure credit risk, determine initial prices for the individual debt issues they originate, and to help determine the interest rate for the issues.
- Companies, businessmen and financial institutions: Companies, businessmen and financial institutions use credit ratings to evaluate counterparty risks, it is the potential risk that one of the parties to the agreement will not fulfill its financial obligations. The opinion of the credit rating agency regarding the risks of the counterparty can help companies analyze their credit exposure to financial companies that have agreed to assume certain financial obligations and evaluate the feasibility of potential partnerships and other business relationships.

2.2.1 Earnings management strategies

The ability of company managers to use earnings management efficiently becomes clear when there are expectations about changes in the company's credit rating in the future, as there are two types of earnings management that executives can use to change profits:

The first type: is documented earnings management based on accounting decisions or accruals, which is “accounting earnings management.”

The second: type is profiting management based on commercial decisions or real activities, which has been defined as “real profit management.” Two methods for measuring profit management that precede the change in credit rating will be presented as follows:

Accruals-Based Earnings Management (AM):

Given the problems that the cash basis suffered from when matching and timing revenues and expenses at the end of the financial period, many doubts were raised about the possibility of measuring the company's performance by relying on this basis, in contrast to what the accrual basis enjoys in preparing the published financial statements with full acceptance and support by the bodies. Authorized to set accounting standards, as they are fairer than the cash basis in determining the results of companies' business, and accounting accruals can be used as a way to know the company's policies and then reveal the method of managing profits (Drymiote & Hemmer, 2013).

It should be noted that despite the advantages that the accrual basis has as an indicator of the company's performance, its wide flexibility may allow management to choose between alternative accounting policies and use accounting estimates to achieve special goals, and as a result, mislead stakeholders about the prevailing economic situation of the company. Accrual accounting represents a set of accounting policies. It is generally accepted and is characterized by sufficient flexibility, and this flexibility has made it one of the most widely used means of managing the company's profits because it is an internal operation that is not revealed by the accounting numbers in the published statements. Also, there is flexibility in applying the accrual basis that would affect the net profits declared in the form Which achieves the management goal function at the expense of the goal function of other stakeholders (Neamah & Albanaa, 2018).

Real Earnings Management (RM):

In general, previous research focused on the practice of accounting earnings management, and the past few years have witnessed the publication of many research on the topic of real earnings management, after transferring the work of executive management from accounting accrual to real profits after the issuance of the Sarbanes-Oxley Act (SOX) in reducing fraud in Financial statements of companies and investor protection. Managing real profits represents a new field in academic research. Controversy still exists about how to stimulate or discourage working with it, the most important motives and restrictions, and identifying the factors contributing to misleading profits through real activities (Sellami, 2015).

The profitability index ranks first among the indicators used to judge the current and future revenue and credit capacity of the economic unit, in measuring the efficiency of using its available resources, but what raises doubt is the decisions taken by management through which it controls the accounting information published in the financial reports, which plays a role. It is essential in guiding investors and evaluating their future trends using financial indicators such as profitability and liquidity, as well as the economic unit's choice of

accounting policies to achieve certain management objectives, especially when managers use the flexibility available to them to choose between accounting methods, as well as cases of estimation and personal judgment for some items appearing in the financial reports to amend the financial reports. Whether it is to mislead stakeholders about the economic performance of the unit, or to influence contractual results, which is known as earnings management or earnings management. There are many definitions of earnings management, but they all point in one direction, which is not leaving the income figure free to achieve certain goals (Ali, 2020).

Performance is considered a decisive factor in determining credit ratings, and although there are other factors such as industry risks, performance efficiency, capital structure...etc., these factors are less influential than the impact of the company's financial performance, and the company's value is greatly affected by credit rating changes. More than any other factor, as companies' revenues are negatively affected by credit rating downgrades by rating agencies, which is essentially a result of the deterioration of the financial performance of these companies (Shoab & Attiya, 2015).

Managing profits according to this trend can pave the way for income or enhance profits. The former is with the aim of reducing the taxes owed, while the latter is with the aim of increasing the profitability of the share and thus raising its price, which ultimately leads to reducing costs and increasing profits and thus obtaining high credit ratings (investment grade). This confirms that companies' efforts to reduce variation in profits enable them to manage the possibility of their bankruptcy, given that the risks of debt market price information are linked to profit fluctuations (Chung-Hua & Yu-Li Huang, 2008).

Managers also manage their profits so that their companies can maintain or improve their credit ratings, and to reach their goals, they resort to increasing use of real earnings management, which is more difficult to detect compared to earnings management based on accrual manipulation (Carter, 2015).

It can be concluded that managers' efforts to manipulate and manage profits are mainly due to maintaining or upgrading their credit ratings (right after a bad year), which ultimately leads to important gains for the company, in addition to the promotions granted to managers as a result of the company's good financial performance, which met or exceeded the expectations of stakeholders. Which leads to reducing the cost of debt and equity, as well as gaining a good image for the company in the financial market and increasing investor confidence. Managers also use earnings management strategies, such as smoothing income, reducing fluctuations in profits, and others, to reduce the possibility of exposure to the risks of both credit rating downgrades or exposure to the risks of (Ben Hamla, 2017).

3. Conclusion

Managers must improve transparency and accountability regarding their companies' climate change impacts and find innovative ways to reduce associated risks. Failure to communicate information about climate change to the market may result in investors being unable to accurately estimate the risks associated with investing. Climate change disclosure can then be viewed as a commitment to transparency, an effort to address the risks and opportunities of climate change, and a standard for measuring an organization's credibility and legitimacy. Once proactive risk management strategies are adopted, companies will voluntarily provide information about their mitigation actions, i.e. "make them accountable" through communication with stakeholders. Hence, high-quality voluntary disclosure of climate change will enable the organization to develop a competitive strategy, disseminate stronger environmental records to stakeholders, differentiate themselves from poor performers to avoid the problem of adverse selection, and ultimately increase the quality of accounting earnings so as to increase their market value and thus improve the quality of Credit rating.

Credit ratings have significant cost for companies, including the future borrowing cost and stock and bond valuations, managers have great incentives to improve or maintain their credit ratings. Earning smoothening is a long-term strategy available for the firm to improve or maintain their credit rating and the result shows that some companies manage their earning to maintain or improve their rating. While other firms at the end of the rating spectrum are more inclined towards the earning smoothening and any change in them led to a significant cost for the firms. The results of the study show that firms at the top of their rating category as more sensitive to the rating change as compared to the firms at the bottom of the firm. So, it is concluded that firms manage their earning to maintain as well as improve their rating.

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