

## Mitigating the Pitfalls of Income Smoothing on Firm Value: The Double Edges of CSR Moderation and Cost of Debt Mediation

التأثير المزدوج للمسؤولية الاجتماعية وتكلفة الدين على قيمة الشركة

Asmaa Hamdy Abdelaziz Mohamed El Mahdy

Lecturer, Faculty of Management

Sciences,

October University for Modern

Sciences and Arts (MSA)

### المستخلص:

**الغرض** -تهدف هذه الدراسة إلى قياس تأثير تسوية الدخل على قيمة الشركة، مع التركيز على الشركات غير المالية المدرجة في مؤشر S&P/EGX ESG بالإضافة إلى ذلك، استكشفت الدراسة دور المسؤولية الاجتماعية للشركات (CSR) في تعديل العلاقة بين تسوية الدخل، تكلفة الدين، وقيمة الشركة ضمن السياق المصري.

**المنهجية/تصميم الدراسة** -تم استخدام طريقة التقدير اللوحي بطريقة العزوم المعممة (GMM) على مجموعة بيانات تضم مائتي مشاهدة سنوية للشركات في الفترة من ٢٠١٤ إلى ٢٠٢٣.

**النتائج** -أوضحت النتائج أن تسوية الدخل تؤدي بشكل كبير إلى خفض قيمة الشركة. وتتفق النتائج مع نظرية الوكالة، حيث يُنظر إلى تسوية الدخل بشكل متكرر كسلوك انتهازية يضعف ثقة المستثمرين ويقلل من قيمة الشركة. علاوة على ذلك، أظهرت النتائج أن تكلفة الدين تلعب دور الوسيط في هذا التأثير، مما يدعم نظرية الإشارة، إذ تزيد تسوية الدخل من تصورات المخاطر لدى المقرضين، مما يؤدي إلى زيادة تكاليف الاقتراض وانخفاض قيمة الشركة. بالإضافة إلى ذلك، أثبتت الدراسة أن المسؤولية الاجتماعية للشركات (CSR) تُعتبر عاملاً معادلاً مهمًا يقلل من التأثير السلبي لتسوية الدخل على قيمة الشركة. وبناءً على نظرية أصحاب المصالح، فإن الشركات التي تشارك بنشاط في مبادرات المسؤولية الاجتماعية الضرورية تكون أكثر قدرة على الحفاظ على ثقة المستثمرين، خاصة في ظل وجود استراتيجيات تسوية الدخل.

**الآثار العملية** -تقدم هذه الدراسة تداعيات عملية للجهات التنظيمية والمديرين التنفيذيين للشركات والمستثمرين والمحللين الماليين. وتؤكد على ضرورة تقييد ممارسات تسوية الدخل لتحسين جودة الأرباح، وتقتراح إجراء تغييرات تشريعية لتعزيز كفاءة السوق ومعاقبة ممارسات تسوية الدخل الانتهازية. كما تقترح الدراسة

دمج مبادرات المسؤولية الاجتماعية للشركات (CSR) في ممارسات الشركات لتقليل الانطباعات السلبية المرتبطة بتسوية الدخل.

**الأصالة/القيمة** – تتميز هذه الدراسة بدمج المسؤولية الاجتماعية للشركات (CSR) كمتغير معدل وتكلفة الدين كمتغير وسيط لتقييم تأثير تسوية الدخل على قيمة الشركة في السياق المصري. تستكشف هذه الدراسة التحديات التي واجهها الاقتصاد المصري بعد الأحداث الأخيرة التي أضعفت الاستقرار الاقتصادي. وتكتسب النتائج أهمية كبيرة لفهم ديناميكيات سوق الأوراق المالية المصري وقدرته على الصمود في مواجهة هذه التحديات.

**الكلمات المفتاحية:** تسوية الدخل، قيمة الشركة، مخاطر السوق، المسؤولية الاجتماعية للشركات، نظرية الوكالة، نظرية الإشارة، مؤشر S&P/EGX ESG.

### **Abstract:**

**Purpose** – This research aimed to measure the influence of income smoothing on the firm value, concentrating on non-financial firms listed in the S&P/EGX ESG index. Furthermore, the study investigated the role of corporate social responsibility (CSR) in moderating the relationship between income smoothing, cost of debt and firm value within the Egyptian configuration.

**Design/methodology/approach** – Generalised Method of Moments (GMM) panel estimate approach was employed on a dataset of two hundred firm-year observations from 2014 to 2023.

**Findings** – It is evident from the results that income smoothing significantly reduces firm value. The results align with agency theory, indicating that income smoothing is frequently viewed as opportunistic conduct that deteriorates investor confidence and reduces firm value. Moreover, the findings indicate that the cost of debt mediates this impact, supporting signaling theory, as income smoothing increases lenders' risk perceptions, thereby raising borrowing costs and reducing firm value. Additionally, the research demonstrates that CSR is a crucial moderator that reduces the negative effect of income smoothing on firm value. In accordance with stakeholder theory, firms that actively participate in essential CSR initiatives are more inclined to maintain investor trust, especially in the presence of income smoothing strategies.

**Research implications** – This study offers practical implications for regulators, corporate executives, investors, and financial

analysts. It emphasises the necessity of restricting income-smoothing practices to improve earnings quality and proposes legislative changes to promote market efficiency and penalise opportunistic income smoothing. The study proposes incorporating corporate responsibility (CSR) initiatives into firm practices to reduce the negative impressions related income smoothing.

Originality/value – This study is unique in integrating corporate social responsibility (CSR) as a moderating variable and the cost of debt as a mediating variable to evaluate the impact of income smoothing on firm value in the Egyptian context. This research explores the challenges that were experienced by the Egyptian economy after the significant events that undermined economic stability. The results have considerable significance for comprehending the dynamics of the Egyptian stock market and its capacity for resilience in confronting all of these challenges.

**Keywords:** Income Smoothing, Firm Value, Market Risk, corporate social responsibility, agency theory, signaling theory, S&P/EGX ESG index.

## 1. Introduction

The evolution of publicly listed firms was introduced as a result of the British industrial revolution of the 18th and 19th centuries (Kitson & Michie, 2014). Before this time, partnerships and sole proprietorships were the most predominant firm structures. The formation of joint-stock businesses created a principal-agent association by separating shareholders from management. The owners of the firms are the principals in such corporations, while the managers are the agents. Jensen & Meckling (2019) stated that the principal-agent relationship is a contractual arrangement in which one or more individuals (referred to as the principal(s)) hire someone (designated as the agent) to conduct certain duties on their behalf, therefore giving the agent a certain level of independence in decision-making (Masyhuri, 2024)

The principal-agent association is affected by the different mindsets and self-interests attitudes of each party. The nonalignment of the agents' and owners' interests not only resulted in an agency problem but also led to an increase in the associated expenses (Nyberg et al., 2010). Although the shareholders expect that the elected board of directors should act

in their best interests, there are situations in which the shareholders' interests are not consistent with those of the board of directors (Behbahania, 2024; Panda & Leepsa, 2017).

Moreover, the agency dilemma arising from the separation of shareholders and the board of directors is sometimes overstated, particularly through the practice of compensating the agent based on performance evaluation metrics such as an increase in corporate earnings. Consequently, boards of directors often achieve their earnings objectives by unethical tactics, including earnings management, budgetary shortfalls, creative accounting, and income smoothing, which comprise financial misconduct. The occurrence of these inappropriate behaviors can undermine a firm's performance and, subsequently, its stock values. Shareholders face challenges to effectively oversee managerial conduct, due to their absence from daily operations. Investors' assessments of firms have been influenced by a deficiency of reliable and relevant data, especially in emerging markets such as Egypt. The capacity of investors to accurately assess firm valuations has been hindered by the use of income smoothing, impairing shareholders' evaluation of firms' basic performance (Dyussemina et al., 2024). Conversely, in an efficient stock market, improper conducts are sanctioned through imposing fines on the violating corporations (Kwon, 2024).

Hung et al., (2024) stated that income smoothing is the board of directors' attempt to condense abnormal swings in income to the level allowed by acceptable accounting standards. According to (Abu-Serdaneh, 2018; Al Baaj et al., 2018; Tsitinidis & Duru, 2013) income smoothing refers to a strategy of managing earnings. Cvetanovska & Kerekes (2015) asserted that directors have the option to adjust operations or exercise discretion in accounting choices to manipulate results in order to meet specified targets. Proponents believe that it improves the quality of financial reporting by stabilizing results, so aiding investors and creditors in forecasting future performance (Sasongko et al., 2021). In contrast, opponents perceive income smoothing as a form of managerial opportunism (Healy & Wahlen 1999; Leuz et al., 2003). They assert that it entails utilizing accounting procedures and techniques to manipulate income and expenses to attain targeted earnings levels. Furthermore, the capital market encourages publicly traded firms to reveal consistent and stable

earnings growth in accordance with performance standards (Graham et al., 2005).

The banking sector in Egypt is essential in providing credit for businesses. The majority of enterprises depend on bank-based borrowing to obtain the required fund. Consequently, comprehending the effect of income smoothing on the cost of debt—a crucial source of financing—and firm value is essential for all businesses in Egypt. If income smoothing is offering knowledge and reducing the asymmetric information issue between the firm and investors, then smoothing firms may benefit from reduced cost of debt due to the diminished information risk. This idea is derived from a theory posited by Trueman & Titman (1988), which contends that a stable profits flow may reduce perceptions of the risk of default, hence lowering the cost of debt. As a result, this will signify that the firm qualifies for credit and boosts its capital for expansion, consequently this will lead to a significant increase in the firm's value. However, if creditors perceived income smoothing as falsification, then smoothing firms may incur a greater cost of debt as creditors penalize management for manipulated earnings. A higher cost of debt will lead to significant decrease in the firm value (Modigliani & Miller, 1963).

Corporate Social Responsibility (CSR) is essential in corporate assessment and relates to the practices adopted by firms to adhere to sustainable development principles. Specifically, investment in socially responsible initiatives highlights ethical conduct that ensures sustainable development (Chouaibi et al., 2021). CSR enhances the firm's reputation, facilitates access to financial resources, and increases its competitiveness in the market (Haseeb et al., 2019). CSR has probably grabbed popular support, (Jarboui et al., 2022) as participation in CSR initiatives decreases finance costs and sustains a competitive advantage. Major institutional investors favour investing in firms with superior CSR performance (Galema et al., 2008; Chouaibi et al., 2021) as both firms and creditors seek to determine if enhanced CSR implementation will improve firm value.

Similarly, the CEO can invest in CSR initiatives to communicate concise and timely signals that could affect stockholder behavior decisions and responses, impacting the firm's financing costs. Consequently, it could be inferred that CSR may reduce the

impact of income smoothing on firm value. Similarly, CSR investment decreases financing costs and allows firms to sustain a competitive edge by enhancing earnings quality. Moreover, substantial investors favour investing in firms with superior CSR implementation, since the implementation of CSR enhances the firm's transparency and efficiency (Galema et al., 2008; Chollet & Sandwidi, 2018; Kamal, 2021).

Accruals are regarded as a form of income smoothing. This type significantly undermines the credibility of financial statements (Priharta et al., 2020), resulting in diminished disclosure and severe negative repercussions for the organization and its surroundings. Since organizational goals encompass value optimization and enhanced disclosure of both financial and non-financial information. In this context, firm managers possess a reinforced motivation to comprehensively reveal such information to demonstrate the organization's dedication to fulfilling several goals to external investors and other stakeholders (Eng & Mak, 2003). Consequently, Egyptian firms may participate in socially responsible initiatives, such as the disclosure of non-financial information (Ghazali, 2007; Ali et al., 2017), which enhances firm performance, proposing a rise in firm value (Vitolla et al., 2020). Consequently, the further question arises: *In what manner does CSR commitment influence the association between income smoothing, cost of debt, and firm value?*

Therefore, the primary objective of the research is to systematically analyze the moderating effect of CSR on the relationship between income smoothing, cost of debt and firm value using generalized method of moments (GMM) based on the Thomson Reuters ASSET4 databases to investigate data on 20 Egyptian non-financial firms part of the S&P/EGX ESG index from 2014 to 2023. This research was motivated by the fact that most of the previous studies in this field originate from countries where supply and demand drive stock prices. On the other hand, in a stock market regulated by the government, the pricing of financial assets is driven by factors other than market dynamics, such as price regulation. Consequently, actual data from a regulated market is required. In this study, Egypt is used as a representative case. The construction of the Alexandria Stock Exchange in 1883 and later the Cairo Stock Exchange in 1903

marked the inception of the Egyptian stock market. Both the Cairo and Alexandria exchanges were quite active and rated sixth in the world until the 1940s when they merged.

Furthermore, the Egyptian Exchange (EGX) witnessed a 9% increase in the first half of 2017 and was rated third among the top Arab bourses. The greatest gainer over that time was the Kuwait Stock Exchange (KSE), up almost 18%, followed by the Tunis Stock Exchange (BVMT), up 14%. Furthermore, in 2022, according to Reuters, the benchmark EGX 30 index reached 22 % higher, beating out the Abu Dhabi Securities Exchange (ADX), which gained 20.3 % during the year. Egypt's stock exchange (EGX) has been the best-performing stock market in the Middle East region throughout 2022 given a bull run triggered by the International Monetary Fund (IMF) agreement that erased losses in the fourth quarter.

This research provides several theoretical and practical contributions. Theoretically, integrating stakeholder theory would explain the moderating effect of CSR on the supposed association among income smoothing, cost of debt, and firm value. The linear relationship between income smoothing and firm value is frequently investigated, hence necessitating the incorporation of cost of debt as mediating variable and CSR as a moderating variable that may enhance or diminish this association. The discourse on CSR has gained increasing interest from policymakers, regulators, market participants, and scholars. In recent years, a significant initiative to enhance CSR engagement has emerged in Egypt, particularly concerning the sustainability index and Egypt's Vision 2030, which seeks to enhance the quality of life for Egyptian citizens and enhance their standard of living across various dimensions by emphasizing the principles of justice, social integration, and the active participation of all citizens in political and social spheres.

This research is structured in the following manner; section two illustrates the literature review, section three clarifies the methodology, section four interprets the statistical analysis, and section five states the conclusion.

## **2. Literature Review**

### **2.1. Income Smoothing & Firm Value**

Hepworth (1953) initially proposed the theory that businesses might purposefully smooth income. Hepworth (1953)



investigated a few potential smoothing methods; he didn't conduct any practical testing. Hepworth (1953) mentioned that the accounting approaches that may be used to smooth income include inventory pricing, amortization accounting, and manipulating earnings to shift them to subsequent years. Additionally, he discussed the benefits of smoothing, which include better relationships with investors, creditors, and employees, while the main risk is income fluctuation.

Successive to the clarification of the Hepworth hypothesis, additional theories related to income smoothing and its impact on the stock price in the capital market have been formulated. One of such theories is the signaling theory, which arose from the discrepancies in the information that the agent and principal possessed. According to Steven & Lina (2011), signaling theory is a business management strategy that gives investors implicit instructions on how management perceives the firm's prospects. These indicators demonstrate to investors the reliability of the firm's performance, including its yearly profit margin. The profit reported in the financial statements may represent either the real profit or the results of an income smoothing technique. Hence, it may be deduced that income smoothing raises the firm's value.

However, this research is grounded in agency theory, which specifically examines various aspects of organisation procedures, conduct, and outputs. Agency theory posits that a corporation is a legally binding arrangement between the owner of a firm (i.e., the principal), and the person in charge of managing the firm (i.e., the agent). An agency relationship is formed when the principal delegates task completion and decision-making authority to the agent (Young, 2015). In an agency relationship, the principal anticipates that the agent would act to achieve his own best interests. The primary objective of the agent's policies, decisions, and actions is to maximize the wealth of principles. However, managers can fight against the interests of the principal if they have another interest. Agency theory states that management and principals' conflicts of interest affect income smoothing. By reallocating or decreasing the welfare of the principal, managers can maximize their welfare. Managers may seek to artificially boost the success of the corporation, as managers will be promoted in the firm if they can increase the corporation's size, boost its rate of expansion, or maximize its efficiency. The



primary goal of managers is to ensure future promotions, bonuses, and higher-paying positions while minimizing the probability of termination (Firmansyah, 2020).

According to Zhai & Wang (2016), agency problems include adverse selection (making accounting decisions that maximize stated revenue to receive a greater bonus) and moral hazards, such as shirking. The manager's performance may only be assessed by the principal based on the outcomes documented in the annual report, which makes it impossible for the principal to monitor the manager's activities in person. One consequence of this is the phenomenon of shirking (Vasiljevic, 2009). Moreover, adverse selection occurs since the agent's reimbursement is determined by how well performance metrics are evaluated (Panda & Leepsa, 2017). The costs associated with the monitoring strategies are as follows: monitoring, bonding, and residual costs. According to Eisenhardt (1989), agency theory proposes procedures that lower agency costs. These mechanisms can be implemented as control mechanisms (e.g., corporate governance; management control system) or as incentive programs for managers. Compensation packages are considered crucial to reduce the perceived contradiction of competing interests between investors and executives.

According to Goel & Thakor (2003), managers may have selected smooth income as a reaction to investors' concerns over reported earnings volatility. Research indicates that investors have a negative response to reported income that fluctuates. But according to Banyopadhyay et al., (2011), the capital market includes an inherent system to penalize executives who participate in inappropriate behavior like self-motivated income smoothing to be priced low. This makes a distinction between earning smoothing that occurs naturally and smoothing those results from manipulation executed by management for their benefit.

Based on the research hypothesis, agency theory describes and predicts agency problems and costs. It forecasts and explains organizational and managerial behavior as well as the consequences of it. Among the fundamental assumptions of agency theory are the following; First, it is necessary for the agent to fulfill all responsibilities, and make decisions for the benefit of the principal, along with taking risks, whereas the principle is

expected to provide funds, assume risks, and create incentives. Second, the results of the firm's success are quantifiable, observable, and contractable. Third, the principals' and agents' interests aren't always in line (Bebuck et al., 2000). Fourth, the self-centered and opportunity-seeking interests of each party impact the effectiveness of the principal-agent relationship. Fifth, the exaggeration of agency costs is attributed to information asymmetry. Thus, agency theory posits that income smoothing diminishes the firm value.

The study conducted by Michelson et al., (1995) investigated the influence of income smoothing on stock returns inside the United States stock market. The sample was split into firms that used smoothing and those that did not. The disparity between the coefficients of variation for profits and sales served as the indicator employed to quantify income smoothing. The results indicated that firms that practice income smoothing have a smaller beta and a higher mean of yearly exceptional returns in comparison to firms that do not smooth their incomes. The capital market assesses the earning management's information after examining the stock returns and determines its usefulness in estimating the stock price. In the same vein, Iniguez & Poveda (2004) examined the association between risk, anomalous return, and income smoothing. Empirical results demonstrated that less risky and more profitable businesses are smoothing their income. Moreover, Subramanyam (1996) investigated if the stock market values discretionary accruals using a sample of over 2,800 firms from 1973 to 1993. The findings indicate that the use of discretionary accrual manipulations enhances the ability of earnings to quantify the economic worth of the firm and is thereby appreciated by a market that operates efficiently. Finally, Chen (2013) investigated the impact of income smoothing on the performance of stocks. An evaluation of income smoothing was measured by both total and discretionary accruals. The results have shown that firms engaged in income smoothing are assigned a higher valuation. In addition, income smoothing reduced firms' implied cost of equity.

Furthermore, Khaddaf et al., (2014) investigated the impact of income smoothing on the performance of the stock market. This research included thirty-two banks that issued dividends and had shares listed for active trading on the Indonesian Stock Exchange

(IDX) between 2007 and 2011. The statistical analysis demonstrated that income smoothing had a negative impact on stock market returns. Furthermore, Thien & Hung (2024) examined the association between investment efficiency and income smoothing behavior within the Vietnamese setting. quantitative data was collected from a sample of 596 publicly listed corporations from 2010 to 2017. The findings revealed a negative relationship between income-smoothing behavior and investment efficiency. This research contributes to the current evidence on investment efficiency and income smoothing behavior in developing countries that have not completely implemented International Financial Reporting Standards (IFRS). Another stream of earlier research investigated the impact of earnings smoothing on stock price and its value relevance. For instance, Marquardt & Wiedman (2004) evaluated whether earnings management impacts the significance of net income and book value in valuing stock price. The findings showed that earnings have less importance in terms of value relevance and that the results can be influenced by appropriate relevant information. On the contrary, A study conducted by Tucker & Zarowin (2006) investigated the impact of income smoothing on enhancing the utility of future cash flows. The methodology of Collins et al., (1994) was applied in this research. The findings indicated that firms engaged in income smoothing practices offered more data about their prospects and revenue generation.

Therefore, according to the agency theory, it could be inferred that negative income smoothing is an agency cost. Managers practice income smoothing to smooth their volatile income, and as a result, receive an incentive bonus regardless of the negative impact it may have on the overall performance of the organization. Firm value can be assessed through various proxies such as stock market performance, operational effectiveness, financial performance, and firm bankruptcy. Since managers' opportunist attitude impacts firm performance, participating in opportunistic income smoothing would adversely affect the intrinsic value of the firm. Thus, the first hypothesis is developed as follows;

*H1. Income smoothing has a significant and negative impact on the firm value of Egyptian non-financial listed firms.*

## 2.2. Income Smoothing, Cost of Debt and Firm Value

In the context of income smoothing, cost of debt, and firm value, there are contradictory conclusions about the interaction between them. Francis et al., (2005) claimed that the price of debt is influenced by accrual quality, since higher accrual quality correlates with reduced debt costs and vice versa. Lenders rely on the quality of accounting information to ascertain loan interest rates. High-quality reported financial information decreases debt costs and increases firm value. Consequently, firms involved in income smoothing must incur a premium for information risk, represented in higher interest rates that reduce the firm's value (Prevost et al., 2008). Although rating agencies may be misled by discretionary accruals, debt markets can identify executive discretion and demand higher rates on the required finance (Prevost et al., 2008). This conclusion supports the garbling theory (Demski & Frimor, 1999; Healy, 1985), which posits that income smoothing serves as a mechanism to deceive stakeholders, such as investors, creditors, analysts, and government, for purposes of remuneration or professional advancement (Demski & Frimor, 1999; Healy, 1985). Garbling is the process by which original information is distorted, affecting decision-making processes. Income smoothing can be used variably across enterprises and time periods. Firms might boost earnings when prior year earnings are low or decrease reported earnings when previous periods exhibit high earnings (Kallunki & Martikainen, 2003). The reported income smoothing impairs financial information and deceives stakeholders, hence increasing the cost of debt and reducing firm value (Amiram & Owens, 2018). The rising amount of debt costs and the decline in firm value due to income smoothing are regarded as penalties for income manipulation (Li & Richie, 2016). Conversely, high-income smoothing reduces a corporation's risk profile, as evaluated by the lender, leading to a reduced cost of debt and increased firm value (Li & Richie, 2016). These findings support the signalling theory (Li & Richie, 2016). Since firms engage in income smoothing to minimize losses and reduce earnings volatility, in turn improve lender confidence and reduce the cost of debt. This aligns with signalling theory, which posits that stable earnings serves as an indicator of enhanced firm value,

subsequently influencing lender perceptions and decreasing debt costs while increasing firm value (Alareeni, 2018; Carmo et al., 2016).

Even though, in the context of developing economics, firms' declared earnings are regarded as a less credible source of information for lending decisions than the declared earnings of firms in developed economics (Orazalin & Akhmetzhanov, 2019). In emerging countries, most firms deliver low-quality financial information, resulting in higher debt costs compared to firms with superior financial information in developed countries (Francis et al., 2005; Orazalin & Akhmetzhanov, 2019). Zaher et al., (2020) analysed the interactions across 56 countries, encompassing both industrialised and emerging countries. Research indicated that high accrual quality decreases the cost of debt, establishing an inverse relationship between accrual quality and cost of debt. This influence is dependent upon varying degrees of financial development and law enforcement (Francis et al., 2005; Zaher et al., 2020). Therefore, the following hypotheses are formulated as follows:

*H2: Cost of debt mediates the impact of income smoothing on firm value of the Egyptian non-financial listed firms*

*H2a: Income smoothing has a significant and positive impact on the cost of debt of Egyptian non-financial listed firms*

*H2b: Cost of debt has a significant and negative impact on the firm value of Egyptian non-financial listed firms.*

### **2.3. Income Smoothing, Cost of Debt, CSR and Firm Value**

The stakeholder theory grounded the role of CSR in moderating the impact of income smoothing on firm value, which suggests that CSR provides insights into the firm's commitment, efforts, and policy indicators related to sustainable development, which is essential for stakeholders' decision-making processes (Garcia-Sanchez, 2021). Moreover, a commitment to CSR serves as an indicator that the company is stable and possesses potential prospects for sustaining investor returns. CSR compels organizations to monitor their outcomes for commercial and management purposes. Financial literature describes CSR as a voluntary corporate commitment to uphold environmental integrity, human rights, and the rights of future generations. It is

regarded as a factor for assessing firms (Chouaibi et al., 2021; Zouari-Hadiji & Chouaibi, 2021).

While the definition of corporate social responsibility (CSR) is debated, Carroll's (1979) definition is the most frequently accepted: CSR includes the economic, legal, ethical, and discretionary expectations that society has for firms at any given time. Carroll's (2016) definition of a company's social duties indicates that CSR corporations ought to pursue profitability, adhere to legal standards, maintain ethical practices (Kim et al., 2012). It is essential to recognise that evaluations of CSR performance for large corporations are frequently accessible to investors via third-party sources. These ratings may be highly linked to the firms' value, as they provide essential information for investors' trading decisions (Dhaliwal et al., 2011).

Subramanyam (1996) demonstrated that market values integrated discretionary accruals as they enhance the capacity of earnings to represent firms' fundamental value. However, it is still probable that firms engage in opportunistic earnings management which may stem from inefficiencies within the capital market. Vlismas et al., (2024) examined the impact of CSR implementation on income smoothing by analysing the association between CSR activities and various forms of real and accrual income smoothing. Data were obtained from the Thomson Reuters Datastream and ESG4 database for publicly listed corporations in the United States from 2005 to 2019, encompassing 15,043 firm-year observations. The findings indicated a negative association between corporate social responsibility (CSR) and income smoothing, particularly when managerial incentives to achieve revenue targets were absent. CSR expenditures may enhance future firm value, prompting managers to engage in current CSR investments as an indication of the firm's potential. Implementing CSR initiatives enhances profits informativeness and serves as managerial signals for conveying internally relevant value information.

Conversely, Chih et al., (2008) investigated CSR and earnings management, yielding conflicting findings across various earnings management proxies. They demonstrated that CSR implementation exhibit greater aggressiveness in accrual management, yet are less inclined to participate in profit smoothing and profit loss avoidance. It is important to note that

many countries possess distinct accounting standards, differing levels of investor protection, and varying legislative frameworks for corporate social responsibility (Reinhardt et al., 2008), as well as divergent earnings management techniques (Kim et al., 2012). Moreover, a body of literature indicates that investment in CSR enhances firms' operational success and shareholder value. Freeman (1984) contends that firms ought to prioritise the interests of both shareholders and stakeholders, as each provides a vital role in the success of the organisation. The current literature includes several significant empirical studies that investigate the influence of CSR expenditure on firm value within the Egyptian context (Al-Hanawi, 2024; Helfaya et al., 2023; Hafez, 2016). Prior research (Al-Hanawi, 2024; Helfaya et al., 2023) identified a positive relationship between the application of CSR and firm value. Helfaya et al., (2023) reported that Egyptian firms display significant variety and inconsistency in their CSR practices. However, CSR positively influences sustainability ratings and firm value. The findings indicated that firms that provide greater CSR disclosures attain participation in the Egyptian Sustainability Index and achieve a high sustainability ranking, which leads to a positive response from the capital market. Conversely, a separate body of prior research indicates that CSR actions lead to a decrease in shareholder wealth. Friedman (1970) argued that the primary aim of any firm is the maximisation of profits and shareholder value. Consequently, CSR expenditures negatively impact firm value. Moreover, he contends that the obligation to finance societal welfare is with the government rather than corporations. Hafez (2016) assessed the effect of CSR on firm value through investigating 33 firms listed on the EGX30 from 2007 to 2014. The results indicated the negative effect of CSR practices on firm value.

Consequently, this research aims not only to investigate the influence of income smoothing on firm value, but also the moderating effect of CSR on this impact.

*H3. CSR moderates the impact of income smoothing on the firm value of non-financial Egyptian listed firms.*



### 3. Methodology

#### 3.1. Description of Population, Sample and Data

This study investigates twenty (20) publicly traded non- financial firms on the S&P/EGX ESG index. Exclusion of financial firms from the sample was based on their unique financial attributes in comparison to non-financial firms. Based on their listing in S&P/EGX ESG index, the twenty (20) firms were deemed appropriate and sufficient to permit generalization concerning the research's demographic characteristics. The Environment, Social and Governance (ESG) Index for Egypt has been created by the Egyptian Institute of Directors, Standard & Poor's and Crisil. The purpose of S&P/EGX ESG index is to raise the profile of those firms that perform well along the three parameters of environmental, social and corporate governance responsibility when compared to their market peers. Since the research period spans from 2014 to 2023, 200 firm-year observations make up the final data. The data on the research's variables was derived from the yearly financial statements provided in the Thomson Reuters database, then analyzed using E-Views 12.

When endogeneity, heteroscedasticity, or other problems arise that violate the assumptions of ordinary least squares (OLS) regression, GMM is usually used. Additionally, GMM is frequently utilized for analyzing panel data or needing to address potential biases. The endogeneity of lagged dependent variables in dynamic panel data is attributed to their relation with error terms. Estimation can be done using either the "difference" or "system" GMM estimator. Dynamic panel model estimation has been conducted using the Ordinary Least Squares (OLS) and Least Square Dummy Variable (LSDV) methods in conjunction with the Generalised Method of Moments (GMM) to determine the choice between the system Generalised Method of Moments (GMM) and the difference GMM approach. The residuals of the lagged dependent variables serve as the upper and lower limits by which the coefficients in the regression model can be estimated. In cases when the regression coefficients of a lagged dependent variable, gathered from a differenced GMM, are observed to be lower than the estimate anticipated by the fixed effect, the System Generalised Method of Moments (GMM) is frequently employed. Conversely, the converse is as valid. The justification for using the Difference GMM approach in future research analysis is

based on the fact that the regression coefficients of the difference GMM model exceed the estimates of traditional fixed effects.

### 3.2. Description and Measurement of Variables

The dependent variable in this study is firm value, measured using Tobin's Q, following previous studies (Jo & Harjoto, 2011; Hassan, 2017; Taylor et al., 2018). Tobin's Q, a widely accepted indicator of firm value, compares the market value of a firm—expressed as the sum of market capitalization and the market value of debt—with the replacement cost of its physical assets (Bharadwaj et al., 1999). This measure is frequently used as a proxy for assessing the premium investors are willing to pay in anticipation of future performance.

Income smoothing serves as the independent variable and is measured by the fluctuation of income relative to the variability of cash flow from operations, consistent with prior research (Francis et al., 2004; Gao & Zhang, 2015; Leuz et al., 2003). Firms practicing extensive income smoothing typically exhibit lower income variability compared to cash flow fluctuations. Following Francis et al. (2004), income smoothing is quantified as the ratio of the standard deviation of net income to the standard deviation of cash flow from operations, both adjusted for lagged total assets. For clarity, the income smoothing calculation adheres to the methodologies of (Gao & Zhang, 2015; Sun & Zhang, 2023), employing the reciprocal of the ratio as measure of income smoothing, meaning that higher values indicate greater income smoothing.

$$IS_{i,t} = \frac{S_{D,CFOi,t}}{S_{D,NII,t}} \quad (1)$$

CFO<sub>i,t</sub> and NII<sub>i,t</sub> represent the cash flow from operations and net income before extraordinary items of firm *i* in year *t*, respectively, adjusted for lagged total assets. The standard deviations (SDs) are computed over a rolling six-year period concluding in the current year *t*. An increased IS correlates with less income fluctuation in relation to cash flows, resulting in a greater level of income smoothing.

The cost of debt, the mediating variable in this study can either be quantified by the yield on newly issued bonds (Sengupta, 1998), bond ratings (Francis et al., 2005; Ge & Kim, 2014), or the ratio of total interest expenses to total debt (Carmo et al., 2016). This study utilizes the yield between interest expenses and debt as the cost of

debt, given the widespread use of bank loans in Egypt (Le & Phan, 2017; Tran, 2024).

Corporate Social Responsibility (CSR) acts as the moderating variable and is represented as a binary measure, where firms included in the S&P/ESG index are assigned a value of 1 and those excluded are assigned a value of 0, based on the index's environmental, social, and governance (ESG) dimensions (Sayed & Khalil, 2022).

Following (Abogun, et al., 2021; Salah & Jarboui, 2022) this research utilized two control variables, Firstly, the logarithm of total assets was employed as a proxy for quantifying the size of a firm. Firms of greater size are more inclined to manipulate their revenue (Moses, 1987). Empirical research (Feihn & Struck, 2011; Rountree et al., 2008) on the associations between firm size and income smoothing continues to provide conflicting results. Secondly, is firm age, measured as the natural log of the difference between the current year and the year when the firm first appeared in the EGX. Firm age is employed as control variable since it influences both the firm's propensity for income smoothing and its market valuation through factors like operational maturity, market reputation, and growth prospects (Jung, et al., 2020).

### 3.3. The Econometric Model

The functional model for this research is established as follows in Equation (2);

$$FV = \alpha_i + \beta_1 FV_{it-1} + \beta_2 IS_{it} + \beta_3 COD_{it} + \beta_4 CSR_{it} + \beta_5 IS_{it} * CSR_{it} + \beta_6 FA_{it} + \beta_7 FS_{it} + \varepsilon_{it} \quad (2)$$

FV = Firm value (TobinQ),

IS= Income Smoothing

COD =Cost of Debt

CSR=Corporate Social Responsibility

IS\*CSR= the interaction between income smoothing and corporate social responsibility.

FA =Firm Age

FS= Firm Size

$\beta_1 - \beta_7$  are the model parameters

$\varepsilon$  =error term

## 4. Empirical Findings and Discussion of Results

### 4.1. Descriptive Statistics

The descriptive statistics of the dependent, explanatory, mediating, moderating, and control variables are shown in Table 1. The mean values of 1.79020, 1.979, 0.1057, 0.6050, 1.46706 and 6.841873 for

firm value, income smoothing, cost of debt, corporate social responsibility, firm age and firm size, respectively are shown in Table 1. The income smoothing and firm value averages were found to be variable over time, demonstrated by the large differences between the measures' standard deviations. In contrast to cost of debt, corporate social responsibility, firm age and firm size which show narrow variety in their standard deviations supporting small disparities. The mean income smoothing value of 1.979163 suggests that a significant portion of firms do not use income smoothing techniques. There are considerable differences between the mean and the median concerning the firm value, income smoothing and the cost of debt, as in the three cases, the mean is remarkably larger than the median. This may sometimes imply that the mean is closer to the tail in these right-skewed distributions, reflecting the considerable increases in the ratios in recent years compared to the early years.

**Table 1**  
**Descriptive statistics**

Variable	FV	IS	COD	CSR	FA	FS
Mean	1.79020	1.979	0.1057	0.6050	1.46706	6.841873
Median	1.07270	1.272	0.0419	1.0000	1.46239	6.848680
Maximum	9.75062	3.475	3.9855	1.0000	2.22788	8.141988
Minimum	0.0452	0.000	0.0000	0.0000	0.30103	3.945469
Std. Dev.	1.8678	3.480	0.35232	0.4900	0.36972	0.711967

*Source(s): Author's Computation, 2024*

The multicollinearity analysis of the independent variables, presented in Table 2, indicates an absence of perfect multicollinearity, since no correlation coefficients approximate  $\pm 1$ . The correlation analysis reveals significant correlations among the variables. Firm age demonstrates a significant negative correlation with firm value at the 0.01 significance level ( $r = -0.214$ ), indicating that older firms may generally possess lower market valuations relative to newer firms within the Egyptian stock market. Furthermore, firm age has significant positive impact on CSR ( $r = 0.219$ ,  $p < 0.01$ ) and firm size ( $r = 0.422$ ,  $p < 0.01$ ), suggesting that older firms tend to be larger and more involved in socially responsible behaviours. The lack of strong correlations among most variables supports the absence of multicollinearity concerns, ensuring the robustness of subsequent regression analyses.

**Table 2**  
**Correlation Analysis**

Variable	FV	IS	COD	CSR	FS	FA
FV	1					
IS	-.069	1				
COD	.003	-.017	1			
CSR	.056	-.040	-.052	1		
FS	-.112	.121	-.093	.132	1	
FA	-.214**	.141*	.050	.219**	.422**	1

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

\* . Correlation is significant at the 0.05 level (2-tailed).

Source(s): Author's Computation, 2024

## 4.2. Empirical Analysis:

The Generalised Method of Moments (GMM) model was utilized to analyses the impact of income smoothing on firm valuation. The mediation hypothesis was evaluated according to the methodology established by (Baron & Kenny, 1986), comprising three essential steps. Initially, a significant impact must exist on the independent variable (income smoothing) and the dependent variable (firm value), which was examined using Model 1, with firm value indicated by Tobin's Q. Second, a significant impact must exist on the independent variable (income smoothing) and the mediating variable (cost of debt), examined using Model 2. Third, the dependent variable (firm value) is regressed against both the independent variable (income smoothing) and the mediating variable (cost of debt), with the mediator anticipated to significantly affect the dependent variable, as demonstrated in Model 3. Furthermore, Model 4 was constructed to assess the moderating influence of CSR on the impact of income smoothing on firm value.

### 4.2.1. Analysis of Hypothesis 1

Table 3 displays the regression results. Model 1 was developed for Hypothesis 1 to examine the impact of income smoothing on firm value. The findings displayed in Model (1) demonstrate a statistically significant positive impact of the current value of FV on its previous value within a defined period, as shown by a coefficient of 0.125981 (P value < 0.000). These findings indicate that the current assessed value of a firm is significantly impacted by its historical value.

The coefficient of -0.017619 ( $P < 0.000$ ) explains the inverse impact of income smoothing on firm value. This implies that income smoothing signal to investors that management is engaging in opportunistic behavior, prioritizing short-term appearances over long-term value creation, which undermines trust and can lead to a lower valuation of the firm. This result fits with the agency theory. Consequently, the results support the acceptance of H1.

The analysis of control factors indicates that both firm size and firm age have significant negative impacts on firm value, with coefficients of -0.113850 ( $p < 0.05$ ) and -0.347062 ( $p < 0.000$ ), respectively. These findings indicate that the firm value decreases as firm size increases because larger firms are often viewed as less dynamic, face diminishing growth opportunities, and may face inefficiencies and agency problems. Additionally, as firms' age increases, firms develop from high-growth organizations to either stable or declining entities, marked by diminished dynamism, limited growth prospects, and possibly inadequate resource allocation. These aspects contribute to a decline in market valuation in relation to the replacement cost of their assets, resulting in a reduced firm value.

**Table 3. The impact of income smoothing on firm value**

Estimates of fixed effects	Model 1 (Firm value) coefficient
FV(-1)	0.145981***
IS	-0.017619***
Control variables	
FS	-0.113850**
FA	-0.347062***
Other statistics	
Sargan–Hansen J-Stat	11.32203(0.789185)
Year fixed effect	Yes
Firm fixed effect	Yes
	m statistics (prob)
AR (1)	-0.006018 (0.9952)
AR (2)	NA

Note: Significance levels \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , and \*  $p < 0.1$ .

#### 4.2.2 Analysis of Hypothesis 2

Table 4 demonstrates the mediation effect of cost of debt in the impact of income smoothing on firm value. To assess the mediation hypothesis, Model 2 regressed the cost of debt on income smoothing as the initial step, adhering to the approach established by (Baron & Kenny, 1986). The income smoothing coefficient in Model 2 was significantly positive at the 1% level, demonstrating the positive impact of income smoothing on the cost of debt. This indicates that excessive income smoothing may alert lenders to potential manipulation of financial reports to show consistent earnings. This manipulation undermines trust in financial statements, resulting in higher borrowing costs, therefore supporting H2a.

In the next step, Model 3 was constructed to examine the mediating influence of debt cost on the impact of income smoothing on firm value. In the regression analysis of income smoothing, cost of debt, and firm value, the coefficient for income smoothing was negative and statistically significant at the 1% level. Moreover, the coefficient for the cost of debt was markedly negative, demonstrating that an increase in the cost of debt reduces the firm's value. This finding indicates that higher borrowing costs reflect to investors a deteriorating risk profile and diminishing firm performance, which undermines investor confidence and reduces firm value. The findings validate H2b, indicating that the cost of debt mediates the impact of income smoothing on firm value, supporting H2.



**Table 4. The mediation effect of cost of debt on the impact of income smoothing on firm value**

Estimates of fixed effects	Model 2 (cost of debt)	Model 3 (firm value)
	coefficient	coefficient
FV (-1)	-	0.145981***
COD (-1)	0.102426***	-
IS	0.005714***	-0.222109***
COD	-	-0.124701***
Control variables		
FS	-0.128362***	-0.347062***
FA	1.154180***	-0.113850**
Other statistics		
Sargan–Hansen J-Stat	17.31023 (0.365802)	11.32203(0.789185)
Year fixed effect	Yes	Yes
Firm fixed effect	Yes	Yes
Wald test	34723.28***	2056390***

	m statistics (prob)	
AR (1)	-0.254875 (0.7988)	-0.006018 (0.9952)
AR (2)	NA	NA

Note: Significance levels \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , and \*  $p < 0.1$ .

#### 4.2.3 Analysis of Hypothesis 3

Upon examining CSR as a moderating variable in Model (4), the results reveal several significant findings. The moderating effect of CSR positively moderates the impact of income smoothing on firm value. This indicates that the execution of CSR can reduce the adverse effects of income smoothing on firm value. This supports stakeholder theory, as CSR initiatives improve stakeholder relationships and enhance long-term firm value. Thus, the findings support H3, demonstrating that CSR reduces the negative impacts of income smoothing.

Furthermore, the impact of the control variables (firm size and firm age) remains constant. Additionally, the impact of the income smoothing on the firm value has remained the same. Yet, CSR has significant positive effect on firm value since CSR enhances firm value by improving reputation, building trust with stakeholders, reducing risks, and promoting efficiency, ultimately driving high firm value, this result approves the stakeholder

theory, which states that CSR practices are linked to improved financial performance and value.

**Table 5. The moderation effect of CSR on the impact of income smoothing on firm value**

Estimates of fixed effects	Model 4 (firm value)
	coefficient
FV(-1)	0.138466***
IS	-0.22210***
CSR	0.745219***
Moderating effect	
IS*CSR	0.250855***
Control variables	
FS	-0.681928***
FA	-1.15418***
Other statistics	
Sargan–Hansen J-Stat	13.46975 (0.489913)
Year fixed effect	Yes
Firm fixed effect	Yes
Wald test	1123876***

m statistics (prob)

AR (1) NA

AR (2) -0.175144 (0.8610)

Note: Significance levels \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , and \*  $p < 0.1$ .

Eventually, table 6 displays the results of the hypotheses tests conducted in this study offering a thorough overview of the hypotheses testing and the associated results.

**Table 6. Results Summary**

<b>Hypotheses</b>	<b>Whether Hypotheses are Supported</b>
H1. Income smoothing has a significant and negative impact on the firm value of Egyptian non-financial listed firms.	Supported
H2: Cost of debt mediates the impact of income smoothing on firm value of the Egyptian non-financial listed firms. H2a: Income smoothing has a significant and positive impact on the cost of debt of Egyptian non-financial listed firms. H2b: Cost of debt has a significant and negative impact on the firm value of Egyptian non-financial listed firms.	Partially supported mediation effect
H3. CSR moderates the impact of income smoothing on the firm value of non-financial Egyptian listed firms.	Fully supported moderation effect

## 5. Results and Discussion

The primary aim of this study was to examine the influence of income smoothing on the firm value of non-financial listed in the S&P/EGX ESG index. The findings from this research indicates that the firm value's one-period lagged value has a significant impact on its present value, emphasizing the importance of using dynamic models for estimation (Baik et al., 2020; Bartov et al., 2002). This suggests that a firm's historical value has a critical role in determining its current valuation. Positive historical performance indicate stability and growth potential, attracting investors and enhancing market confidence. Financial analysts should prioritise long-term financial trends over short-term income volatility to promote a more sustainable investment market in Egypt.

The results also showed a significant negative effect of income smoothing on firm value. This suggests that investors tend to undervalue firms engaging in income smoothing, especially when such practices appear intentional. This result aligns with existing literature, which suggests that income smoothing is often interpreted as earnings management, signaling potential opportunistic behavior by management that diminishes firm value (Demerjian et al., 2020; Lyimo, 2014; Oler et al., 2018; Shabani & Sofian, 2018). These findings are consistent with previous studies (Dyussembina et al., 2023; HosseiniQehi et al., 2019; Huang et al., 2009), which suggest that income smoothing is viewed negatively by investors, ultimately leading to a reduction in firm value. However, these findings contradict the results of studies (Kerekes & Cvetanovska, 2015; Mahulae, 2021 Obeidat, 2021; Mulyati & Mulyana, 2021), who demonstrated that income smoothing has a statistically significant positive effect on firm value, arguing that, under certain conditions, income smoothing can be interpreted as a signal of stability and risk management, which can lead to a positive impact on firm value. These results align with agency theory, which asserts that income smoothing strategies can mislead investors, distort a firm's actual financial condition, and ultimately decrease investor trust. Thus, the Egyptian Financial Regulatory Authority (FRA) is entitled to increase transparency requirements to prevent firms from practicing income smoothing and preserve investor confidence in financial disclosures.

Furthermore, the results showed that cost of debt mediates the effect of income smoothing on firm value supporting the signaling theory which suggests that income smoothing may signal managerial opportunism rather than stability, thereby increasing lenders' perceptions of risk (Spence, 1973). Studies have confirmed that higher cost of debt reduces firm value by eroding profitability and limiting the firm's ability to invest in value-enhancing projects (Dechow & Skinner, 2000; Leuz et al., 2003). Additionally, this mediation effect is consistent with previous empirical studies. For instance, Francis et al., (2005) demonstrated that income smoothing firms are subject to greater inspection from creditors, resulting in increased borrowing costs. These higher costs directly reduce firm value, as financial

flexibility diminishes and shareholders bear the consequences of decreased returns (Ali et al., 2007). Thus, Egyptian banks must to incorporate comprehensive earnings quality assessments into their credit assessment procedures to guarantee more precise risk evaluations to facilitate more informed lending decisions and support sustainable business expansion.

Furthermore, the findings indicated that corporate social responsibility moderates the impact of income smoothing on firm value, hence supporting stakeholder theory. When firms engage in CSR activities, they develop goodwill and confidence among stakeholders, such as investors, creditors, and customers, which may reduce the negative impacts of income smoothing (Chen et al., 2020). Prior research confirmed this moderating impact. Kang & Kim (2019) demonstrated that firms exhibiting substantial CSR performance are more inclined to preserve investor confidence, even while participating in income smoothing activities. CSR initiatives indicate a long-term dedication to ethical conduct and sustainable development, mitigating the perception of opportunistic behaviour typically associated with income smoothing (Kim et al., 2012). Egyptian listed firms should actively participate in meaningful CSR initiatives, as this can enhance their brand, improve their credibility in the market, and promote confidence in investors. A strategic commitment to CSR not only reduces concerns about earnings management but also raise sustainable investor confidence in the firm's long-term value.

The negative impact of firm's size on firm value can be explained through agency theory. Large corporations frequently demonstrate high complexity and bureaucratic levels, which increase agency issues since managers prioritize personal objectives over shareholder interests (Jensen & Meckling, 1976). Inefficiencies in decision-making and resource allocation can diminish firm value (Chen & Zhang, 2020; Margaritis & Psillaki, 2010). Furthermore, the negative impact of firm age on firm value aligns with the organizational life cycle theory, which asserts that firms progress through stages of growth, maturity, and decline (Mueller, 1972). Growing firms are frequently characterized by rapid expansion, creativity, and flexibility, attributes that are

much valued by investors. Conversely, matured firms can face recession, constrained growth prospects, and diminished competitiveness as a result of bureaucracy and inflexible organizational frameworks (Coad, 2009; Loderer & Waelchli, 2010). The FRA and the Egyptian stock exchange should actively promote governance frameworks that enhance the operational efficiency of listed firms. Meanwhile, investors should take into account firms' age and life cycle stage as critical factors in their valuation assessments to ensure more accurate and informed investment decisions.

## 6. Conclusion:

This study aimed to examine the influence of income smoothing on the valuation of non-financial Egyptian publicly traded firms listed in S&P/EGX ESG index from 2014 to 2023. Moreover, the present study investigated how CSR moderates the nexus between income smoothing, cost of debt and firm value. To empirically evaluate the research's hypotheses, regression analysis was performed using the GMM estimation approach on a panel of 200 firm-year observations.

Evidence from empirical study confirms that income smoothing has a significant negative effect on the overall value of non-financial Egyptian publicly traded firms listed in S&P/EGX ESG index. The previously shown results align with the agency theory, which posits that there is an information asymmetry between the agent and the principle. As a corporate manager, the agent is exposed to more information than the principal. Information in the hands of firm executives can set off events that align with the goals and aspirations of achieving wealth (Mursalim, 2005). Due to the lack of information, investors will find it challenging to regulate the opportunistic measures taken by the firms' management in the short term. Income smoothing is one example of the management's opportunistic behavior. As a result, Egyptian firms that used upward income smoothing witnessed a large decline in their firm value.

Furthermore, the empirical evidence has confirmed the hypothesis that cost of debt mediates the effect of income smoothing on firm value. Since increased income smoothing practices leads to increased cost of debt and consequently leads to decline in firm value. Finally, the results showed that CSR

moderates the effect of income smoothing on firm value by lowering this negative effect on firm value.

Important implications and recommendations are provided by the findings to government regulatory agencies, especially the Ministry of Finance, the Financial Regulatory Authority (FRA), and the Egyptian Stock Exchange (EGX), as well as firms' executives, financial and investment analysts, and foreign investors in emerging countries. The primary value of this research is that it offers corporate managers some insightful information on income-smoothing techniques. Managers are urged to lessen income smoothing procedures and enhance earnings transparency by adopting internationally recognized financial reporting standards (e.g., IFRS) because it lowers firm value and weakens investor confidence. It is also urged that for the sake of investment safety, investors, financial analysts, and investment firms should identify firms that purposefully participate in income smoothing and avoid investing in them. Given the negative effect of income smoothing on firm value, investment decisions should integrate earnings quality assessments alongside traditional financial metrics. Moreover, when evaluating the value of the firm depending on the extent of income smoothing implemented by management, it is advisable to equally take into account CSR practices, as firms with strong CSR commitments tend to demonstrate higher resilience and investor trust in Egypt's volatile market conditions. Lastly, the Egyptian Financial Regulatory Authority is recommended to implement strategies that have the potential to raise the market's efficiency level and maintain appropriate levels of cost on debt. Specific policy recommendations include mandatory earnings quality disclosures, enhanced audit and compliance mechanisms, and CSR reporting incentives to improve transparency and accountability. In an efficient market context, authorities are better positioned to monitor corporate governance practices, ensure accurate debt pricing, and impose penalties on firms that intentionally engage in income smoothing.

However, there are substantial limitations to the research. Firstly, the research comprises a subset of non-financial firms that are listed on S&P/EGX ESG index. Future researchers can build on this finding and compare the income smoothing-firm value association between developed and emerging countries.



Additionally, this research only uses one proxy to evaluate firm value—the tobing—and one proxy for income smoothing, which is the ratio of the standard deviation of the cash flow from operations to the standard deviation of the net income. Future research can add several metrics of income smoothing, such as the negative correlation between a firm's change in pre-discretionary income ( $\Delta$ PDI) and its change in discretionary accruals proxy ( $\Delta$ DAP). Also, can add stock return as a measure for the firm value.

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