The current issue and full text archive of this journal is available on Emerald Insight at:
https://www.emerald.com/insight/2632-279X.htm

Does audit quality moderate the impact of environmental, social and governance disclosure on firm value? Further evidence from Egypt

Received 22 November 2022
Revised 19 February 2023
17 May 2023
Accepted 16 June 2023

Mohamed Samy El-Deeb
Department of Accounting, October University for Modern Sciences and Arts, Giza, Egypt
Tariq H. Ismail
Department of Accounting, Cairo University, Cairo, Egypt, and
Alia Adel El Banna
Department of Accounting, Faculty of Business and Finance, New Giza University, Giza, Egypt

Abstract

Purpose – This paper aims to examine the impact of environmental, social and governance (ESG) disclosure and firm value (FV), as well as, pinpoints the role of the audit quality (AQ) as a moderating variable on such impact; where the authors hypothesize that AQ modulates the relationship between ESG disclosure and the FV.
Design/methodology/approach – Data of a sample of firms listed on the Egyptian Stock Exchange Market (EGX) were collected over the period of 2017–2021 and analyzed using the regression and 2SLS models.
Findings – The results suggested that: (1) the ESG has a significant positive impact on the FV in the EGX, and (2) AQ has a significant impact, as a moderating variable, on the relationship between ESG disclosure and FV.
Research limitations/implications – The findings would help the Egyptian market authorities in realizing the importance of integrating ESG information within the financial reports of the listed firms. The findings could also help in developing effective disclosure procedures to provide shareholders with useful information.
Originality/value – This paper contributes to the literature regarding the ESG disclosure components and the FV value by considering AQ in testing such relationship.

Keywords Environmental disclosure, Social disclosure, Governance disclosure, Audit quality, Firm value, Egypt

Paper type Research paper

1. Introduction

Nowadays, sustainability has become a global trend that is being considered by most of the companies and global organizations like the United Nations (UN) and Sustainability Accounting Standards Board (SASB). Recently, the UN has introduced the initiative of sustainable development goals (SDGs) that is comprised of 17 main goals that relate to the human rights as well as the environmental issues and corporate reporting. Recently in Egypt,

Journal of Humanities and Applied Social Sciences
Vol. 5 No. 4, 2023
pp. 293-322
Emerald Publishing Limited
2632-279X
DOI 10.1108/JHASS-11-2022-0155

the decree No. 108 of 2021 of ESG disclosure has released by the Financial Regulatory Authority and is in effect in 2022.

Scholars and corporations have worried about sustainability for decades. Global warming, pollution and environmental deterioration have made sustainable business a must. The UN added environmental and sustainability objectives to human rights in 2015. The UN's "SDGs" update was agreed to by most nations. Moreover, Egypt has started working toward making sustainability reporting obligatory through decree No. 108 of 2021 that govern the ESG reporting. This type of reporting is currently become mandatory in Egypt; however, in 2019 the EGX has released a report that pinpoints the benefits of ESG reporting. The main drivers of ESG reporting are reaching a higher level of transparency, better access to capital, risk management and assessment, better reputation and higher stakeholders' loyalty. In addition, the Global Reporting Initiative (GRI), which was created in 2000, is undergoing continuous updating to accommodate renewable issues.

ESG reporting has been one of the most important themes recently, and its adoption is being pushed globally. Moreover, the ESG information must be disclosed since the majority of organizations' stakeholders feel that such efforts lead the way to (1) improved future firm performance, (2) risk management and (3) reputation. Moreover, the ESG disclosure would enhance the firm's credibility (Bouslah *et al.*, 2013; Godfrey *et al.*, 2009; Maaloul *et al.*, 2023; Rabaya and Saleh, 2022). From the environmental perspective, the amount of wrong waste disposal and water pollution has increased lately, which had a huge negative environmental impact. From a social perspective, there has been higher gender discrimination and low diversity, lower level of employee safety within high-risk operations as well as income inequality. From a governance perspective, the roles of leadership are being misunderstood by several employees/managers, also there has been a confusion when managing acts of corruption or opportunistic behaviors of managers (Aziz *et al.*, 2016 a, b; COSO and WBCSD, 2018). In addition to that, the governance aspect is tackled in alignment with environmental and social aspects to discover the novel topics or issues that encompass the business community (COSO and WBCSD, 2018).

The ESG disclosure is very important when it comes to pollution from industries as chemicals and petroleum, which might have a negative impact on the environment. Firms operating in those industries tend to have a higher ESG performance as they need to increase and protect their reputation, otherwise, this would affect shareholders' benefits (Perez *et al.*, 2017). According to Hsiao and Kelly (2018), voluntary disclosure or integrated reporting is a good way to be able to communicate to the public or the stakeholders the firm's performance, strategy and governance, which will allow the firm's value to increase over time. The world has started giving attention to the environment and accordingly firms have become more aware of the need for ESG disclosure when in 1989 in Norway, Norsk Hydro has published the first environmental responsibility reports. Currently, most firms, whether listed or not, started to engage in ESG disclosure (Yang *et al.*, 2020; Hamed *et al.*, 2022). Additionally, ESG disclosure is a tool that managers may use to maximize the relationship between a firm's value and its sustainable growth (Popa *et al.*, 2022; Wahba, 2008).

Stakeholder theory posits that firms have a responsibility to create value for a variety of stakeholders, and provides the theoretical justification for why ESG disclosure could impact firm value. In this context, ESG disclosure provides stakeholders with essential information about a company's commitment to sustainability and social responsibility, which can help to build their trust and reputation. This can result in a variety of advantages for the firm, such as improved access to capital, increased consumer loyalty and improved employee morale (Alsayegh *et al.*, 2020; Tarmuji *et al.*, 2016).

Hence, the AQ may moderate the effect of ESG disclosure on firm value. High-quality auditing can enhance the credibility of a firm's ESG disclosure by providing assurance that the presented information is accurate and trustworthy. This can increase stakeholder confidence in the firm's commitment to sustainability and social responsibility, leading to improved stakeholder relations and enhanced firm performance. In contrast, poor auditing can contribute to a lack of trust and confidence in a firm's ESG disclosure, which can result in reputational harm, weakened stakeholder relationships and decreased firm value (Asante-Appiah and Lambert, 2022; Zahid *et al.*, 2022a, b; Zahid *et al.*, 2023).

Therefore, the AQ can play a significant moderating role in the association between ESG disclosure and the firm value. ESG disclosure is more likely to increase the firm value of firms with high-quality auditing, whereas firms with low-quality auditing may not realize these benefits.

Given the previous research findings in the literature, the relationship between ESG disclosure and the firm value can only be determined through empirical research. It is expensive for firms to publish ESG information and comply with environmental and sustainability requirements, even if doing so is thought to assist them in getting better access to capital markets and have a favorable influence on firm value through increasing openness with investors and lenders. In the meantime, the AQ as a moderating variable may be used to improve the transparency of financial reports.

In recent years, there has been an increasing focus on the importance of ESG practices in the business sector in Egypt. The government has been implementing policies and regulations to promote sustainable development and encourage firms to adopt responsible business practices. For example, according to a report by the Egyptian Ministry of Investment and International Cooperation (MIIC) published in 2020, the government has been working to increase the share of renewable energy in the country's energy mix, with a goal of generating 20% of Egypt's electricity from renewable sources by 2022. That report also highlighted the government's efforts to improve energy efficiency, reduce pollution and protect natural resources through regulations and incentives (Seda and Ismail, 2020).

Several studies have investigated the relationship between corporate governance and ESG practices. It has been revealed that high-quality governance practices, such as board independence, audit committee effectiveness and CEO duality, are positively associated with ESG performance (Ararat *et al.*, 2021). Research conducted in the Egyptian context demonstrates that corporations with a higher degree of corporate governance are more likely to have robust ESG practices (Farah *et al.*, 2021; Shousha and Rady, 2021).

Additionally, ownership concentration has been proven to affect ESG practices. Due to reduced pressure from dispersed shareholders, research indicates that concentrated ownership may lead to lower ESG disclosure levels (Ould Daoud Ellili, 2020). Other studies, however, have concluded with a positive correlation between ownership concentration and ESG performance (for example: Velte, 2020). Some studies have found a positive relationship between ownership concentration and ESG practices in the Egyptian context (Razek, 2014; Wahba and Elsayed, 2015), while others have found a negative relationship (Farooque *et al.*, 2022).

It has also been revealed that the form of ownership structure, whether family-owned or institutional, influences ESG practices. Due to the desire to maintain the firm's reputation and legacy, family-owned businesses are more likely to prioritize long-term objectives, including ESG performance. Institutional proprietors, in contrast, are more likely to prioritize short-term financial performance rather than ESG concerns. In the Egyptian context, research has revealed that family-owned businesses have superior ESG practices compared to non-family businesses (Al Amosh and Khatib, 2022; Aboud and Diab, 2018; Aboud and Diab, 2019).

The Egyptian Ministry of Manpower and Migration and The Egyptian Ministry Of Environmental Affairs (2019) highlight the efforts of the Egyptian government to improve working conditions and protect workers' rights through the Law no. 12 of 2019 on the rights of workers. This is an important step toward creating a fair and just society, as well as promoting sustainable development. The Egyptian government has also been working on a national strategy for the protection and development of the environment which was released in 2019. The strategy aims to ensure sustainable use of natural resources, protect biodiversity, reduce pollution and waste, and promote the use of renewable energy. This is an important step toward creating a more sustainable and responsible business environment in Egypt. In 2021, the Egyptian Financial Supervisory Authority (EFSA) has issued guidelines for environmental and social risk management for financial institutions. This is a positive step toward promoting sustainable investment and financing, as well as reducing the environmental and social risks associated with the activities of financial institutions. This can help to promote sustainable economic growth in Egypt (Hussein and Nounou, 2022).

While there are still challenges and areas for improvement in the Egyptian business sector's adoption of ESG practices, the recent developments and focus on sustainability in the country are positive signs for the future. The recent developments and efforts made by the Egyptian government and organizations in the field of ESG and sustainable development are positive steps toward creating a more sustainable and responsible business environment in Egypt. The government's strategies, laws and regulations, as well as, the interest of firms and financial institutions in incorporating ESG practices into their operations and decision-making are good indicators that Egypt is moving in the right direction toward a sustainable future.

In the light of the above discussion, the purpose of this study is to examine the effects of ESG disclosure on FV in the Egyptian context. Although this issue has been extensively investigated in many developed countries, contributions in the context of emerging markets like Egypt have been minimized. To fill the gap, this study intends to provide insights on the importance of the compliance of listed firms with the ESGs disclosure requirements to help managers looking at increasing the firms' value. Furthermore, this study extents the prior literature; where it considers the AQ as a moderator that might affect the relationship between ESGs and the firm value. Hence, the findings of this study may assist (1) the firm's executives in better allocating the available resources to activities related to sustainability by adopting methods that are more efficient and resilient, and (2) the management to make sound decisions that would lead to more sustainability.

The rest of this paper is organized as follows: Section 2 presents a review of the literature and hypotheses development. Section 3 is the research design. Section 4 is the data analysis and discussion of results. Section 5 is the conclusions, the limitations and suggestions for future research.

2. Literature review and hypotheses development

2.1 ESG disclosure and FV

The firm management should work toward the interests of the stakeholders. The stakeholder theory highlights that any firm or the responsible management team involved in the decision-making process must consider most, if not all, of the desires of their stakeholders. When this happens, it will make the stakeholders more satisfied with the firm, hence, the FV will be created and increased (Martinez-Ferrero and Frias-Aceituno, 2013). Prior literature as Lasker and Majumder (2019) and Faisal *et al.* (2020) highlighted that there is an increased awareness within the developed countries and that there is more need for more transparency by the investors and regulators. According to El-Deeb (2019), the stakeholder theory is essential for identifying the role of the board of directors' accountability to the stakeholders of the firm as well as other potential investors. Additionally, in order to estimate the FV, the stakeholder theory offers economic and public values as well as an attention to required morals and ethics.

The literature has also shed light on the legitimacy theory, which asserts that firms have a set of responsibilities and obligations toward society, such as publishing sustainability reports and other voluntary non-financial disclosures on a regular basis; in which the non-financial disclosure might be viewed as a vehicle for legitimacy (Cho and Patten, 2007). Deegan and Blomquist (2006) noted that the process of legitimacy may be gleaned from the firm's viewpoint as a method of establishing expectations and finding indicators that relate to the external environment and reveal the amount of policy adherence. Furthermore, Legitimacy theory may also be used as a supporting instrument to implement, execute and grow the firm's and society's communication of aims and objectives (Hardiyansah *et al.*, 2021).

According to Yang *et al.* (2020), the level of disclosures is being implemented in phases where many countries have started with the first two stages revolving around legal control, however, many countries are entering the third stage which is implementing ESG disclosure to face recent environmental issues. Reports or disclosures provided by firms must lack bias, since if they mislead stakeholders, it will lead to a failure in transparency and confidence in that firm, giving the appearance of inferior quality supplied information (Mahoney *et al.*, 2013). Hoque (2017) provided insights on growing business value disclosure; where more non-financial transparency, like ESG, will attract investors to the business. This will give present shareholders confidence in the business, which will boost its value and allow it access other forms of finance, including loans (Ramchander *et al.*, 2012; El-Deeb, 2019).

Bachoo *et al.* (2013) referred to three perspectives of disclosure. First, the reporting entity' perspective, where the sustainability reporting will give the investors and regulators a clear view of what is happening inside the firm away from the financial disclosures. Second, the investors' perspective; where they will have more confidence and gain more assurance that the firm is operating well and engaging in better environmental performance. Third, the regulator's perspective; where there will be better oversight and higher economic benefits from the higher sustainability reporting.

Firms disclose ESG reports on their environmental, social and governance performance. Strong ESG policies and disclosure to investors may improve long-term financial performance and boost share values. However, economic conditions, industry trends and company-specific variables impact share prices, not only ESG performance (Lin *et al.*, 2021; Harjoto and Wang, 2020). For instance, a firm's revenue growth, profits per share, management team and growth strategy might affect share prices. Share prices are also affected by investor attitude, market circumstances and interest rates. The link between ESG and share prices is complicated, hence the influence of ESG on share prices may vary by firm and industry. Strong ESG standards are associated with greater values in certain research, but not in others. ESG performance is one of several elements to examine when assessing a firm's long-term growth and share price (Eccles and Serafeim, 2011; Şeker and Şengür, 2021). Also, Scholtens (2008) suggested that corporate social responsibility disclosures have a positive effect on stock returns which means that the shareholders trust that firm as well as there is a great chance of attracting more investors. In Egypt, Aboud and Diab (2018) tested the level of ESG disclosure for the listed firms in S&P/EGX ESG index, and the results revealed that there is a higher FV when there are higher levels of disclosure. Furthermore, Arayssi *et al.* (2016) agrees that the ESG disclosure plays an essential role in guiding the shareholders in predicting the future position of the firm and its value.

The relationship between ESG disclosure and firm value has been extensively investigated in the discipline of financial accounting. While some academics have argued for a direct relationship between ESG disclosure and firm value, an extended body of research indicates that the connection is indirect. Surroca *et al.* (2010) conducted a study on a dataset of 599 firms and concluded that CSR and financial performance are not directly related; instead, the relationship is mediated by the reputation of the firm.

Similarly, Servaes and Tamayo (2013) conducted an empirical study demonstrating the lack of a direct relationship between corporate social performance (CSR) and firm value as measured by Tobin's Q. The study considered the advertising expenditures as a means by which CSR influences the firm value. The results revealed that: (1) CSR has a positive and statistically significant effect on firm value only for firms with high consumer awareness, as measured by advertising intensity, (2) CSR activities have a negative effect on firm value for firms with minimal advertising intensity and (3) the effect of advertising expenditure on the relationship between CSR and market value was stronger for more admired firms, diminished for less admired firms and negative for the least admired firms. The visibility of a firm's social behavior toward investors influences the prospective impact of CSP on the firm's value. Several investigations, including those by Cho *et al.* (2013), Di Giuli and Kostovetsky (2014) and Barnett (2014) support this conclusion.

In Egypt, a significant step toward the increasing ESG disclosures was the introducing of the ESG Index; where the FRA published Decrees No. 107 and 108 for the year 2021, mandating that firms listed on the Egyptian Stock Exchange should produce sustainability-related environmental, social and governance disclosure reports. This index was established as the main index in Egypt to meet investors' concerns regarding ESG issues. A committee comprising of the Egyptian Institute of Directors, the Egyptian Corporate Responsibility Centre is responsible for the index. It examines the quality of information that corporations provided about their ESG responsibilities. The index therefore offers investors exposure to the best-performing firms on the Egyptian market, as defined by ESG characteristics (Abdelfattah and Aboud, 2020).

Based on the above discussion, this study aims to contribute to the literature on the combined impact of ESG disclosures on business value by concentrating on the Egyptian market. We suggest that firms that participate in ESG practices and are acknowledged by the stock market authorities (i.e. included in the ESG index) are more likely to obtain a competitive advantage and be seen favorably by investors. Based on the above discussion, the first hypothesis is formulated as follows:

H1. There is a significant positive impact of ESG disclosure on the FV.

2.2 Environmental disclosure and FV

Environmental issues attracted increased attention in the past decades, extensive studies have carried out to cover the area of environmental accounting and reporting in different geographical areas; where several studies tested the effect of corporate governance mechanisms on the environmental reporting (for example Dienes *et al.*, 2016). The study of Pucheta-Martinez *et al.* (2018a, b) recommended that regulators should persuade firms operating in sensitive industries with environmental issues to implement better stockholder engagement policies that will aid in improving the firm performance. From the investor perspective, firms that avoid proper environmental disclosure tend to have hidden information and tend to be accused of having low-quality of dealing with environmental issues, versus firms that disclose more often which allows investors to perceive the firm as more reliable and hence the value increases (Diamond and Verrecchia, 1991).

According to Handa and Linn (1993), the stock prices are linked to the level of disclosure through estimation risk which might result in less returns to investors, due to having missed material information or important disclosures. In addition to that, investors find that firms with best environmental practices are safer to invest in and that the relationship between the firm and its stakeholders becomes much better (McGuire *et al.*, 1988). Furthermore, the investors' view of the firm changes for the better with higher environmental disclosure levels, which will in turn increase the firm's reputation and position in the market as well as better performance (Shane and Spicer, 1983; Barnett, 2007).

The government of the United Kingdom had started mandating environmental reporting standards for businesses (Al-Najjar and Anfimiadou, 2012). Also, with regards to the UK, Thomas and Tonks (1999) revealed that if there are better and increased environmental practices this will increase the stock returns which will benefit their stakeholders as the value will increase. In China, Li *et al.* (2019) found that there is a pressure from NGOs and environmental organizations for firms to engage in best environmental practices as well as better disclosures as this is a competitive advantage of that firm, hence better firm value.

In the GCC countries, Gerged *et al.* (2020) found that there is a positive impact on FV by increased environmental disclosure. That study is very important as most of the industries under test are operating in oil, petroleum and energy. Even though that it is still voluntary, the emphasis on the role of NGOs and governmental persuasion to disclose more has made it seem that it is mandatory to disclose. In Saudi Arabia, Alhazmi (2017) highlighted the role of the government in encouraging firms to engage in environmental practices and environmental disclosures. In the United Arab Emirates, Zakaria (2017) stated that starting from 2018, all listed firms are required to do environmental disclosure by which it will increase transparency and the FV.

Egyptian firms just recently began to prioritize environmental protection. Still, many firms are not familiar with this concept and may resist addressing environmental concerns. The Egyptian government's Vision 2030 is positive news for those working to put into effect environmental regulations, policies and programs on a national and global scale. This newfound vision is expected to lead to environmental sustainability of which will have an impact on the performance of Egyptian firms. Hence, this leads to the sub-hypothesis *H1a* as follows:

H1a. There is a significant positive impact of environmental disclosure on the FV

2.3 Social disclosure and FV

A significant number of social and moral standards must be observed inside the firm for the legitimacy theory to be properly used (Long and Driscoll, 2008). This sort of transparency would aid the firm in gaining the respect of its present and prospective workers, therefore gently enhancing its efficiency, performance and worth (Cormier *et al.*, 2011). Firms that participate in greater and more extensive social disclosure will maintain a stronger reputation and connection with its stakeholders and linked parties, resulting in a higher FV (Gray *et al.*, 1995). Social disclosure is comprised of several elements, such as board diversity, equal pay, gender equality, ethics and social ideals existing inside the firm.

In a study conducted in the UK, Al-Najjar and Anfimiadou (2012) concluded that the requirement for regulators to monitor the social disclosures and reports that firms publish would raise investor uncertainty. A further advantage of social firm activities and disclosures is the support and the practicing of the agency theory, which works to reduce conflicts between shareholders and top management, resulting in a rise in the FV (Jo and Harjoto, 2011). Moreover, as underlined by Ismail *et al.* (2021a, b), human rights disclosures have an influence on a firm's image, which might lead to an increase in sales, which would affect the firm's long-term financial success.

In recent years, the topic of social disclosure and its impact on FV has gained attention in the academic literature. In Egypt, a number of studies have explored the relationship between social disclosure and FV, providing insights into the importance of considering ESG factors for firms operating in the country. For example, Aboud and Diab (2018) found that firms in Egypt that provide more comprehensive social disclosure have a higher market value compared to firms that provide less disclosure. The results of that study suggest that social disclosure can contribute to increased investor confidence and improve the reputation of companies, leading to an increase in their market value. El-Deeb *et al.* (2022) investigated the impact of social disclosure on FV in the Egyptian non-financial sector. The results showed that firms that provide more disclosure have a higher market value compared to firms that provide less disclosure. The results highlight the significant impact ESG factors on the value of firms. El-Deeb and Sobhy (2017) examined the relationship between CSR and firm performance in the Egyptian listed firms. The results showed that firms that practicing and providing more social disclosure have better financial performance compared to firms that provide less disclosure. The results pinpointed the importance of considering ESG factors in the Egyptian environment, as they can have a positive impact on a firm's financial performance.

In conclusion, recent academic studies in Egypt suggest that social disclosure can have a positive impact on FV and financial performance (Aboud and Diab, 2018; El-Deeb and Sobhy, 2017; El-Deeb *et al.*, 2022). Firms that provide more comprehensive social disclosure are likely to benefit from the increased investor confidence and improved reputation, leading to higher market value and better financial performance. These findings highlight the importance of considering social disclosure for firms operating in Egypt. Hence, this leads to the sub-hypothesis *H1b* as follows:

H1b. There is a significant positive impact of social disclosure on the FV.

2.4 Governance disclosure and FV

Strong corporate governance mechanisms are what moderates the level of sustainability reporting in general and the more the internal control system is intact the more the attention to the needs of the shareholders are taken into consideration (Kolk and Pinsko, 2010; Kend, 2015; Al-Farooque and Ahulu, 2017; Mahmood *et al.*, 2018; Hussain *et al.*, 2018; Abdelfattah and Aboud, 2020). Moreover, the role that corporate governance fills is that it gives the top management guidance on what is needed to be achieved and what is needed to be tackled regarding environmental issues (Masud *et al.*, 2018). Recently in Egypt, the Egyptian Financial Supervisory Authority (EFSA) had a new update on corporate governance code that needs to be followed by different firms.

Governance disclosure is essential for investors, because it assures them that the firm is being transparent enough to be monitored by external parties, hence a higher FV and higher stock returns (Shleifer and Vishny, 1997). Additionally, better governance disclosure will deliver a sense of safety to the investors as the issue of information asymmetry will be mitigated, because of there is an increased level of voluntary disclosure, there will be an increased level of transparency which will give confidence to the investors and increase the credibility of the firm as well (Ekasari *et al.*, 2018; Naciti, 2019).

According to a study conducted on Asian firms; Husnaini and Basuki (2020) revealed that the higher the level of governance disclosure, the lower the FV would be. On the other hand, other researchers like Feng Kao *et al.* (2019) have encouraged the importance of measuring the impact of governance disclosures on the FV to enhance the efficiency level of management of the corporations.

Strong corporate governance increases a corporation's duty to its stakeholders. Voluntary transparency about governance increases FV, performance and reputation (Loh *et al.*, 2017; Lukas and Basuki, 2015; Perez *et al.*, 2017; Yang *et al.*, 2019). Wang (2016) found that voluntary disclosure boosts business value, and investors are prepared to pay a 20% premium for such firms. Better voluntary disclosure is constantly expected by shareholders, and without effective corporate governance procedures, shareholders' requirements won't be addressed (Siagian *et al.*, 2013). Other researchers corroborate the link between corporate governance transparency and business value (Broadstock *et al.*, 2020; Costa *et al.*, 2015; Sumani and Roziq, 2020). Durnev and Kim (2005) concluded that transparent and well-governed enterprises had a greater market performance.

The relationship between governance disclosure and FV has been the subject of growing interest in the academic literature in recent years, and Egypt is no exception. The Egyptian Institute of Directors released a revised version of CG guidelines in July 2016; where BOD's responsibility for implementing governance was singled out as being of greater importance. The guidelines discuss the ideal composition of the BOD in terms of the caliber of the members and their roles, focuses on the elements of the control environment, and emphasizes the rule of application or justification under a new name, namely compliance or explain as a fundamental rule, opening the door for the mandatory enforcement of the manual's rules (Hussein, 2021; Samaha *et al.*, 2012).

A number of studies have investigated this relationship in the context of firms operating in Egypt, providing insights into the impact of governance disclosure on FV. For example, Aboud and Diab (2018) found that firms in Egypt that provide more comprehensive governance disclosure have a higher market value compared to those who provide less governance disclosure. The results suggest that governance disclosure can contribute to increased investor confidence and improve the reputation of firms, leading to an increase in their market value. EI-Deeb (2015) investigated the impact of governance disclosure on the performance of firms in the Egyptian banking sector. The results showed that banks that provide more governance disclosure have better financial performance compared to banks that provide less governance disclosure. The results highlight the importance of considering governance disclosure for financial institutions operating in Egypt, as it can have a positive impact on their financial performance. Hassan *et al.* (2009) examined the relationship between governance disclosure and FV in the Egyptian telecommunications sector. The results showed that telecommunications companies that provide more governance disclosure have a higher market value compared to companies that provide less governance disclosure.

In conclusion, recent academic studies in Egypt suggest that governance disclosure can have a positive impact on FV and financial performance Aboud and Diab (2018), EI-Deeb (2015), Hassan *et al.* (2009)). Companies that provide more comprehensive governance disclosure are likely to benefit from the increased investor confidence and improved reputation, leading to higher market value and better financial performance. These findings highlight the importance of considering governance disclosure for companies operating in Egypt. Accordingly, this leads to the following sub-hypothesis *H1c*:

H1c. There is a significant positive impact of governance disclosure on the FV.

2.5 The moderating effect of the AQ on ESG and the FV

AQ can moderate the relationship between ESG factors and the FV significantly. Strong ESG practices, for example, may have a positive effect on the financial performance and value creation of a firm. However, the degree to which these effects are realized may be contingent on the quality of the auditing procedure. Audits of superior quality can provide stakeholders with greater assurance that a firm's ESG disclosure are accurate and reliable, thereby boosting their confidence in the firm's overall performance and value. On the other hand, inadequate AQ may reduce confidence in a firm's ESG disclosure, resulting in skepticism regarding the firm's performance and value. As suggested by stakeholder theory, AQ can therefore function as a moderating factor that influences the strength and direction of the relationship between ESG factors and the FV (Zahid *et al.*, 2022a, b; Dakhli, 2022).

Very few studies consider the role played by the AQ and its impact on ESG and the FV. According to Asante-Appiah (2020), ESG requirements are becoming increasingly important to investors; where, the link between media coverage of a firm's negative ESG issues and audit effort and quality was investigated. To mitigate the high risk associated with a polluted ESG reputation, auditors are increasing their workload. The results show that the AQ affects ESG disclosure and the FV. Moreover, Hua and Alam (2021) examined the relationship between ESG risks and the AQ. The results show that ESG risk and the AQ were found to have a strong association during a period from 2007 to 2016 suggesting that firms with high ESG risk have less control over profitability. When conducting audits of financial statements, auditors take ESG factors into account. El-Deeb *et al.* (2022) confirm that investors of enterprises that participate in sensitive environmental concerns must reveal more information about their operations. The results suggested that AQ significantly mediates the association between speech tone and the FV.

In recent years, there has been growing interest in the relationship between a firm's ESG performance and its financial performance. One area of interest is the potential moderating effect of AQ on this relationship. Dakhli (2022) examines how AQ moderates the link between CSR and business financial performance. Higher AQ appears to strengthen the association between CSR and corporate financial performance. The results revealed that firms with strong CSR and auditing standards do better financially; where good auditing techniques ensure the credibility of the CSR-financial performance link. The findings suggested that AQ can boost CSR's financial success and boost stakeholder confidence in CSR-engaged enterprises' financial reporting. Zahid *et al.* (2022a, b) examines the moderating role of AQ in the relationship between ESG performance and dividend payout policy in Western Europe. Higher AQ leads to a greater association between ESG performance and dividend distribution policy. The results supported that firms with high ESG performance and high AQ likely to have larger dividend payout ratios, demonstrating that AQ has a beneficial effect on the association between ESG performance and dividend payment policies. The findings suggested that high-quality auditing techniques are necessary to ensure the validity of the link between ESG performance and dividend distribution policy in Western Europe.

Overall, the findings of the above mentioned studies suggested that AQ can play an important role in enhancing the credibility of a company's ESG performance and, in turn, leading to a higher FV. This highlights the importance of AQ in providing accurate and reliable information on a firm's ESG performance, which can be used by investors to make more informed investment decisions. However, there is a need to examine the interaction effect of AQ on the relationship between ESG performance and the FV in Egyptian context.

Accordingly, the hypothesis that tests the moderating role of the AQ on the relation between ESG disclosure and the FV is formulated as follows:

H2. The AQ has a positive significant effect on the relationship between ESG and FV.

3. Research design

3.1 Sample selection and data collection

The sample of this study is comprised of firms listed on the Egyptian Stock Exchange (EGX 100) index. The analysis is restricted to a sample of 100 companies due to the effort required to carry out the manual content analysis to rate the corporate disclosure levels. The data needed are the physical copies of the annual reports and corporate governance disclosures available on the firms' respective online platforms or specialized websites. In instances where a firm does not have a website or has not made its annual report available on its website, the study depends on that data available at the Egyptian Company for Information Dissemination (EGID).

Banks and financial institutions (17) were excluded as they have a special regulations and accounting standards. Additionally, firms with missing data (37) were excluded. The final sample of (46) companies with 230 observations is selected because they have consistent published data, aiming to attract investors through data transparency policies. The time period covers five years 2017–2021 as it signifies the starting point of introducing SDGs. The data are collected through the published financial statements and websites of listed firms and other websites (Mubasher.info, Investing.com and Reuters.com). Table 1 summarizes the details of the sample selection.

3.2 The study variables

To examine the influence of ESG disclosure on the FV while considering the moderating effect of AQ, four types of variables are employed: dependent, independent, moderating and control variables. Table 2 shows the study variables.

3.3 Relationships between variables

Figure (1) describes the relationships between the four variables; the independent variables (ESG disclosure, environmental disclosure, social disclosure and governance disclosure), the dependent variable (FV), the moderating variable (AQ) and the control variables (firm size, leverage and return on equity).

	No. of firms
Initial sample	100
Less: banks and financial institutions	(17)
Less: firms with missing data	(37)
Final sample	46

Source(s): Table by authors

Table 1. Sample selection

Type	Variables	Measurement	Abbreviation	Reference
Independent Variables	Environmental, Social and Governance Disclosure	An index is used to measure the level of disclosure (scoring system) to each pillar separately. A content check list is used to establish the index	ESG	Decree No. 108 for year 2021 issued by Egyptian Financial Regulatory Authority
	I. Environmental Disclosure		ENV	
	II. Social Disclosure		SOC	
	III. Governance Disclosure		GOV	
Dependent Variable	Firm Value	Tobin's Q = total market value of firm/ total asset value of Firm	FV	Ismail and ElDeeb (2020)
Moderating Variable	Audit Quality	A dummy variable; where a value of 1 to be assigned if the firm's auditor is a Big-4 audit firm, otherwise a value of zero is assigned	AQ	Kusumah and Manurung (2017)
Control Variables	Firm Size	Logarithm of total assets	FSize	Serrasqueiro and Macas-Nunes (2008)
	Leverage	Total Debt/Total Assets	LEV	Dal Maso *et al.* (2017), Wei *et al.* (2020)
	Return on Equity	Net Income/Total Equity	ROE	Mallette and Fowler (1992), Konar and Cohen (2001)

Source(s): Table by authors

Table 2. Summary of the study variables

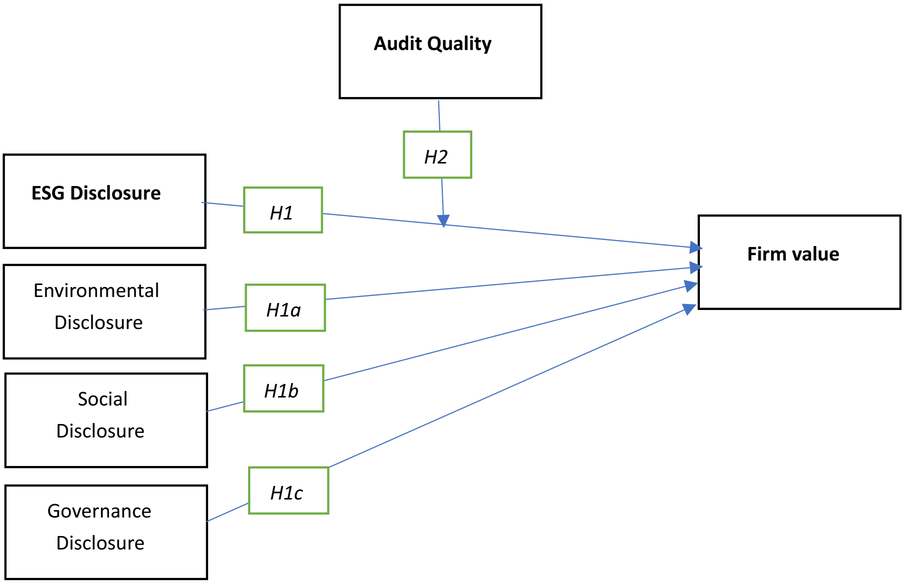

Figure 1.
Relationships between variables

Source(s): Figure by authors

3.4 Research models

To test the hypothesis (H1) the below regression model is formed:

$$FV_{i,t} = \beta_0 + \beta_1 ESGD_{i,t} + \beta_2 Fsize_{i,t} + \beta_3 ROE_{i,t} + \beta_4 Lev_{i,t} + \varepsilon_{i,t} \tag{1}$$

To test the sub-hypothesis (H1a) the below regression model is formed:

$$FV_{i,t} = \beta_0 + \beta_1 Env_{i,t} + \beta_2 Fsize_{i,t} + \beta_3 ROE_{i,t} + \beta_4 Lev_{i,t} + \varepsilon_{i,t} \tag{2}$$

To test the sub-hypothesis (H1b) the below regression model is formed:

$$FV_{i,t} = \beta_0 + \beta_1 Soc_{i,t} + \beta_2 Fsize_{i,t} + \beta_3 ROE_{i,t} + \beta_4 Lev_{i,t} + \varepsilon_{i,t} \tag{3}$$

To test the sub-hypothesis (H1c) the below regression model is formed:

$$FV_{i,t} = \beta_0 + \beta_1 Gov_{i,t} + \beta_2 Fsize_{i,t} + \beta_3 ROE_{i,t} + \beta_4 Lev_{i,t} + \varepsilon_{i,t} \tag{4}$$

To test the hypothesis (H2) the below regression model is formed:

$$FV_{i,t} = \beta_0 + \beta_1 ESGD_{i,t} * AQ_{i,t} + \beta_2 Fsize_{i,t} + \beta_3 ROE_{i,t} + \beta_4 Lev_{i,t} + \varepsilon_{i,t} \tag{5}$$

Where:

$\boldsymbol{FV_{i,t}}$ = The firm value based on the capitalized market value of stock prices of the firm (i) within the time period (t)

$\boldsymbol{\beta_0}$ = Model constant

$\boldsymbol{ESGD_{i,t}}$ = Environmental, social and governance disclosure index for the firm (i) within the time period (t)

$\boldsymbol{Env_{i,t}}$ = Environmental disclosure of the firm (i) within the time period (t)

$\boldsymbol{Soc}_{i,t}$ = Social disclosure of the firm (i) within the time period (t)

$\boldsymbol{Gov}_{i,t}$ = Governance disclosure of the firm (i) within the time period (t)

$\boldsymbol{FSize}_{i,t}$ = Firm size of the firm (i) within the time period (t)

$\boldsymbol{LEV}_{i,t}$ = Amount of debt of the firm (i) within the time period (t)

$\boldsymbol{ROE}_{i,t}$ = Return on equity of the firm (i) within the time period (t)

$\boldsymbol{ESGD}_{i,t} * \boldsymbol{AQ}_{i,t}$ = The moderating effect between ESG disclosure and audit quality of the firm (i) within the time period (t)

4. Data analysis and discussion of results

4.1 Descriptive analysis

Table 3 shows the descriptive statistics of ESG disclosure level based on the data collected in this investigation. It can be noted that the mean value of ESG disclosure is 0.5958, coupled with the minimum and maximum value of 0.01 and 0.72 respectively. These results indicate the absence of the ESG disclosure in some firms and the existence of a high level of disclosure in other firms. This can justify the need for the law no. 108 of 2021 issued by the Egyptian Financial Regulatory Authority to force firms to stick with the required disclosure of ESG measures.

The results of this analysis are consistent with those of previous research conducted in the same domain, as evidenced by the works of Dakhli (2022) and Zahid *et al.* (2022a, b), thereby bolstering the validity of our findings. Moreover, the results in Table 3 show the three main components of the ESC disclosure index; where environmental disclosure has the highest mean level of 0.5477 followed by governance disclosure with a mean value of 0.5176 and finally the social disclosure with a mean level of 0.5050. The findings suggest that the disclosure primarily focuses on environmental and governance aspects, as opposed to social aspects, which is consistent with the results of prior studies.

4.2 Correlations between variables

The ESG index and the FV cross-correlation is noted as shown in Table 4 with a significant positive result less than 0.01. Except for leverage, correlations between Tobin's Q and control

Disclosure index	N	Minimum	Maximum	Mean	Std. Deviation
Environmental disclosure	230	0.01	0.65	0.5477	0.27819
Social disclosure	230	0.00	0.74	0.5050	0.26581
Governance disclosure	230	0.03	0.59	0.5176	0.24946
ESG disclosure	230	0.01	0.72	0.5958	0.15791

Source(s): Table by authors

Table 3. Descriptive statistics of the ESG disclosure components

	ESG_INDEX	Tobins' Q	Audit quality	Leverage	Profitability	Firm size
ESG_INDEX	1					
Tobins' Q	0.241**	1				
Audit Quality	0.111*	0.488**	1			
Leverage	−0.059	0.088	0.010	1		
Profitability	0.209**	0.209**	−0.022	0.048	1	
Firm Size	−0.184**	−0.208**	−0.236**	0.477**	−0.085	1

Source(s): Table by authors

Table 4. Correlation matrix between variables

variables are statistically significant. All factors except firm size and leverage have a positive connection with ESG disclosure. The greatest association exists between ESG index and the FV with a correlation of 0.241, indicating that the FV increases significantly when ESG disclosure is present. All control variables except leverage, which are indicators of performance, have a substantial link with ESG disclosure.

4.3 Regression results

The regression analysis is used in testing the research hypotheses, where regression models (Models 1–4) were formulated to investigate the impact of the ESG disclosure pillars individually and in aggregate on the FV. In addition, another regression model (Model 5) is used to test the impact of AQ, as a moderating variable, on the relationship between ESG and the FV. The results in Panels A–D of Table 5 summarize testing of H1 and its three

Table 5. Results of the regression analysis

TobinsQ	Coef	Std. Err	t	*P* > *t*	[95% conf	Interval]
Panel (A): the impact of ESG on firm value						
ESG_Index	1.371224	0.4223881	3.25	0.001	0.5388816	2.203567
Leverage	0.0063921	0.0020585	3.11	0.002	0.0023357	0.0104485
ROE	0.0065303	0.0026546	2.46	0.015	0.0012993	0.0117614
LogofTotalAssets	−0.3669616	0.076741	−4.78	0.000	−0.5181846	−0.2157386
Cons	3.591173	0.7077184	5.07	0.000	2.196569	4.985777
				Adj R-square =	0.1424	

TobinsQ	Coef	Std. Err	t	*P* > *t*	[95% conf	Interval]
Panel (B): the impact of environmental disclosure on firm value						
Environmental	0.3746223	0.1536595	2.44	0.016	0.0718266	0.6774179
Leverage	0.0071336	0.0020923	3.41	0.001	0.0030106	0.0112565
ROE	0.0064318	0.0026966	2.39	0.018	0.001118	0.0117456
LogofTotalAssets	−0.322172	0.0762119	−4.23	0.000	−0.4723524	−0.1719917
Cons	3.722918	0.7120429	5.23	0.000	2.319792	5.126044
				Adj R-square = 0.1254		

TobinsQ	Coef	Std. Err	t	*P* > *t*	[95% conf	Interval]
Panel (C): the impact of social disclosure on firm value						
Social	0.3336398	0.1610527	2.07	0.039	0.0162752	0.6510045
Leverage	0.0065317	0.0020858	3.13	0.002	0.0024215	0.010642
ROE	0.0066377	0.0027019	2.46	0.015	0.0013133	0.0119621
LogofTotalAssets	−0.3066327	0.0768314	−3.99	0.000	−0.4580338	−0.1552316
Cons	3.637788	0.7240211	5.02	0.000	2.211059	5.064518
				Adj R-square = 0.1191		

TobinsQ	Coef	Std. Err	t	*P* > *t*	[95% conf	Interval]
Panel (D): the impact of governance disclosure on firm value						
Governance	0.4222181	0.1701647	2.48	0.014	0.0868977	0.7575385
Leverage	0.0060989	0.0020852	2.92	0.004	0.0019899	0.0102079
ROE	0.0070431	0.0026698	2.64	0.009	0.001782	0.0123041
LogofTotalAssets	−0.2959818	0.0768793	−3.85	0.000	−0.4474773	−0.1444864
Cons	3.501906	0.7280459	4.81	0.000	2.067245	4.936567
				Adj R-square = 0.1262		

Source(s): Table by authors

sub-hypotheses. The first hypothesis tests the impact of the ESG disclosure index on the FV, hence, the aggregate overall index values, including environmental, social and governance components are considered. The results in Table (5- Panel A) indicate that the model is valid and that there is a significant impact of the ESG disclosure level on the FV with explanatory power of 14.24% of the change in the dependent variable.

The results showed a significant positive association between both ESG and the FV. The coefficient shows a 1.37% premium for ESG-rated firms. However, a variety of institutional and firm-level criteria have been used to support the existence of such association. As more information about a firm's strengths and problems is made available to the public, Fatemi *et al.* (2018) contends that ESG investments raise the FV. According to Wong and Zhang (2022), economies in developing countries have a consistently positive relationship; where ESG investments lower a firm's cost of capital, which in turn increases the firm's worth. Moreover, there has been an apparent strong link between governance mechanisms' reporting and social reporting; hence, this sheds light on the importance of ESG reporting on increasing the FV (Hamed *et al.*, 2022; Fatemi *et al.*, 2018; Pucheta-Martinez *et al.*, 2018b).

It is vital to note that ESG reporting can represent a variety of objectives, beyond the obvious desire to highlight the firm's strengths and minimize shortcomings, when assessing the influence of ESG disclosure on the FV. Disclosure can be used to explain shifts in ESG policies or to rebuild a firm's reputation (Cho and Patten, 2007; Hummel and Schlick, 2016). The amount of information a firm discloses on its environmental factors do have a significant effect on a firm's financial performance or valuation, as results of the regression model that are shown in Table (5- Panel B); where it consistent with the results of prior literature showing a significant impact of the environmental component of ESG disclosure index on the FV with a coefficient value 0.37 and explanatory power of 12.5% of the change in the dependent variable.

The results in Table (5- Panel C) support the arguments that social disclosure like CSR are having a significant impact on the FV (El-Deeb and Sobhy, 2017; Ismail *et al.*, 2021a, b; Gallego-Alvarez and Pucheta-Martinez, 2021). Social disclosure has a significant impact on the FV with coefficient 0.33 and with explanatory power 11.91% of the change in the FV. Li *et al.* (2022) supports these findings, where better social disclosure positively impacts the FV. The results are in line with those of Ahsan *et al.* (2021), where social disclosure increases the FV. In testing an emerging economy, investors tend to focus on non-financial disclosure that represent CSR practices to gain more confidence, hence the results of Tiep Le and Nguyen (2022) has shown that CSR disclosure proves a positive significant impact on the FV. Recently in the UK, social reporting has been enforced on firms which in turn has a positive impact on investors' decisions and accordingly the FV (Hamed *et al.*, 2022). Bose *et al.* (2022) suggested that adequate social disclosure has aided firms in increasing their FV through the downtime of COVID-19.

The results in Table (5- Panel D) show that governance disclosure as a component of ESG is significantly and positively affecting the FV with a coefficient value 0.422 and explanatory power of 12.62%. This result is consistent with Ammann *et al.* (2011), where governance disclosure impacts the FV positively. In line with that, since corporate governance can be measured through different aspects such as board diversity, and this relationship has shown that there is a positive impact of governance on higher firm's value (Carter *et al.*, 2003). Similarly, Abdi *et al.* (2022) concluded that sustainability and governance disclosure not only affect financial performance, but also it impacts the FV positively. In line with the aforementioned studies, Tiep Le and Nguyen (2022) have shed light on the important role of corporate governance in increasing the FV.

ESG disclosure has a significant positive impact on the FV, either as overall evaluations of transparency or as individual elements. The most notable conclusion is that governance has the greatest coefficient in the regression results, as shown in Table 5, indicating that governance disclosure is more important to users than environmental and social disclosures. Our results can also claim that the mandatory guidelines of corporate governance have existed for a very long period, possibly since the early 2000s in Egypt, which has made firms and users more familiar with them.

Furthermore, we have used the model (5) to test the impact of ESG on the FV using AQ as a moderating variable as shown in Table 6. The results indicate a significant impact of the AQ as a moderating variable on the relation between ESG disclosure and the FV, where the coefficient of the moderating effect reached a value of 1.34 after taking the AQ into consideration.

One of the key findings of this paper indicates a negative correlation between total assets and FV within the Egyptian business environment. It can be explained on the ground that small firms generally exhibit higher market valuation compared to larger ones. Such findings might be due to the presence of agency dilemmas and information asymmetries within the Egyptian market. The existence of greater agency conflicts between managers and shareholders in larger firms may result in sub-optimization of investment decisions and increased agency costs. Additionally, it is plausible that larger firms encounter greater challenges with regards to information asymmetry, owing to the absence of transparency and disclosure within the Egyptian market. This may lead to an augmented information risk and a reduced level of investor confidence. The aforementioned factors have the potential to diminish the market worth of the bigger firms in comparison to their book values.

There are several reasons why environmental disclosure holds greater significance than social and governance disclosure in the Egyptian context. Environmental disclosure is indicative of a firm's level of awareness and responsibility toward its environmental impacts. These impacts are particularly noteworthy in a nation that confronts pressing issues such as water scarcity, air pollution and climate change. Environmental disclosure has the potential to bolster a firm's reputation and legitimacy with stakeholders, particularly in situations where environmental regulations and enforcement are lacking and there is a rising public consciousness and demand for environmental preservation. Environmental disclosure can furnish investors with valuable information, given their growing interest in environmental, social and governance factors as integral components of their decision-making process. Through the disclosure of environmental performance and initiatives, firms can demonstrate their dedication to sustainability and appeal to socially responsible investors, thereby increasing their access to capital. Hence, the significance of environmental disclosure surpasses that of social and governance disclosure in Egypt owing to its potential to gain advantages for both firms and society in the domains of environmental conservation, stakeholder engagement and financial outcomes.

Moreover, the explanatory power of the model increased to 22.32% of the change in the dependent variable. It can be noted that AQ plays a critical role in increasing the FV, because the better the AQ is, the more the assurance that disclosure quality is higher. In the study of

Table 6.
Regression analysis of the impact of ESG Index on FV using AQ as a moderating variable

TobinsQ	Coef	Std. Err	t	$P > t$	[95% conf	Interval]
ESG X AQ	1.343482	0.2719824	4.94	0.000	0.8075105	1.879453
Leverage	0.0058609	0.0019621	2.99	0.003	0.0019944	0.0097275
ROE	0.0050768	0.0025435	2.00	0.047	0.0000644	0.0100891
LogofTotalAssets	0.268981	0.0756827	−3.55	0.000	−0.4181221	−0.1198399
cons	2.770314	0.693757	3.99	0.000	1.403189	4.137439
				Adj R^2 = 0.2232		

Source(s): Table by authors

Wijaya (2020) on the Indonesian stock market, the findings suggested that increased AQ would lead to an increasing in the FV. Moreover, AQ when added to the relationship between any of the corporate governance measures like the board quality, shows a positive impact on the increment of the FV (Omer *et al.*, 2020). In Nigeria, Abba and Sadah (2020) highlighted that AQ is higher when the auditors understand the industry well enough, and in turn this will give more credibility to the stakeholders, hence increasing the FV. Additionally, CSR disclosure and the FV can have a more significant impact when the relationship is linked to AQ, according to Handayati *et al.* (2022), when the audit is performed with high quality this will have a positive impact on the FV.

However, the findings of this paper suggested that after considering the AQ in the model, total assets and the FV show a positive association. According to the above results, larger firms with better AQ have higher market valuations than smaller firms with low AQ. AQ can reduce agency predicaments and information asymmetry that affect the FV can explain the current outcomes. However, the AQ increases auditor independence, competence and reputation. These elements can improve financial reporting credibility. This may reduce manager-shareholder agency disputes, improving investment efficiency and lowering agency costs. An improved AQ may also reduce information risk and promote investor confidence by reducing manager-investor information asymmetry. The findings of our study indicate that audit quality plays a crucial role in determining the value of firms operating in the Egyptian business landscape. Additionally, our research highlights that audit quality serves as a moderator in the relationship between total assets and firm value.

4.4 Robustness test

It is imperative that the analysis first addresses the probable endogeneity of ESG disclosure due to omitted factors or simultaneity after the examination of the influence of ESG disclosure and the AQ on the FV. Otherwise, the predicted coefficient will be skewed and inconsistent if the FV influences ESG disclosure, as it will be linked to the error term in a regression between the FV and ESG disclosure. To account for the possibility of endogeneity, this paper employs an instrumental variables strategy following Sandwidi and Cellie (2019). Using instrumental variables that are unrelated to the error terms, two-stage least-squares regression first estimates the estimated values of the problematic predictors (the first stage), and then utilizes those estimated values to build a linear regression model for the dependent variable (the second stage).

The results from the 2SLS regression analysis on the determinants of ESG disclosure are shown in Table 7, where second-stage regression revealed that, ESG disclosure, AQ and the relationship between these factors have an impact on the FV. The results are consistent with our linear regression analysis where the adjusted R^2 value is 18.7%. This means that the model is valid, and that the AQ has a significant and positive impact on the association between ESG disclosure and the FV.

		Unstandardized coefficients				
		B	Std. Error	Beta	t	Sig
Equation 1	(Constant)	0.235	0.968		0.243	0.808
	ESGXAQ	4.279	0.639	0.973	6.691	0.000
	ESG_Index	0.953	1.658	0.142	0.575	0.046
					Adj R^2 = 0.187	

Source(s): Table by authors

Table 7.
2SLS analysis

5. Conclusions, limitations and suggestions for future research

The relationship between ESG and the FV remains an open question in the literature. Despite this, an increasing number of research show that a firm's market worth is boosted by its ESG disclosure initiatives. There is some evidence that ESG disclosure can boost a firm's market value, but this has not been tested in emerging markets like Egypt using the methodology followed in this paper; instead, it has been tested on developed ones like the US and the UK. The lack of a comprehensive study on the benefits of ESG in developing nations was the driving force for our study. Social and environmental hazards are also causing increased amounts of concern in the Egyptian context; where this paper studied how ESG impacts the value of publicly traded firms. The ESG score based on the decree No. 108-year 2021 is used; where it represents the most comprehensive and multi-dimensional ESG indicator in relation to the Egyptian financial market.

This study examined the link between ESG characteristics and the FV in the Egyptian stock market, as well as the moderating effect of the AQ. According to the findings, firms with greater ESG performance likely to have a higher FV than those with lower ESG performance. This indicates that investors are increasingly taking ESG considerations into account when making investment decisions, and that firms that emphasize ESG are more likely to have better stock prices and market values. Furthermore, the results suggest that the AQ has a considerable moderating influence on the link between ESG and the FV, such that the beneficial impact of ESG on the FV is enhanced when audited by auditors of high quality; where they can give more trustworthy and precise information about a firm's ESG performance, therefore fostering investor trust and improving the favorable impact of ESG on the FV.

The findings of this study indicate that ESG and its components have a positive and significant impact on the FV in the Egyptian Stock Exchange Market and this is consistent with the stakeholder theory and the legitimacy theory; which suggest that a firm's ESG performance can lead to a positive impact on its reputation, brand image and financial performance by meeting the needs and expectations of its various stakeholders and by gaining the legitimacy and support of society. Moreover, this study highlighted the importance of the AQ as a moderating variable on the relation between the ESG disclosure level and the FV, which reinforced the results and made it more robust.

However, the implications and recommendations derived from the aforementioned findings might be used to increase the awareness of the Egyptian business society. It can be concluded that there is a positive and noteworthy correlation between ESG factors and the FV, suggesting that investors in the Egyptian market provide considerable importance on the ESG performance of firms, and are willing to pay a premium for those that exhibit superior ESG standards. The statement posits that in the Egyptian market, firms can gain a competitive edge and distinguish themselves by disclosing their ESG practices. This is particularly relevant given the increasing recognition and desire for sustainable practices among both local and International stakeholders. Consequently, it is imperative for firms to improve their ESG disclosure protocols and effectively convey their ESG accomplishments and undertakings to the general public in a manner that is both transparent and trustworthy.

This study highlights the significance of the AQ in moderating the correlation between ESG disclosure level and the FV. This suggests that the accuracy and reliability of ESG information are pivotal for investors to evaluate the ESG performance of firms and to make well-informed investment choices. The statement posits that the disclosure of ESG information ought to undergo meticulous auditing and assurance procedures to guarantee its dependability, precision, comprehensiveness and comparability. In addition, it is imperative that regulatory bodies and institutions responsible for establishing standards offer unambiguous and uniform directives and structures for disclosing and auditing ESG data. This measure is necessary to improve the caliber and consistency of ESG information within various industries and firms.

The congruence of these results with the stakeholder theory and the legitimacy theory suggest that the disclosure of ESG information can serve as a strategic instrument for firms to handle their associations with their stakeholders and to obtain legitimacy and backing from the community. The statement posits that the alignment of ESG disclosure with the expectations and requirements of pertinent stakeholders is crucial, and that such disclosure should accurately reflect the social and environmental ramifications of the firm's operations. Hence, it is imperative for firms to actively participate in stakeholder communication and incorporate feedback mechanisms to recognize their significant environmental, social and governance concerns and to effectively manage their stakeholder interests. In addition, it is recommended that firms implement a proactive strategy toward disclosing their ESG practices. This can be achieved by establishing unambiguous objectives, benchmarks and metrics for their ESG performance and by providing updates on their advancements and obstacles. Demonstrating their dedication to sustainability is crucial.

Furthermore, the findings of this paper are consistent with the trend toward more ESG disclosure and concern for sustainability in emerging markets such as the Egyptian Stock Exchange. The Egyptian government's recent attempts to encourage sustainability and corporate responsibility, including the implementation of new ESG reporting criteria and guidelines, may have contributed to the favorable association between ESG and the FV. Nonetheless, this study provides more evidence of the link between ESG voluntary non-financial disclosures and corporate value, bolstering the claim that ESG is becoming a significant factor in financial markets. In addition, this study highlights the importance of the AQ in strengthening the relationship between ESG and the FV.

For academia, this study contributes to the growing body of literature on ESG and firm performance by providing evidence from the Egyptian context, which can inform future research in the field. Additionally, this study highlights the importance of considering the role of the AQ in the relationship between ESG and the FV, which could be an interesting avenue for further research.

For practitioners, this study suggests that firms in the Egyptian context should focus on improving their ESG performance as it can positively impact the FV. This study also highlights the importance of having high-quality audits, which can further enhance the positive association between ESG and the FV. These findings could help firms in the Egyptian context make informed decisions regarding their ESG strategies and the relationship with the AQ.

However, there are some limitations in this study that might be addressed in future research as follows: (1) The empirical analysis is based on a limited number of observations, (2) it covers the period between 2017–2021 which include the COVID-19 pandemic era, therefore the outcomes might be affected, (3) the study is exclusively quantitative in nature; where we use the ESG disclosure index and to avoid the issue of reverse-causality in the estimation methods, we used a robustness test at the qualitatively diverse elements of ESG metrics that should be investigated in future research. This enabled us to reduce the estimation bias caused by sample selection, and (4) even yet, our estimation methodology does adequately control other potential biases, such as omitted variable biases. Furthermore, for future research, it is recommended to carry out an event study that considers the decree's No. 108 of 2021 of ESG disclosure. Additionally, future research would benefit from variables more related to the Egyptian context, such as the CEO-duality, ownership concentration, foreign ownership, and government ownership of firms.

References

Abba, H.I. and Sadah, A.A. (2020), "Audit quality and firm value of listed deposit money banks in Nigeria", *International Journal of Economics and Financial Issues*, Vol. 1 No. 4, pp. 269-282.

Abdelfattah, T. and Aboud, A. (2020), "Tax avoidance, corporate governance and social responsibility: the case of the Egyptian capital market", *Journal of International Accounting, Auditing and Taxation*, Vol. 18 No. 7, pp. 4-9.

Abdi, Y., Li, X. and Turull, X.C. (2022), "Exploring the impact of sustainability (ESG) disclosure on firm value and financial performance (FP) in airline industry: the moderating role of size and age", *Environmental, Development and Sustainability*, Vol. 24 No. 1, pp. 5052-5079.

Aboud, A. and Diab, A. (2018), "The impact of social, environmental and corporate governance disclosures on firm value Evidence from Egypt", *Journal of Accounting in Emerging Economies*, Vol. 8 No. 4, pp. 442-458.

Aboud, A. and Diab, A. (2019), "The financial and market consequences of environmental, social and governance ratings: the implications of recent political volatility in Egypt", *Sustainability Accounting, Management and Policy Journal*.

Ahsan, T., Al-Gamrh, B. and Mirza, S.S. (2021), "Corporate social responsibility and firm-value: the role of sensitive industries and CEOs power in China", *Applied Economics*, Vol. 54 No. 16, pp. 1844-1863.

Al Amosh, H. and Khatib, S.F. (2022), "Ownership structure and environmental, social and governance performance disclosure: the moderating role of the board independence", *Journal of Business and Socio-Economic Development*, Vol. 2 No. 1, pp. 49-66.

Al-Farooque, O. and Ahulu, H. (2017), "Determinants of social and economic reportings: evidence from Australia, the UK and South african multinational enterprises", *International Journal of Accounting and Information Management*, Vol. 25 No. 2, pp. 177-200.

Al-Najjar, B. and Anfimiadou, A. (2012), "Environmental policies and firm value", *Business Strategy and the Environment*, Vol. 21, pp. 49-59.

Alhazmi, A.N. (2017), *Exploring the Factors and Effects of Corporate Social Responsibility Disclosure in Saudi Arabia*, PhD Thesis, Nottingham Trent University.

Alsayegh, M.F., Abdul Rahman, R. and Homayoun, S. (2020), "Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure", *Sustainability*, Vol. 12 No. 9, 3910.

Ammann, M., Oesch, D. and Schmid, M. (2011), "Corporate governance and firm value: international evidence", *Journal of Empirical Finance*, Vol. 18 No. 1, pp. 36-55.

Ararat, M., Claessens, S. and Yurtoglu, B.B. (2021), "Corporate governance in emerging markets: a selective review and an agenda for future research", *Emerging Markets Review*, Vol. 48, 100767.

Arayssi, M., Dah, M. and Jizi, M. (2016), "Women on boards, sustainability reporting and firm performance", *Sustainability Accounting, Management and Policy Journal*, Vol. 7 No. 3, pp. 376-401.

Asante-Appiah, B. (2020), "Does the severity of a client's negative environmental, social and governance reputation affect audit effort and audit quality?", *Journal of Accounting and Public Policy*, Vol. 39 No. 3, 106713.

Asante-Appiah, B. and Lambert, T.A. (2022), "The role of the external auditor in managing environmental, social, and governance (ESG) reputation risk", *Review of Accounting Studies*, Vol. 27 No. 3, pp. 1-53.

Aziz, N., Manab, N. and Othman, S. (2016a), "Critical success factors of sustainability risk management (SRM) practices in Malaysian environmentally sensitive industries", *Procedia-Social and Behavioral Sciences*, Vol. 219, pp. 4-11.

Aziz, N., Manab, N. and Othman, S. (2016b), "Sustainability Risk Management (SRM) : an extension of enterprise risk management (ERM) concept", *International Journal of Management and Sustainability*, Vol. 5 No. 1, pp. 1-10.

Bachoo, K., Tan, R. and Wilson, M. (2013), "Firm value and quality of sustainability reporting in Australia", *Australian Accounting Review*, Vol. 23 No. 1, pp. 67-87.

Barnett, M.L. (2007), "Stakeholder influence capacity and the variability of financial returns to corporate social responsibility", *Academy of Management Review*, Vol. 32 No. 3, pp. 781-794.

Barnett, M.L. (2014), "Why stakeholders ignore firm misconduct: a cognitive view", *Journal of Management*, Vol. 40 No. 3, pp. 676-702.

Bose, S., Shams, S., Jahangir Ali, M. and Mihret, D. (2022), "COVID-19 impact, sustainability performance and firm value: international evidence", *Accounting and Finance*, Vol. 62 No. 1, pp. 597-643.

Bouslah, K., Kryzanowski, L. and Bouchra, M. (2013), "The impact of the dimensions of social performance on firm risk", *Journal of Banking and Finance*, Vol. 37 No. 4, pp. 1258-1273.

Broadstock, D.C., Matousek, R., Meyer, M. and Tzeremes, N.G. (2020), "Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental and social governance implementation and innovation performance", *Journal of Business Research*, Vol. 119, pp. 99-110.

Carter, D., Simkins, B. and Simpson, G. (2003), "Corporate governance, board diversity, and firm value", *The Financial Review*, Vol. 38 No. 1, pp. 33-53.

Cho, C.H. and Patten, D.M. (2007), "The role of environmental disclosures as tools of legitimacy: a research note", *Accounting, Organization and Society*, Vol. 32 No. 7, pp. 639-647.

Cho, S.Y., Lee, C. and Pfeiffer, R.J., Jr (2013), "Corporate social responsibility performance and information asymmetry", *Journal of Accounting and Public Policy*, Vol. 32 No. 1, pp. 71-83.

Cormier, D., Ledoux, M.J. and Magnan, M. (2011), "The informational contribution of social and environmental disclosures for investors", *Management Decision*, Vol. 49 No. 8, pp. 1276-1304.

COSO and WBCSD (2018), *Enterprise Risk Management: Applying Enterprise Risk Management to Environmental, Social and Governance Related Risks*, COSO and WBCSD.

Costa, C., Lages, L. and Hortinha, P. (2015), "The bright and dark side of CSR in export markets: its impact on innovation and performance", *International Business Review*, Vol. 24 No. 5, pp. 749-757.

Dakhli, A. (2022), "The impact of corporate social responsibility on firm financial performance: does audit quality matter?", *Journal of Applied Accounting Research*, Vol. 23 No. 5, pp. 950-976.

Dal Maso, L., Liberatone, G. and Mazzi, F. (2017), "Value relevance of stakeholder engagement: the influence of national culture", *Corporate Social Responsibility and Environmental Management*, Vol. 24 No. 1, pp. 44-56.

Deegan, C. and Blomquist, C. (2006), "Stakeholder influence on corporate reporting: an exploration of the interaction between WWF-Australia and the Australian minerals industry", *Accounting, Organization and Society*, Vol. 314 No. 1, pp. 343-372.

Diamond, D. and Verrecchia, E. (1991), "Disclosure, liquidity and the cost of capital", *Journal of Finance*, Vol. 46 No. 4, pp. 689-721.

Di Giuli, A. and Kostovetsky, L. (2014), "Are red or blue companies more likely to go green? Politics and corporate social responsibility", *Journal of Financial Economics*, Vol. 111 No. 1, pp. 158-180.

Dienes, D., Sassen, R. and Fischer, J. (2016), "What are the drivers of sustainability reporting? A systematic review", *Sustainability Accounting, Management and Policy Journal*, Vol. 7 No. 2, pp. 154-189.

Durnev, A. and Kim, E.H. (2005), "To steal or not to steal: firm attributes, legal environment and valuation", *The Journal of Finance*, Vol. 60 No. 3, pp. 1461-1493.

Eccles, R.G. and Serafeim, G. (2011), *Leading and Lagging Countries in Contributing to a Sustainable Society*, Harvard Business School Working Knowledge, Boston.

Ei-Deeb, M.S. (2015), "Disclosure attributes impact of corporate governance auditing quality and voluntary disclosures on the financial performance of banks listed in the Egyptian stock exchange market", *Accounting Though*, Vol. 19 No. 5, pp. 41-77.

Ekasari, H., Subroto, B., Saraswati, E. and Prihatiningtias, Y. (2018), "From theory to parctice of signaling theory: sustainability reporting strategy impact on stock price crash risk with sustainability reporting quality as mediating variable", *The 2018 International Conference of Organizational Innovation*, Japan, KnE Social Sciences, pp. 647-658.

El-Deeb, M. (2019), "The impact of integrated reporting on firm value and performance; Evidence from Egypt", *Alexandria Journal of Accounting Research*, Vol. 3 No. 2, pp. 1-50.

El-Deeb, M.S. and Sobhy, N.A. (2017), "An exploration of corporate social responsibility disclosure determinants, corporate governance, and capital structure in the Egyptian stock exchange market", *Egyptian Account Review*, Vol. 6, pp. 1-44.

El-Deeb, M.S., Halim, Y.T. and Elbayoumi, A.F. (2022), "Disclosure tone, corporate governance and firm value: evidence from Egypt", *Asia-Pacific Journal of Accounting and Economics*, Vol. 29 No. 3, pp. 793-814, doi: 10.1080/16081625.2021.1934708.

Faisal, F., Situmorang, L.S., Achmad, T. and Prastiwi, A. (2020), "The role of government regulations in enhancing corporate social responsibility disclosure and firm value", *Journal of Asian Finance, Economics and Business*, Vol. 7 No. 8, pp. 509-518.

Farah, B., Elias, R., Aguilera, R. and Abi Saad, E. (2021), "Corporate governance in the Middle East and North Africa: a systematic review of current trends and opportunities for future research", *Corporate Governance: An International Review*, Vol. 29 No. 6, pp. 630-660.

Farooque, O.A., Dahawy, K.M., Shehata, N.F. and Soliman, M.T. (2022), "ESG disclosure, board diversity and ownership: did the revolution make a difference in Egypt?", *Corporate Ownership and Control*, Vol. 19 No. 2, pp. 67-80.

Fatemi, A., Glaum, M. and Kaiser, S. (2018), "ESG performance and firm value: the moderating role of disclosure", *Global Finance Journal*, Vol. 38, pp. 45-64.

Feng Kao, M., Hodgkinson, L. and Jaafar, A. (2019), "Ownwership structure, board of directors and firm performance: evidence from Taiwan", *Corporate Governance*, Vol. 19 No. 1, pp. 189-216.

Gallego-Alvarez, I. and Pucheta-Martinez, M.C. (2021), "The moderating effects of corporate social responsibility assurance in the relationship between corporate social responsibility disclosure and corporate performance", *Corporate Social Responsibility and Environmental Management*, Vol. 29 No. 1, pp. 535-548.

Gerged, A.M., Beddewela, E. and Cowtown, C.J. (2020), "Is corporate environmetal disclosure associated with firm value? A multicountry study of Gulf Cooperation Council firms", *Business Strategy and the Environment*, Vol. 30, pp. 185-203.

Godfrey, P., Merrill, C.B. and Hansen, J. (2009), "The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis", *Strategic Management Journal*, Vol. 30 No. 4, pp. 425-445.

Gray, R., Kouhy, R. and Lavers, S. (1995), "Corporate social and environmental reporting", *Accounting, Auditing and Accountability Journal*, Vol. 8 No. 2, pp. 47-77.

Hamed, S.R., Al-Shattarat, B.K., Al-Shattarat, W.K. and Hussainey, K. (2022), "The impact of introducing new regulations on the quality of CSR: evidence from the UK", *Journal of International Accounitng, Auditing and Taxation*, Vol. 46 No. 1, 100444.

Handa, P. and Linn, S.C. (1993), "Arbitrage pricing with estimation risk", *Journal of Financial and Quantitative Analysis*, Vol. 28 No. 1, pp. 81-100.

Handayati, P., Tham, Y.H., Yuningsih, Y. and Rochayatun, S.M. (2022), "Audit quality, corporate governance, firm characteristics and CSR disclosures – evidence from Indonesia", *The Journal of Corporate Accounting and Finance*, Vol. 1 No. 1, pp. 1-14.

Hardiyansah, M., Agustini, A.T. and Purnamawati, I. (2021), "The effct of carbon emission disclosure on firm value: environmental perfromance and industrial type", *Journal of Asian Finance, Economics and Business*, Vol. 8 No. 1, pp. 123-133.

Harjoto, M.A. and Wang, Y. (2020), "Board of directors network centrality and environmental, social and governance (ESG) performance", *Corporate Governance: The International Journal of Business in Society*, Vol. 20 No. 6, pp. 965-985.

Hassan, O.A., Romilly, P., Giorgioni, G. and Power, D. (2009), "The value relevance of disclosure: evidence from the emerging capital market of Egypt", *The International Journal of Accounting*, Vol. 44 No. 1, pp. 79-102.

Hoque, M.E. (2017), "Why company should adopt integrated reporting?", *International Journal of Economics and Financial Issues*, Vol. 7 No. 1, pp. 241-248.

Hsiao, P. and Kelly, M. (2018), "Investment considerations and impressions of integrated reporting: evidence from Taiwan", *Sustainability Accounting, Management and Policy Journal*, Vol. 9 No. 1, pp. 2-28.

Hua, M. and Alam, P. (2021), "Audit quality and environment, social, and governance risks", *International Journal of Business Research and Management (IJBRM)*, Vol. 12 No. 2, pp. 50-76.

Hummel, K. and Schlick, C. (2016), "The relationship between sustainability performance and sustainability disclosure–Reconciling voluntary disclosure theory and legitimacy theory", *Journal of Accounting and Public Policy*, Vol. 35 No. 5, pp. 455-476.

Husnaini, W. and Basuki, B. (2020), "ASEAN corporate governance scorecard: sustainability reporting and firm value", *Journal of Asian Finance, Economics and Business*, Vol. 7 No. 11, pp. 315-326.

Hussain, N., Rigoni, U. and Orij, R. (2018), "Corporate governance and sustainability performance: analysis of triple bottom line performance", *Journal of Business Ethics*, Vol. 149 No. 2, pp. 411-432.

Hussein, A. (2021), "The impact of board governance disclosure on the firm value: evidence from Egypt", *Asian Journal of Accounting and Finance*, Vol. 3 No. 3, pp. 31-44.

Hussein, A. and Nounou, G. (2022), "The impact of internet financial reporting on Egyptian company's performance", *Journal of Financial Reporting and Accounting*, Vol. 20 No. 5, pp. 841-865.

Ismail, T.H. and Eldeeb, M.S. (2020), "The effect of corporate governance, dividend policy and informativeness of risk disclosure on the firm value: egyptian evidence", *Afro-Asian Journal of Finance and Accounting*, Vol. 12 No. 6, pp. 761-789.

Ismail, T.H., Abd-el-Naby Abd-el-Fattah, H. and Adel El Gamal, H. (2021a), "Human rights disclosures, corporate governance mechanisms, and firm performance: directions for future research", *Journal of Business Startegy, Finance and Management*, Vol. 2 No. 2, pp. 1-10.

Ismail, T.H., Elhamy, M.A. and Eltamboly, N.A. (2021b), "A proposed corporate social responsibility model to develop a coherent sustainability commitment", *Journal of Contemporary Research in Business Administration and Economic Sciences*, Vol. 1 No. 1, pp. 1-23.

Jo, H. and Harjoto, M. (2011), "Corporate governance and firm value: the impact of corporate social responsibility", *Journal of Business Ethics*, Vol. 103 No. 3, pp. 351-383.

Kend, M. (2015), "Governance, firm-level characteristics and their impact on the client's voluntary sustainability disclosures and assurance decisions", *Sustainability Accounting, Management and Policy Journal*, Vol. 6 No. 1, pp. 54-78.

Kolk, A. and Pinkse, J. (2010), "The integration of corporate governance in corporate social responsibility disclosures", *Corporate Social Responsibility and Environmental Management*, Vol. 17 No. 1, pp. 15-26.

Konar, S. and Cohen, M. (2001), "Does the market value environmental performance?", *The Review of Economics and Statistics*, Vol. 83 No. 2, pp. 281-289.

Kusumah, W.R. and Manurung, D. (2017), "The effect of audit quality, tenure of audit to audit lag report with specialized industry of auditors as a moderating variable", *International Journal of Applied Business and Economic Research*, Vol. 15 No. 25, pp. 99-107.

Lasker, R. and Majumder, A. (2019), "Gender diversity in boardroom and different committees: a study with reference to bse sensex 30 companies", *International Journal on Recent Trends in Business and Tourism (IJRTBT)*, Vol. 3 No. 3, pp. 99-107.

Li, Z., Liao, G. and Albitar, K. (2019), "Does corporate environmental responsibility engagement affect firm value? The mediating role of corporate innovation", *Business Strategy and the Environment*, Vol. 29, pp. 1045-1055.

Li, Y., Villiers, C., Zixuan Li, L. and Li, L. (2022), "The moderating effect of board gender diversity on the relation between corporate social responsibility and firm value", *Journal of Management Control*, Vol. 33 No. 1, pp. 109-143.

Lin, S.L., Wu, S.C. and Li, Q. (2021), "Do R&D and ESG affect the corporate value? Evidence from China Fin-Tech Industry", *Journal of Accounting, Finance and Management Strategy*, Vol. 16 No. 2, pp. 159-205.

Loh, L., Thomas, T. and Wang, Y. (2017), "Sustainability reporting and firm value: evidence from Singapore-listed companies", *Sustainability*, Vol. 9 No. 11, pp. 1-12.

Long, B. and Driscoll, C. (2008), "Codes of ethics and the pursuit of organizational legitimacy: theoratical and empirical contributions", *Journal of Business Ethics*, Vol. 77, pp. 173-189.

Lukas, S. and Basuki, B. (2015), "The implementation of good corporate and its impact on the financial performance of banking industry listed in IDX", *The International Journal of Accounting and Business Society*, Vol. 23 No. 1, pp. 47-72.

Maaloul, A., Zéghal, D., Ben Amar, W. and Mansour, S. (2023), "The effect of environmental, social, and governance (ESG) performance and disclosure on cost of debt: the mediating effect of corporate reputation", *Corporate Reputation Review*, Vol. 26 No. 1, pp. 1-18.

Mahmood, Z., Kouser, R., Ali, W., Ahmad, Z. and Salman, T. (2018), "Does corporate governance affect sustainability disclosure? A mixed methods study", *Sustainability*, Vol. 10 No. 1, pp. 1-20.

Mahoney, L., Thorne, L., Cecil, L. and Lagore, W. (2013), "A research note on standalone corporate social responsibility reports: signaling or Greenwashing?", *Critical Perspectives on Accounting*, Vol. 24 Nos 4-5, pp. 350-359.

Mallette, P. and Fowler, K. (1992), "Effects of board composition and stock ownership on the adoption of poision pills", *Acadmey of Management Journal*, Vol. 35 No. 5, pp. 1010-1035.

Martinez-Ferrero, J. and Frias-Aceituno, J.V. (2013), "Relationship between sustainable development and financial performance: international empirical research", *Business, Strategy and the Environment*, Vol. 24 No. 1, pp. 20-39.

Masud, M., Nurunnabi, M. and Bae, S. (2018), "The effects of corporate governance on environmental sustainability reporting: empirical evidence from South Asian countries", *Asian Journal of Sustainability and Social Responsibility*, Vol. 3 No. 3, pp. 1-26.

McGuire, J.B., Sundgren, A. and Schneewis, T. (1988), "Corporate social responsibility and firm financial performance", *Academy of Management Journal*, Vol. 31 No. 4, pp. 854-872.

Naciti, V. (2019), "Corporate governance and board of directors: the effect of board composition on firm sustainability performance", *Journal of Cleaner Production*, Vol. 237, pp. 1-8.

Omer, W.K., Aljaaidi, K.S. and Habtoor, O.S. (2020), "Board quality, audit quality and economic firm value: the case of manufactured Saudi's Listed companies", *Quality-Access to Success*, Vol. 21 No. 178, pp. 96-102.

Ould Daoud Ellili, N. (2020), "Environmental, social, and governance disclosure, ownership structure and cost of capital: evidence from the UAE", *Sustainability*, Vol. 12 No. 18, 7706.

Perez, A., Lopez, C. and Garcia-De los Salmones, M. (2017), "An empirical exploration of the link between reporting to stakeholders and corporate social responsibility reputation in Spanish context", *Accounting, Auditing and Accountability*, Vol. 30 No. 3, pp. 668-698.

Popa, D.N., Bogdan, V., Sabau Popa, C.D., Belenesi, M. and Badulescu, A. (2022), "Performance mapping in two-step cluster analysis through ESEG disclosures and EPS", *Kybernetes*, Vol. 51 No. 3, pp. 98-118.

Pucheta-Martinez, M.C., Bel-Oms, I. and Olcina-Sempere, G. (2018a), "Female institutional directors on boards and firm value", *Journal of Business Ethics*, Vol. 152 No. 2, pp. 343-363.

Pucheta-Martínez, M.C., Bel-Oms, I. and Olcina-Sempere, G. (2018b), The association between board gender diversity and financial reporting quality, corporate performance and corporate social responsibility disclosure: A literature review. Academia Revista Latinoamericana de Administración, Vol. 31 No. 1, pp. 177-194.

Rabaya, A.J. and Saleh, N.M. (2022), "The moderating effect of IR framework adoption on the relationship between environmental, social, and governance (ESG) disclosure and a firm's competitive advantage", *Environment, Development and Sustainability*, Vol. 24 No. 2, pp. 2037-2055.

Ramchander, S., Schwebach, R.G. and Staking, K.I. (2012), "The Information relevance of corporate social responsibility: evidence from DS400 index reconstitutions", *Strategic Management Journal*, Vol. 33 No. 3, pp. 303-314.

Razek, M.A. (2014), "The association between corporate social responsibility disclosure and corporate governance: a survey of Egypt", *Research Journal of Finance and Accounting*, Vol. 5 No. 1, pp. 93-98.

Samaha, K., Dahawy, K., Hussainey, K. and Stapleton, P. (2012), "The extent of corporate governance disclosure and its determinants in a developing market: the case of Egypt", *Advances in Accounting*, Vol. 28 No. 1, pp. 168-178.

Sandwidi, B.W. and Cellier, A. (2019), "Corporate social performance and financial risk: evidence from European firms", in *Corporate Social Responsibility*, Ethics and Sustainable Prosperity, pp. 47-77.

Scholtens, B. (2008), "A note on the interaction between corporate social responsibility and financial performance", *Ecological Economics*, Vol. 68, pp. 46-55.

Seda, A. and Ismail, M. (2020), "Challenges facing social entrepreneurship: the implications for government policy in Egypt", *Review of Economics and Political Science*, Vol. 5 No. 2, pp. 162-182.

Şeker, Y. and Şengür, E.D. (2021), "The impact of environmental, social, and governance (ESG) performance on financial reporting quality: international evidence", *Ekonomika*, Vol. 100 No. 2, pp. 190-212.

Serrasqueiro, Z. and Macas-Nunes, P. (2008), "Performance and size: empirical evidence from Portuguese SMEs", *Small Business Economics*, Vol. 31 No. 2, pp. 195-217.

Servaes, H. and Tamayo, A. (2013), "The impact of corporate social responsibility on firm value: the role of customer awareness", *Management Science*, Vol. 59 No. 5, pp. 1045-1061.

Shane, P. and Spicer, B. (1983), "Market response to environmental information produced outside the firm", *The Accounting Review*, Vol. 58, pp. 521-538.

Shleifer, A. and Vishny, R.W. (1997), "A survey of corporate governance", *The Journal of Finance*, Vol. LII No. 2, pp. 737-783.

Shousha, A. and Rady, A. (2021), "Corporate governance, environmental and social responsibility and firm performance: evidence from Egypt", *Scientific Journal of Financial and Commercial Studies and Research*, Vol. 2 No. 1, pp. 455-526.

Siagian, F., Siregar, S.V. and Rahadian, Y. (2013), "Corporate governance, reporting quality, and firm value: evidence from Indonesia", *Journal of Accounting in Emerging Economies*, Vol. 3 No. 1, pp. 4-20.

Sumani, S. and Roziq, A. (2020), "Reciprocal capital structure and liquidity policy : implentation of corporate governance toward corporate performance", *Journal of Asian Finance, Economics and Business*, Vol. 7 No. 9, pp. 85-93.

Surroca, J., Tribó, J.A. and Waddock, S. (2010), "Corporate responsibility and financial performance: the role of intangible resources", *Strategic Management Journal*, Vol. 31 No. 5, pp. 463-490.

Tarmuji, I., Maelah, R. and Tarmuji, N.H. (2016), "The impact of environmental, social and governance practices (ESG) on economic performance: evidence from ESG score", *International Journal of Trade, Economics and Finance*, Vol. 7 No. 3, p. 67.

The Egyptian Ministry of Environmental Affairs (2019), "National strategy for the protection and development of the environment", available at: https://www.eeaa.gov.eg/English/Strategies/Pages/National-Strategy-for-the-Protection-and-Development-of-the-Environment.aspx

Thomas, A. and Tonks, T. (1999), "Corporate environmental policy and abnormal stock price returns: an empirical investigation", *Proceedings of the 1999 Eco-Management and Auditing Conference*, Leeds, ERP Environment, pp. 335-344.

Tiep Le, T. and Nguyen, V.K. (2022), "The impact of corporate governance on firms' value in an emerging country: the mediating role of corporate social responsibility and organizational identification", *Cogent Business and Management*, Vol. 9 No. 1, pp. 1-24.

Velte, P. (2020), "Institutional ownership, environmental, social, and governance performance and disclosure–a review on empirical quantitative research", *Problems and Perspectives in Management*, Vol. 18 No. 3, pp. 251-282.

Wahba, H. (2008), "Explaining the moderating effect of financial performance on the relationship between corporate environmental responsibility and institutional investors: some Egyptian evidence", *Corporate Social Responsibility and Environmental Management*, Vol. 15, pp. 361-371.

Wahba, H. and Elsayed, K. (2015), "The mediating effect of financial performance on the relationship between social responsibility and ownership structure", *Future Business Journal*, Vol. 1 Nos 1-2, pp. 1-12.

Wang, M.C. (2016), "The relationship between environmental information disclosure and firm valuation: the role of corporate governance", *Quality and Quantity*, Vol. 50 No. 3, pp. 1135-1151.

Wei, P., Mao, X. and Chen, X. (2020), "Institutional investors' attention to environmental information, trading strategies, and market impacts: evidence from China", *Business Strategy and the Environment*, Vol. 29, pp. 566-591.

Wijaya, A.L. (2020), "The effect of audit quality on firm value: a case in Indonesian manufacturing firm", *Journal of Accounting, Finance and Auditing Studies*, Vol. 6 No. 1, pp. 1-15.

Wong, J.B. and Zhang, Q. (2022), "Stock market reactions to adverse ESG disclosure via media channels", *The British Accounting Review*, Vol. 54 No. 1, pp. 1-44.

Yang, Y., Orzes, G., Jia, F. and Chen, L. (2019), "Does GRI sustainability reporting pay off? An empirical investigation of publicly listed firms in China", *Business and Society*, Vol. 6 No. 3, pp. 43-45.

Yang, Y., Wen, J. and Li, Y. (2020), "The impact of environmental information disclosure on the firm value of listed manufacturing firms : evidence from China", *International Journal of Environmental Research and Public Health*, Vol. 17 No. 1, pp. 961-981.

Zahid, R.A., Taran, A., Khan, M.K. and Chersan, I.C. (2022a), "ESG, dividend payout policy and the moderating role of audit quality: empirical evidence from Western Europe", *Borsa Istanbul Review*, Vol. 22 No. 2, pp. 200-212.

Zahid, R.A., Khan, M.K., Anwar, W. and Maqsood, U.S. (2022b), "The role of audit quality in the ESG-corporate financial performance nexus: empirical evidence from Western European companies", *Borsa Istanbul Review*, Vol. 23 No. 2, pp. 350-367.

Zahid, R.M., Saleem, A. and Maqsood, U.S. (2023), "ESG performance, capital financing decisions, and audit quality: empirical evidence from Chinese state-owned enterprises", *Environmental Science and Pollution Research*, Vol. 30 No. 15, pp. 1-14.

Zakaria, S. (2017), "CSR to be compulsory for UAE companies", available at: https://www.khaleejtimes.com/business/local/csr-to-be-compulsory-for-uae-companies

Further reading

AJ Centre (2019), "ESG investment in ASEAN is promising; however, challenges remain, AJC says in a new study on ESG investment in ASEAN", available at: www.businesswire.com/news/home/20190327005869/en/

Egypt's Financial Regulatory Authority, (RRA, 2021, July 5). FRA Board Decision number (108): Climate-related risks and opportunities. Egypt.

Hayman, R. (2019), "The contribution of civil society to sustainable development in the gulf and beyond", *Development in Practice*, Vol. 29 No. 5, pp. 645-650.

Lin, S.L., Wu, S.C. and Li, Q. (2021), "Do R&D aud ESG affect the corporate value? Evidence from China Fin-Tech Industry", *Journal of Accounting, Finance and Management Strategy*, Vol. 16 No. 2, pp. 159-205.

MSCI (2021), "MSCI ESG fundamentals Egypt", available at: https://www.msci.com/esg-fundamentals/countries/emea/egypt

Nguyen, T.T. (2020), "An empirical study on the impact of sustainability reporting on firm value", *Journal of Competitiveness*, Vol. 12 No. 3, pp. 119-135.

The Egyptian Capital Market Authority (2020), "New regulations for the governance of listed companies", available at: https://www.cma.gov.eg/English/Laws/Pages/New-Regulations-for-the-Governance-of-Listed-Companies.aspx

Wong, J.B. and Zhang, Q. (2022), "Stock market reactions to adverse ESG disclosure via media channels", *The British Accounting Review*, Vol. 54 No. 1, 101045.

Appendix

Reporting type	Item of disclosure	Indicators
Environmental Reporting	*Environmental Monitoring and Operations*	*Does the company implement any official environmental, social and/or sustainability strategy?* *Did this strategy originate internally or based on an external local or international strategy?* *Does the company specify and analyze environmental and social risks that result from its economic activities?* *Does the company adopt any specific strategy regarding waste recycling/water usage/energy?* *Does the company identify any goals regarding decreasing warm carbon emissions/global warming gases(If yes please specify)* *Does the management team hold a system/certification that relate to environmental practices (ISO 14001)? (If Yes please specify)*
	Carbon Emissions	Does the company calculate total level of annual carbon emissions (if yes, please specify the metric tons)
	usage of energy sources and its assortments	*Does the company calculate total size of directly used energy annually?* *Does the company calculate the level of energy consumption by the type of generation source per year?* *Does the company calculate the level of energy saved annually, if any?*
	Water Usage	Does the company calculate the total amount of water consumed annually? Does the company calculate the total amount of recycled water treated annually if any?
	Waste Management	Does the company calculate the total volume of waste produced, recycled or processed by type and weight annually?

(*continued*)

Table A1. ESG pillars scoring reporting

Reporting type	Item of disclosure	Indicators
Social Reporting	*Gender Diversification and Wages Level*	*Does the company disclose the number of employees according to the type of employment (temporary or permanent employment)?*
		Does the company disclose the percentage of the total number of male and female employees?
		Does the company disclose the percentage of male and female-occupied positions (for junior-middle-level jobs)?
		Does the company disclose the percentage of positions held by males and females (for senior and executive positions)?
		Does the company disclose the level of average wages for males in comparison to average wages for females?
	Employees Turnover Rate	*Does the company disclose the percentage of turnover rate of permanent employees on annual basis?*
		Does the company disclose the percentage of turnover rate of temporary employees on annual basis?
		Does the company disclose the percentage of the turnover rate of contract employees and/or consultants on annual basis?
	Non-Discrimination	Does the company adopt a policy to criminalize sexual harassment? And/or a policy of non-discrimination on any racial grounds religious or gender?
	Global Standards for Health and Safety	*Does the company have an occupational health and/or a policy that relates to international health and safety(for example international working standards policy that relate to the occupational health and safety that relate to the labor of the organization)?*
		What is the number of accident victims if any?
		How many hours of case-related training relating to environmental, social and health and safety issues for professional staff?
	Children and Forced Labor	Does the company follow a policy of prohibiting child labor and/or forced labor? (If the answer is yes, does this policy apply to suppliers and sellers dealing with the company?
	Labor Rights	In addition the Egyptian labor law requirements, does the company follow laws and standards of the international labor organization or any other international frameworks, standards or laws related to labor rights? If the answer is yes, please clarify
		Does this policy include suppliers and sellers who deal with the company?

Table A1.

(*continued*)

Reporting type	Item of disclosure	Indicators
Governance Reporting	*Diversity of the BOD*	Does the company disclose the number and percentage of total board seats occupied by males and females? Does the company disclose the number and percentage of the committees heads occupied by males and females?
	Bribery/Anti-Corruption	Does the company issue and follow any decisions relating to combat
	Code of Ethics and Conduct	Does the company issue and implement code of ethics and conduct?
	Data Privacy	In addition to the Egyptian law of consumer protection and personal data protection law, does the company follow any standards, framework or other international recommendations relating to data privacy? If the answer is yes, please clarify
	Sustainability Practices Reporting and Disclosure	*Does the company issue GRI-CDP-SASB-IIRC-UNCG or other sustainability reports?* *Does the company aim to achieve any specific goals of the United Nations sustainability goals (SDGs)?* *Does the company set these goals and report on progress under the UN Sustainable Development Goals?* *Did the company clearly publicize its compliance to the corporate social responsibility?* *Does the company adopt an explicit and clear policy/principle regarding community investment?* *Does the company participate in public and private sectors initiatives concerned with community development?*
	External Assurance	Do the Environmental, Social and Governance (ESG) disclosures issued by the company get reviewed by an independent external party?

Source(s): Appendix by authors

Table A1.

About the authors

Mohamed Samy El-Deeb is Professor of accounting and the head of the Accounting Department at October University for Modern Sciences and Arts (MSA). He received his Bachelor, MSc, and PhD of Accounting from Cairo University. Dr Mohamed El-Deeb is a fellow of the higher education academy-UK. He has a post graduate certificate in education from Greenwich university-UK. Dr Mohamed El-Deeb is a Chartered Accountant (CA), and is certified by the Egyptian Accounting Syndicate. He is a member of many professional associations like the Egyptian Society of Accountants and Auditors (ESAA), and Egyptian tax society.

Tariq H. Ismail is a Professor of accounting at the Faculty of Commerce, Cairo University, Egypt and the Dean of Business School at the International Academy of Engineering and Media Sciences, Egypt. He served on the Board of General Promotion Committee of Accounting and Auditing, Supreme Council of Universities, Egypt. He has published numerous articles in top and highly ranked journals and has many books which had worldwide audience. He had many research grants and excellence awards for the contributions he made in his field. He is the editor of Academy Journal of Social Sciences and the associate editor of Journal of Humanities and Applied Social Sciences. He is on the editorial board of

several reputable journals. His current research focuses on disclosure quality and financial reporting, accounting in emerging economies, and corporate governance. Tariq H. Ismail is the corresponding author and can be contacted at: t.hassaneen@foc.cu.edu.eg

Alia Adel El Banna is Assistant Lecturer, Accounting Department, Faculty of Business and Finance, New Giza University, Egypt. Her research interests are related risk management, disclosure quality, accounting standards and disclosure, in particular the impact of financial and non-financial factors on disclosure.