



UNIVERSIDADE CATÓLICA PORTUGUESA

ESG and Audit: Evidence from Portugal

Bernardo Henriques Albuquerque

Católica Porto Business School

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By

Bernardo Henriques Albuquerque

Under the supervision of

Dr. Manuel Ricardo Fontes da Cunha

Católica Porto Business School

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For all those mentioned above, I dedicate this work!

Resumo

Este estudo explora a evolução do cenário da auditoria no contexto dos fatores Environmental, Social e de Governance (ESG), enfatizando o seu papel crucial, riscos, benefícios e os principais desafios que o novo quadro regulatório (IFRS S1 e IFRS S2) transportará para a profissão de auditoria.

Foi utilizada uma metodologia de pesquisa por questionário, para identificar tendências e padrões nas respostas dos participantes, abrangendo auditores Revisores Oficiais de Contas de Portugal, que compartilharam as suas opiniões sobre os desafios impostos pela nova regulamentação e a preparação necessária pelos membros desta profissão. Ao mesmo tempo, incluímos participantes não-auditores, que forneceram perspectivas sobre os benefícios da integração de considerações ESG no processo de auditoria. No total, foram coletadas 68 respostas, incluindo 45 auditores e 23 não-auditores.

Os resultados demonstraram que a maioria dos participantes considera benéfica a integração dos desafios relativos a ESG na auditoria, pois ela aprimorará a transparência das informações, a confiança dos investidores e a reputação de uma marca. Em relação aos principais desafios associados às IFRS S1 e IFRS S2, as preocupações mais prevalentes incluem a confiabilidade e consistência dos dados ESG, a complexidade da avaliação da materialidade dos fatores ESG e a avaliação da sustentabilidade de toda a cadeia de fornecimento de uma empresa. Este desafio torna-se particularmente pronunciado quando a cadeia de fornecimento opera externamente à empresa auditada.

Keywords: ESG, Auditoria, IFRS S1, IFRS S2, Desafios à Auditoria

Abstract

This study explores auditing in the context of Environmental, Social and Governance (ESG) factors, emphasizing its crucial role, risks, benefits, and the main challenges that the new regulatory framework (IFRS S1 and IFRS S2) will transport to the audit profession.

Employing a survey methodology, the research seeks to identify trends and patterns in responses from participants, encompassing both Certified Public Accountant auditors from Portugal, who shared insights on challenges posed by the new regulation and the knowledge required by auditors, as well as non-auditors who provided perspectives on the benefits of integrating ESG considerations, into the audit process. In total, we collected 68 responses, comprising 45 auditors and 23 non-auditors.

The results demonstrated that most of participants considered that integration of ESG disclosures in audit process beneficial, since it will enhance the transparency of the information, the investors' confidence, and a positive brand reputation. In terms of the primary challenges associated with IFRS S1 and IFRS S2, the most prevalent concerns include the reliability and consistency of ESG data, the complexity of assessing the materiality of ESG factors, and sustainability evaluation of a company's entire supply chain. This challenge becomes particularly pronounced when the supply chain operates externally of the audited firm.

Keywords: ESG, Audit, IFRS S1, IFRS S2, Audit challenges

Table of contents

- Acknowledgementsv
- Resumo vii
- Abstract.....ix
- Table of contents.....xi
- Index of Figures xiii
- Index of Tables..... xv
- List of Abbreviations..... xvii

- Introduction..... 1
- 1. Literature Review.....3
 - 1.1. ESG.....3
 - 1.2. ESG Risks4
 - 1.3. ESG Audit and ESG Assurance5
 - 1.4. Technology and Audit7
 - 1.5. Important efforts for standardization of ESG.....7
 - 1.6. IFRS S1 and IFRS S2.....10
- 2. Methodology.....13
 - 2.1. Data collecting and inquiry structure.....13
- 3. Results and discussion 15
 - 3.1. Sample Characterization.....15
 - 3.2. Auditor’s responses analysis15
 - 3.3. General responses analysis.....20
 - 3.4. Discussion of results.....22
- 4. Conclusion25
- Bibliography27
- Appendices.....33

Index of Figures

Figure 1- Characterization of the sample.....15

Figure 2 - Auditors opinion about the challenges of the IFRS S1 & S2 integration on audit.....16

Figure 3 – Auditors opinion about the required skills for ESG17

Figure 4 – Auditors opinion on the methods to guarantee accuracy and reliability on ESG data.....18

Figure 5 – Auditors opinion of the combination of technology and ESG auditing practices19

Figure 6 – Participants opinion on the impact of ESG integration on audit.....20

Figure 7 – Participants opinion on incentives to firms being more sustainable.21

Figure 8 – Participants opinion of the benefits of having ESG regulation.....22

Index of Tables

Table 1 - Four TCFD Themes9

Table 2 - Scope emissions of IFRS S211

List of Abbreviations

CSR – Corporate Social Responsibility

ESG – Environmental, Social and Governance

FSB – Financial Stability Board

GHG – Greenhouse Gas

GHGP – Greenhouse Gas Protocol

GRI – Global Reporting Initiative

IAASB – International Auditing and Assurance Standards Board

IFAC – International Federation of Accountants

IFC – International Finance Corporation

IFRS – International Financial Reporting Standards

ISA – International Standards on Auditing

ISSB – International Sustainability Standards Board

OROC – Ordem dos Revisores Oficiais de Contas

SASB – Sustainability Accounting Standards Board

TCFD – Task Force on Climate-Related Financial Disclosure

WBCSD – World Business Council for Sustainable Development

Introduction

The societal challenges brought about by climate change, socioeconomic disparities, and unsustainable use of resources have been compelling business organizations to recognize and address environmental, social, and governance issues that surround or emanate from their business operations. These business operations are compelled to navigate this complex terrain, adapting their practices to meet the evolving demands of consumers and investors (Alsaahli & Malagueño, 2022). As documented by KPMG¹ (2022), it is predicted that ESG reporting and auditing will have expanded and undergone significant changes by the year 2030. Business organizations should expect increased demand for transparency in ESG disclosure emanating from consumers, regulatory bodies, and business stakeholders.

However, this huge necessity of being “green” in the market can lead to some ESG risks, which can have a negative outcome to the stakeholders and the society itself. To prevent those risks, the audit process can be a potential solution by ensuring that the non-financial information is true and reliable, as explained by Larrinaga and Bebbington (2021). Schor et al. (2022), stated that ESG reporting and auditing is still developing, and business leaders and auditors are learning to adequately incorporate ESG measures in reporting and auditing practices, supporting that this area is still in development and with lot of space for improvement. Although, audit needs to have some kind of regulation, serving as a guide to ensure and establish the patterns of what it is acceptable and not. This trend was identified by Paulsen et al. (2022), where it is explained that there are some ESG auditing attempts to create uniformity in standards and regulatory frameworks. This can be observed with some organizations trying to deliver some global guidelines for non-financial information, to standardize for all the companies this matter. Hence, to make a more global and definitive

¹KPMG is one of the “Big four” accounting and audit firms, which are the largest and most prominent professional services firms in the world.

sustainability guidelines, on 26th June of 2023 was created the IFRS S1 and IFRS S2, which are going to deliver some challenges to the companies and auditors, that will be explored in depth in this thesis.

This dissertation, embarks on a comprehensive exploration of the multifaceted realm of ESG auditing, exploring its pivotal role, associated risks, benefits, and the transformative influence of the new regulatory framework, comprising IFRS S1 and IFRS S2. The methodology used is a survey to auditors and non-auditors. The significance of this inquiry arises from the profound implications these developments hold for the audit profession and the broader business landscape.

This study is structured by starting with the literature review featuring the main concepts involving ESG, audit, important guidelines, and the explanation of the new legislation regarding the IFRS S1 and IFRS S2. The explanation of the methodology this study follows. The main results are subsequently shown and discussed. Lastly, the conclusion, limitations, and suggestions for future research in the topic are presented.

1. Literature Review

1.1. ESG

Historically, the assessment of business performance, predominantly revolved around a financial perspective. However, this conventional paradigm is undergoing a transformative shift towards a more intricate evaluation, where non-financial data has gained paramount significance among all stakeholders, (Cort & Esty, 2020). The realm of non-financial information encompasses a multitude of elements, with Elkington (1994) pioneering a pivotal concept for the future of sustainability, namely the "triple bottom line." This concept advocates that businesses should not only focus on profit, but also towards social and environmental concerns. It is worth noting that this transformation is not confined solely to enterprises, it extends to society at large, as articulated by the transition towards a more sustainable and conscientious attitude (Alsaali & Malagueño, 2022). Considering the shifting consumer preferences and habits, companies have been compelled to align themselves with these evolving patterns to maintain competitiveness in the market, as highlighted by Morimoto et al. (2005).

The concept of the "triple bottom line" has not only been influential but has also played an important role in the emergence of another significant concept known as Corporate Social Responsibility (CSR), defined by the European Commission (2011) as *the responsibility of enterprises for their impacts on society and outlines what an enterprise should do to meet that responsibility*. Consequently, this concept served as a foundational precursor to the more contemporary concept known as ESG (Environmental, Social, and Governance).

ESG comprises three key principles of corporate sustainability, as defined by the International Finance Corporation (IFC)² in 2021. These principles can be elucidated as follows:

(i) Environmental: This section contains a range of concerns, including energy efficiency, efforts to mitigate climate change, the reduction of waste, the preservation of biodiversity, and the minimization of carbon footprints.

(ii) Social: Within this realm, attention is directed towards matters that may lead to actual or potential impacts on employees and the communities in which a company operates. This includes issues such as labor practices, employee well-being, community engagement, and broader societal contributions.

(iii) Governance: The governance aspect is centered on issues related to the ethical interest within the company's leadership and decision-making processes.

ESG represents a comprehensive framework that encourages companies to not only pursue financial success, but also, to address critical environmental, social, and governance considerations to ensure long-term sustainability and responsible corporate behavior (Luo et al., 2023).

1.2. ESG Risks

As mentioned earlier, the evolving patterns of consumer behavior are exerting greater demands on businesses to embrace sustainability practices (Alsahali & Malagueño, 2022). While there are numerous advantages for stakeholders and our planet in doing so, it's important to acknowledge the potential disadvantages described by Asante-Appiah & Lambert (2022) as ESG risks. These ESG risks entail the problematic of a company's diminished value, due to a deteriorated reputation

² Integrated on the World Bank Group, promoting private sector investment and development in emerging markets, allied with the sustainability ideology of creating a more equal society.

stemming from its management of ESG factors. An illustrative instance of such a risk is the phenomenon commonly referred to as "Greenwashing."

According to Furlow (2010), companies recognized the potential of gaining a competitive edge in the market, by harnessing non-financial information, often manipulating it for their own advantage. This form of manipulation is commonly referred to as "Greenwashing," a term succinctly defined by Tateishi (2017) as communication that deceives people by disclosing positive information about an organization, service, or product while concealing negative environmental performance or impacts. This deceptive practice raises concerns not only for investors but also for all stakeholders, eroding trust in these companies (Chen & Chang, 2013).

To address this pressing issue and restore trust, a crucial step has been the certification of sustainability reports, as advocated by Alsaahli and Malagueño (2022). Certification serves to enhance the credibility and reliability of the information provided, which can be obtained by an audit and assurance process.

1.3. ESG Audit and ESG Assurance

An audit is a systematic process whose goal is to search and evaluate evidence related to the assertions underlying economic actions and events, establishing a degree of correspondence between those assertions and normative-legal criteria, and communicating the results obtained in a timely and structured manner to various users (Eiliefsen et al., 2013). Arens (2017) has made a noteworthy and impactful contribution to the field of auditing education, stating that *auditing is the accumulation and evaluation of evidence about information to determine and report on the degree of correspondence between the information and established criteria. Auditing should be done by a competent, independent person.*

To gain a deeper understanding of the standardization of financial audit and accounting practices, it is essential to introduce the pivotal role played by the

International Federation of Accountants (IFAC). IFAC is a global organization dedicated to serving the public interest by advocating for the widespread adoption and implementation of international guidelines within the accountancy profession (IFAC, n.d). Under the supervision of IFAC we find the International Auditing and Assurance Standards Board (IAASB), a crucial standard-setting body tasked with the development and issuance of the International Standards on Auditing (ISA). ISAs are recognized and used globally as standards for auditing. Among them, ISA 200 guide auditors on their responsibilities, independence and objectives of an auditing always emphasizing the independence and skepticism, as well as the ethical requirements (ISA, 2009).

To increase the transparency of the non-financial reports, ESG auditing should be considered to ensure that the information on ESG reports is accurate and complete. Davisson et al. (2021), proposed a definition of ESG auditing as the processes and practices intended to evaluate, measure, and disclose the performance of an organization in dealing with prevailing environmental, social, and governance issues that are likely to have an impact on the organization, its stakeholders, and the society. The auditors are tasked with producing a sustainability report to comprehensively assess the company's impact on ESG (Environmental, Social, and Governance) factors, as outlined by Larrinaga and Bebbington (2021).

Regarding sustainability assurance, it can be defined as the process of gaining confidence in a sustainability report that has been generated to assess the company's performance in terms of sustainability (Hazaea et al., 2021). The process of assuring sustainability information enhances stakeholders' perception of the credibility of ESG reporting, leading to increased demand for assurance services (Del Giudice & Rigamonti, 2020).

1.4. Technology and Audit

Technology has been used into audit procedures to increase efficiency and expand the scope and depth of audits (Munoko et al, 2020). One of the examples of that, is the concept of continuous auditing, consisting of monitoring financial data in real-time, enabling auditors to identify problems as they develop, rather than having to wait until the end of the fiscal year (Searcy & Woodroof, 2003). This procedure promotes the detection of the fraud and errors anticipatedly, giving the chance to correct them promptly. Another benefit arising from technology is the Big Data analysis, which refers to the analysis and interpretation of large and complex datasets that exceed the capacity of traditional data processing and analysis tools (Balios et al., 2020). This functionality provides a better insight on detecting patterns and trends on information used in audit, giving a better understanding on the risk assessment and decision-making process on audit (Salijeni et al., 2018).

Although audit information technology has evolved over the last decade, Lowe et al. (2017) demonstrates that auditors could make even greater use of information technology in their audits than they are currently using. To achieve this, the auditor of the future should not only be at ease with digital tools but should also possess the necessary skills to comprehend how client data is structured and generated. Furthermore, they should have the ability to extract, analyze, and, crucially, develop proficiency in crafting tools for data control and interpretation (Manita et al., 2020).

1.5. Important efforts for standardization of ESG

For a significant duration, unlike the robust regulations financial reporting has, there existed a notable absence of a comprehensive legal framework for non-financial disclosures (Eccles et al., 2011). Consequently, the dissemination of non-financial information operated largely on a voluntary basis (Delmas & Burbano, 2011).

However, several organizations have taken proactive steps to develop standardized guidelines and frameworks for non-financial reporting processes and structures over the years.

One noteworthy organization in this regard is the Global Reporting Initiative (GRI), founded in 1997 as an independent organization, with the primary objective of assisting its member organizations, to build and promote a sustainability reporting structure, (Global Reporting Initiative, n.d). Since its inaugural guidelines in 1999, GRI standards have undergone modifications to suit sustainability reporting for new needs and varied types of enterprises. As highlighted by Villiers et al. (2022), GRI established important contributes to the notation about the social and environmental impacts of firms to the stakeholders, increasing global comparability and transparency of information.

In 2011, emerges another influential independent non-profit organization named Sustainability Accounting Standards Board (SASB). SASB, which was established to facilitate companies and investors in establishing a common understanding of the financial implications of sustainability (Sustainability Accounting Standards Board, 2023). As noted by Hales (2021), SASB standards are designed to assist investors in allocating their resources by comprehending how a company both influences and is influenced by the evolving landscape of climate change, technological advancements, resource constraints, and other critical factors.

Founded in 2017, the Task Force on Climate-Related Financial Disclosure (TCFD), a task force established by the Financial Stability Board (FSB), with the aim to increase market transparency on the non-financial aspect, (Task Force on Climate-Related Financial Disclosure, n.d.). The TCFD has introduced voluntary standards for consistent reporting related to climate change, and some companies have willingly adopted this approach. These recommendations by TCFD are based on four themes, which are succinctly summarized in Table 1.

TCFD Themes	Description
Governance	Describe the entity climate-related risks and opportunities on the governance field.
Strategy	Provide information about both the current and possible effects of climate-related risks and opportunities on the company's operations, overall strategy, and financial planning, specifically when this information is significant or relevant.
Risk Management	Report the organization's process for identifying, evaluating, and managing climate-related risks.
Metrics and targets	Describe the specific measures and objectives that are employed to evaluate and handle climate-related risks and opportunities that are pertinent, particularly when this information is significant or relevant

Table 1 - Four TCFD Themes

The above four concepts have played a pivotal role in shaping the future, of sustainability reporting, laying the foundation for a systematic approach to identifying and addressing sustainability opportunities and risks (Eccles & Krzus, 2018).

Despite numerous organizations attempting to establish a unified ESG assessment and reporting framework, the World Business Council for Sustainable Development (WBCSD)³, states that different organizations and jurisdictions employ different ESG frameworks. Making the ESG assessment dependent on the requirements in the jurisdiction, business environment, and industry in which they operate (WBCSD, 2019).

³Consists of a global organization comprising over 200 major businesses worldwide. They engage in research, advocacy, and partnerships with governments and civil society to tackle sustainability issues such as climate change, biodiversity, water management, and circular economy initiatives.

However, there are some developments being made in this topic, by the International Financial Reporting Standards (IFRS)⁴, with the introduction of a new standard-setting-board, The International Sustainability Standards Board (ISSB), in 2021. Their goal is to provide a global standard for disclosure obligations relating to sustainability, to help investors make informed decisions (IFRS, 2023). On June 26, 2023, a new standard was introduced on first and second global sustainability disclosures called IFRS S1 and IFRS S2. According to Deloitte⁵ (2023), these developments mark a significant step towards greater transparency and consistency in sustainability reporting, promising a more sustainable and informed future for investors and stakeholders alike.

1.6. IFRS S1 and IFRS S2

The objective of IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information, according to (IFRS,2023) *is to require an entity to disclose information about its sustainability-related risks and opportunities that is useful to primary users of general-purpose financial reports in making decisions relating to providing resources to the entity.* In other words, IFRS S1 outlines the fundamental guidelines for the content and presentation of an organization's sustainability-related financial disclosures. These disclosures should be included on the same reporting as the accompanying financial statements. It is mandatory for the entity to specify which financial statements these sustainability-related financial disclosures are linked to. The entity must also transparently disclose any judgments made during the preparation of these disclosures, including the sources of guidance utilized in the process.

⁴ are a set of accounting guidelines for public firms' financial statements that are meant to ensure their consistency, transparency, and ease of comparison on a global scale.

⁵ It consists of one of the "Big Four" accounting firms, like KPMG that was earlier mentioned, and it plays a crucial role in the global financial ecosystem by providing independent and trusted audit services.

The objective of IFRS S2 Climate-related Disclosures, is to require an entity to disclose information about its climate-related risks and opportunities that is useful to primary users of general-purpose financial reports in making decisions relating to providing resources to the entity (IFRS,2023). IFRS S2 mandates the disclosure of metric categories, encompassing the reporting of greenhouse gas (GHG) emissions categorized as Scope 1, Scope 2, and Scope 3 during the reporting period. Table 2 summarizes all scopes.

List of Scopes	Description
Scope 1 emissions	Refers to direct greenhouse gas emissions stemming from sources owned or under the control of a company.
Scope 2 emissions	Encompass indirect greenhouse gas emissions that arise from the production of purchased electricity, heat, or steam consumed by the company.
Scope 3 emissions	Which extend beyond Scope 2 greenhouse gas emissions, comprise indirect emissions occurring throughout a company's value chain, encompassing both emissions upstream and downstream in the chain.

Table 2 - Scope emissions of IFRS S2

Considering the intricacy of Scope 3 disclosure, which entails tracking GHG emissions throughout a company's value chain, it has historically posed several difficulties related to data accuracy and collection (Chan, 2023). To address this, the standard includes a temporary transition provision. This provision allows companies to delay the disclosure of Scope 3 GHG emissions during the initial year of implementing the standard. The ISSB recognizes that companies might not always have immediate influence over their Scope 3 emissions, particularly in the short term.

When an entity is reporting GHG emissions in adherence to the Greenhouse Gas Protocol (GHGP)⁶ under IFRS S2, it is obligatory to provide information about the

⁶ It offers guidelines, standards, tools, and training so that businesses and governments may assess and control emissions that contribute to global warming.

chosen approach (such as the equity share or control approach) and specify the consolidated accounting group to which these emissions are attributed.

Deloitte (2023) explained that IFRS S1 and IFRS S2 will demand the disclosure of any material information about sustainability and climate-related risks and opportunities. However, as mentioned by Calabrese et al. (2017), one of the challenges of the sustainability reports is the definition of materiality, in sustainability terms, due to the difficulty of measurement, comparing to the financial information. In response to this problematic, IFRS (2023) considers material information if its omission, inaccurate representation, or concealment may reasonably be expected to affect choices that main users make in reliance on such reporting.

Both standards are enlightened with the 4 principals that TCFD created (Governance, strategy, Risk management, Metrics, and targets), making it easier for the companies that already implemented those concepts. The application date for both IFRS S1 and IFRS S2 for annual reporting periods will begin on or after January 1, 2024.

2. Methodology

2.1. Data collecting and inquiry structure

Considering the theory explored in the literature review, IFRS S1 and IFRS S2 is a very recent topic, as so, there is not so much literature about it. This study uses a quantitative approach, using a survey via google forms in English (appendix 1) and the data was analyzed and treated on excel.

The survey is divided in two categories: auditors and non-auditors. To make sure, that most of auditors in Portugal were inquired, the survey was sent to every certified public accountant, listed in the OROC⁷. For the other participants, the survey was distributed in individuals of different backgrounds. The questions were closed type questions, where the participants respond based on a five-point Likert scale (“Strongly disagree”; “Disagree”; “undecided”; “Agree”; “Strongly agree”) of choice of statement that should be the most comfortable and accurate in their opinion.

As previously said, the survey has two participant groups (auditors and non-auditors), although, participants were unaware of the group they were selected to. This single-blind approach was possible by asking each participant if they were auditors. For auditors, as they have more knowledge about the topic, the focus was about the future challenges for auditors with the application of the IFRS S1 and IFRS S2. For those who were not auditors, the emphasis was more about general questions and major benefits of ESG integration in the audit. Although the auditors started the inquiry in a different way, they also answered the questions proposed to the non-auditors.

Throughout the survey, certain optional texting spaces were provided, for the participants who want to add a commentary or suggestion to the survey. Every

⁷ Is the obligatory accountancy organization for statutory auditors and audit firms in Portugal.

participant was previously informed about the objective, anonymity, and confidentiality of this study, answering it in a voluntary manner.

3. Results and discussion

3.1. Sample Characterization

There were 68 participants on this survey, distributed as 45 being statutory auditors and 23 non auditors. As previously mentioned, this survey is directed to auditors and non-auditors, and it is possible to analyze that most of participants were auditors. Figure 1 illustrates the percentages that audit professionals represent (66,2%) and non-auditors (33,8%).

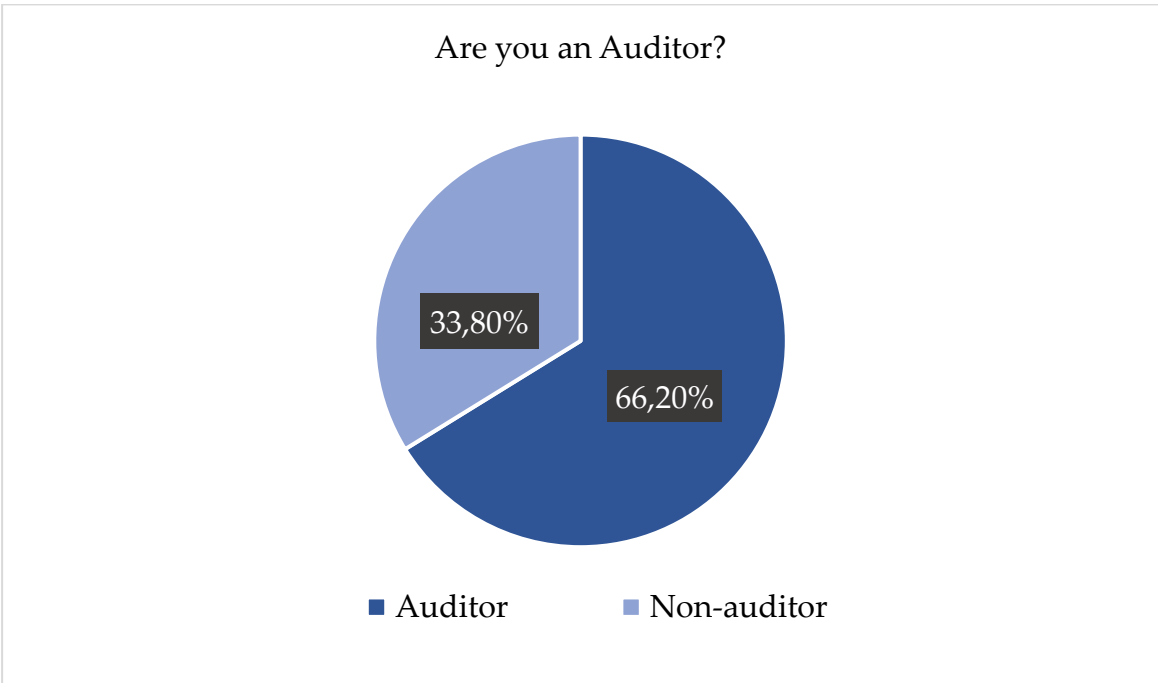


Figure 1- Characterization of the sample

3.2. Auditor’s responses analysis

In this section, our primary focus revolves around the insights garnered from audit professionals' responses. It is worth noting that only auditors were granted access to this segment of the survey. The specific aim of this section was to discern any prevailing trends in the responses of individuals within the same profession,

particularly regarding the key challenges they encounter during the application of IFRS S1/S2 in their audit procedures. Figure 2 illustrates the frequency of participants who expressed their agreement by selecting either "agree" or "strongly agree" in response to the provided options.

A - Difficulty in assessing the materiality of ESG factors

B - Scarcity of reliable and consistent data

C - Lack of ESG knowledge and skills among auditors

D - Resistance or lack of engagement from audited companies

E-Transition planning from another guidelines (Global reporting initiative/Sustainability accounting standards Board) to ISSB

F - Absence of standardized methodologies for scenarios analysis

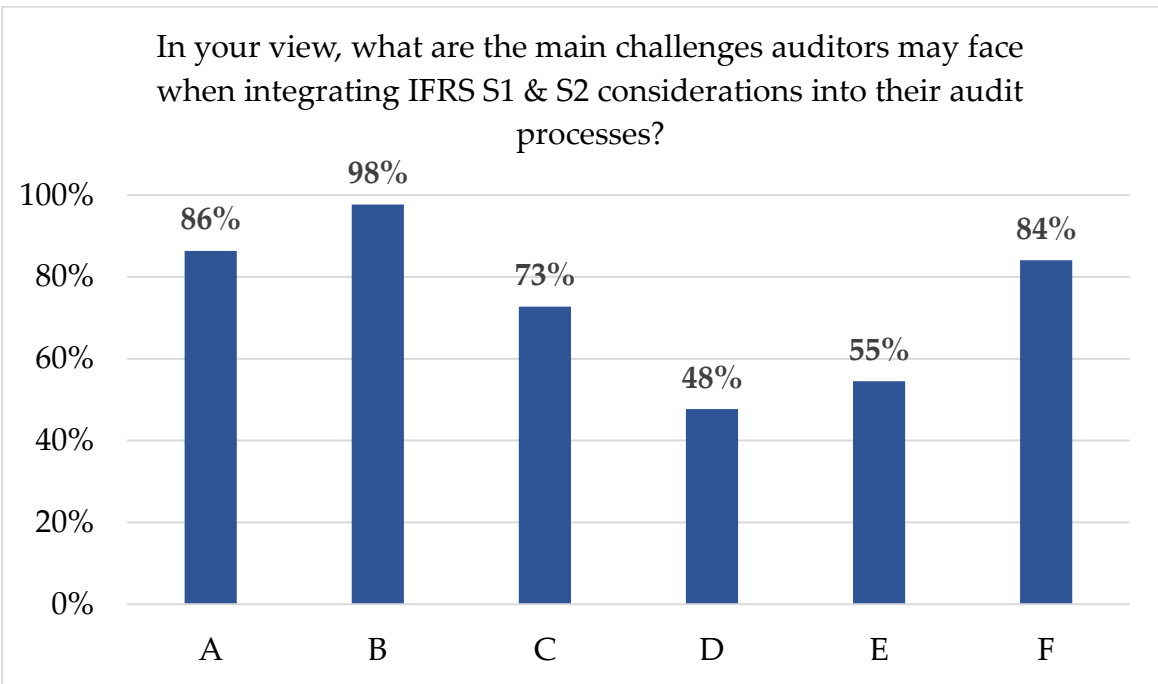


Figure 2- Auditors opinion about the challenges of the IFRS S1 & S2 integration on audit

Analyzing the responses, it is possible to highlight three main challenges that are: (i) Scarcity of reliable and consistent data, with a percentage of 98% meaning that 44 auditors out of 45, consider this the major challenge of the norms. Some participants

added a comment on this specific topic, pointing that companies would play a big role on giving consistent data and reliable information. (ii) Difficulty in assessing the materiality of ESG factors, 86% answered this is going to be a challenge. On this specific subject, a participant suggested that validation of CO₂ emissions is going to be another challenge. (iii) Absence of standardized methodologies for scenarios analysis, was chosen by 84% of auditor’s population.

In terms of the essential skills and knowledge required for auditors to effectively engage with the opportunities and risks associated with ESG, Figure 3 provides a visual representation of the congruent responses from participants.

- A - In-depth knowledge of ESG principles and standards
- B - Ability to interpret and communicate ESG information clearly
- C - Analytical skills to assess company ESG performance
- D - Familiarity with ESG data technologies and analytics tools

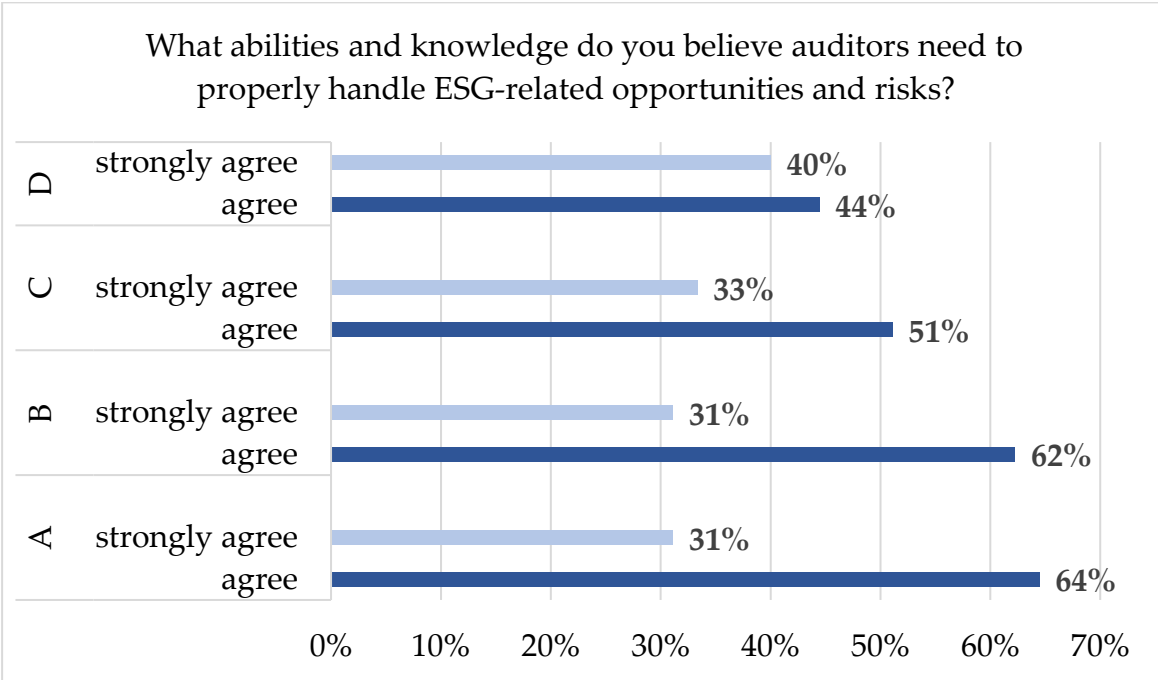


Figure 3– Auditors opinion about the required skills for ESG

Examining the outcomes, the majority agreed that auditors need a general knowledge of ESG guidelines and principles and the ability to express that information in a clear and effective manner. Both options, had a 31% of a “strongly agree” opinion, 64% and 62% of an “agree” opinion, respectively. However, it is worth mentioning that familiarity with the combination of ESG data technology and analytics tools, has the most equal rate of responses between the “agree” option and “strongly agree” option, with 44% and 40% correspondingly.

Following the survey, it was asked to the auditors which procedures should be taken to ensure accuracy and reliability of ESG data in audits. Figure 4 describe the distribution of the auditors’ choices.

- A – Do a comprehensive investigation of the data’s origins.
- B – Verify the methodology of data collection and calculation of ESG indicators
- C – Use independent and reliable data sources
- D - Hire ESG specialists to aid with the audit

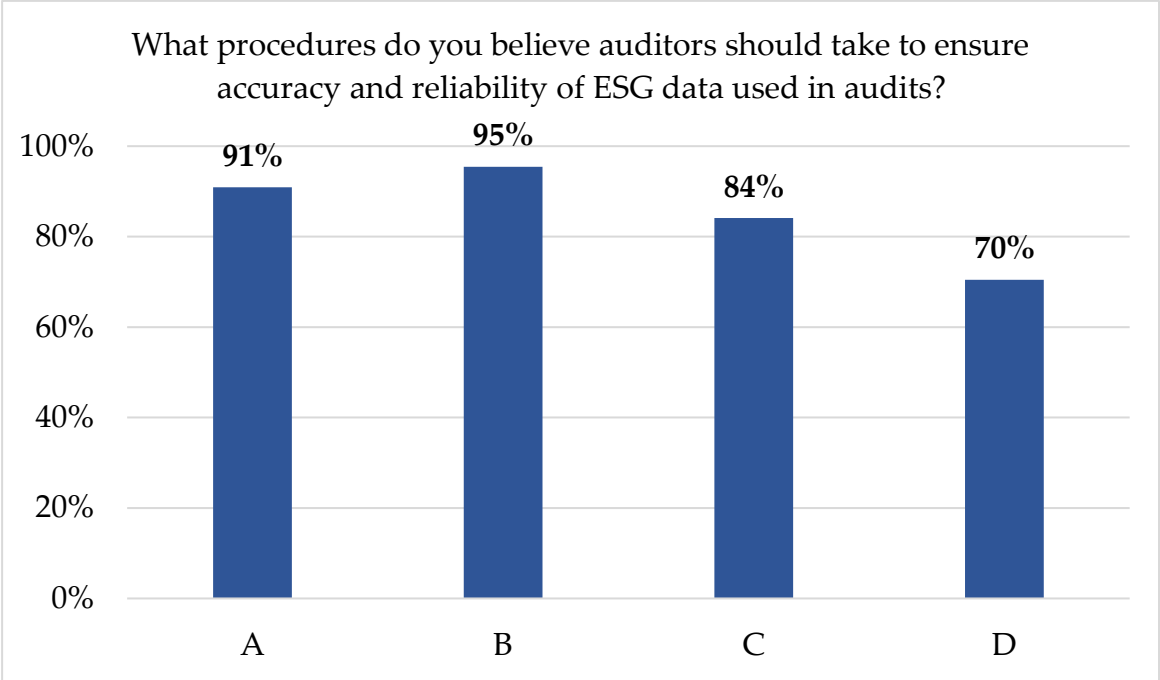


Figure 4– Auditors opinion on the methods to guarantee accuracy and reliability on ESG data.

Observing the results, 95 % of the auditors considered verifying the methodology of the data collection and calculation of ESG indicators, an important procedure to ensure the reliability of this kind of data on audit process. Notwithstanding, 91% responded that doing a comprehensive investigation of the data origins could help to ensure sustainability information.

The last question of the auditor’s section of the survey, had the objective to explore the point of view of the auditors, on the combination of technology and data analytics with ESG auditing. Figure 5 illustrates the auditor’s opinion on this subject.

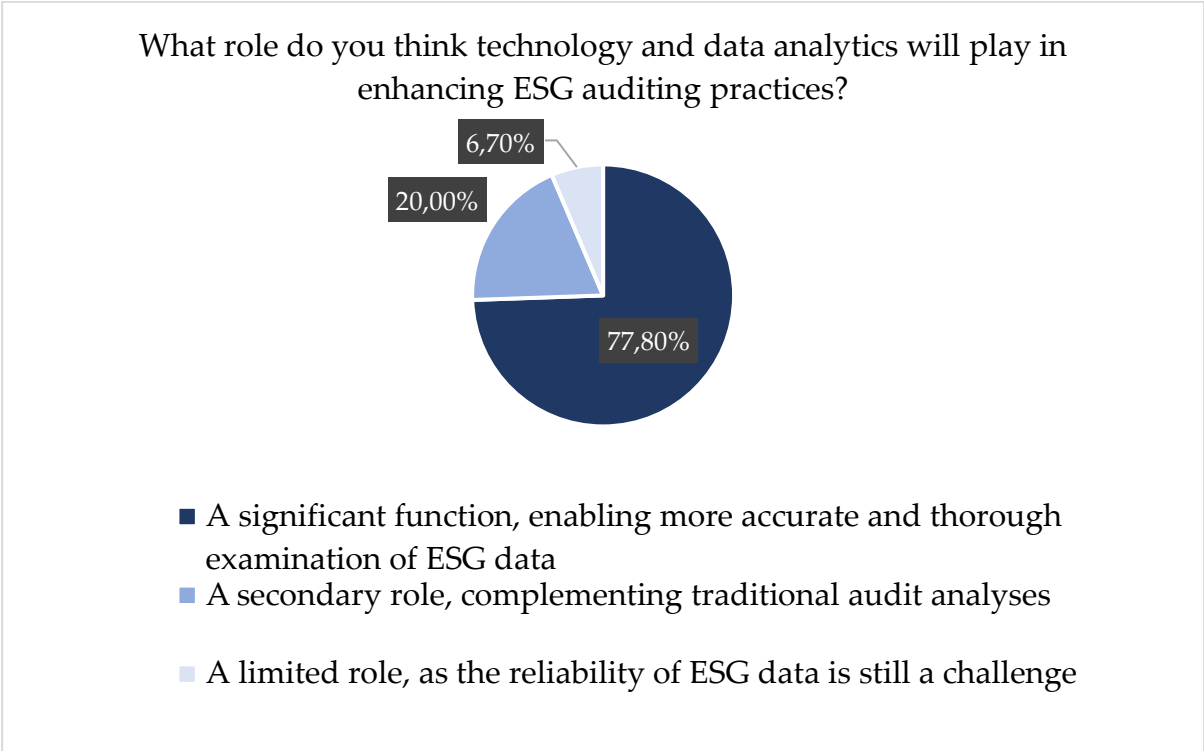


Figure 5 – Auditors opinion of the combination of technology and ESG auditing practices

By the results, 77,3% of the auditors think that data analytics and technology is going to play an important role in the future. Only 6,8 % responded that this combination of technology and ESG is going to have a limited role.

3.3. General responses analysis

In this section, the participant pool has expanded to encompass not only auditors but also non-auditors. The initial question in this section aims to gauge participants' perspectives regarding the integration of ESG factors in audit engagements. Figure 6 serves as a visual representation of the outcomes derived from this question.

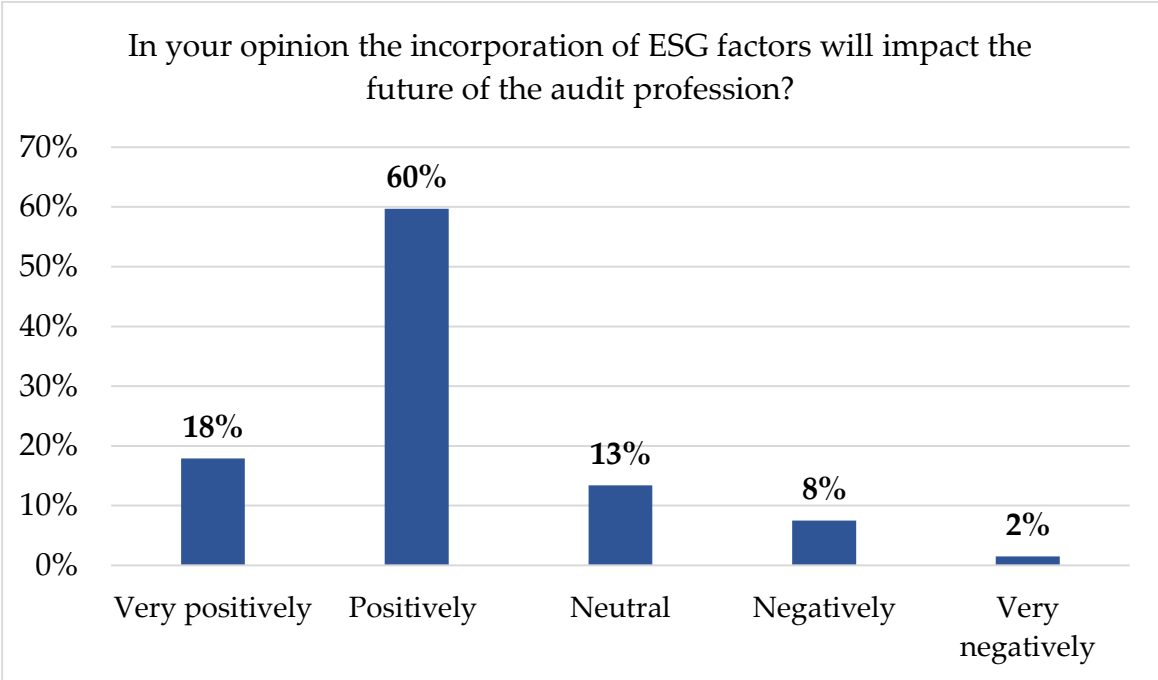


Figure 6 – Participants opinion on the impact of ESG integration on audit

Previous results shows that more than half of the participants (60%) consider that ESG will impact positively the future of the audit profession. Even the option “Very positively” is the second most popular answer with 18%.

In our ongoing analysis, the perspectives of the participants regarding potential strategies to incentivize firms on applying the ESG guidelines. Figure 7 describes the results.

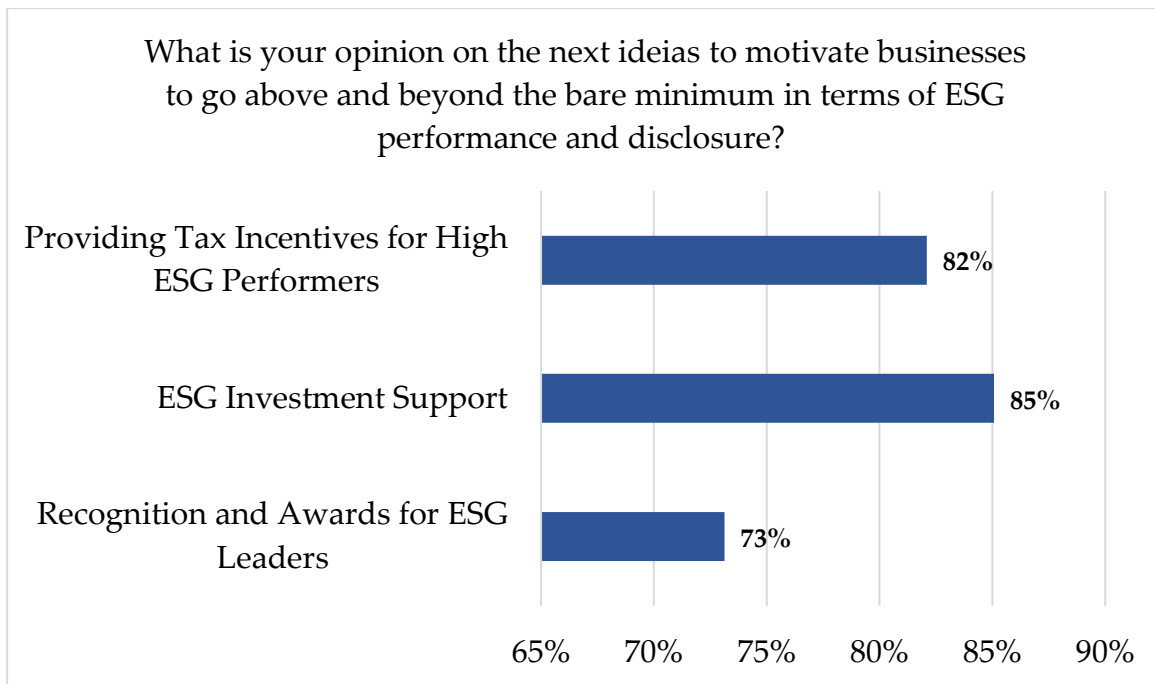


Figure 7 – Participants opinion on incentives to firms being more sustainable.

As it is show on the results, the most voted procedures to provide motivation to surpass the bare minimum regarding the ESG performance and disclosure were the support on ESG investment with 85% and tax incentives for firms who have better ESG performance.

Last question was about to see the opinion of participants on which benefits they see on having a regulation for the ESG information on the reports. As a reminder, participants could only choose the 3 more relevant for them from the most important to the least important. Figure 8 demonstrates the results.

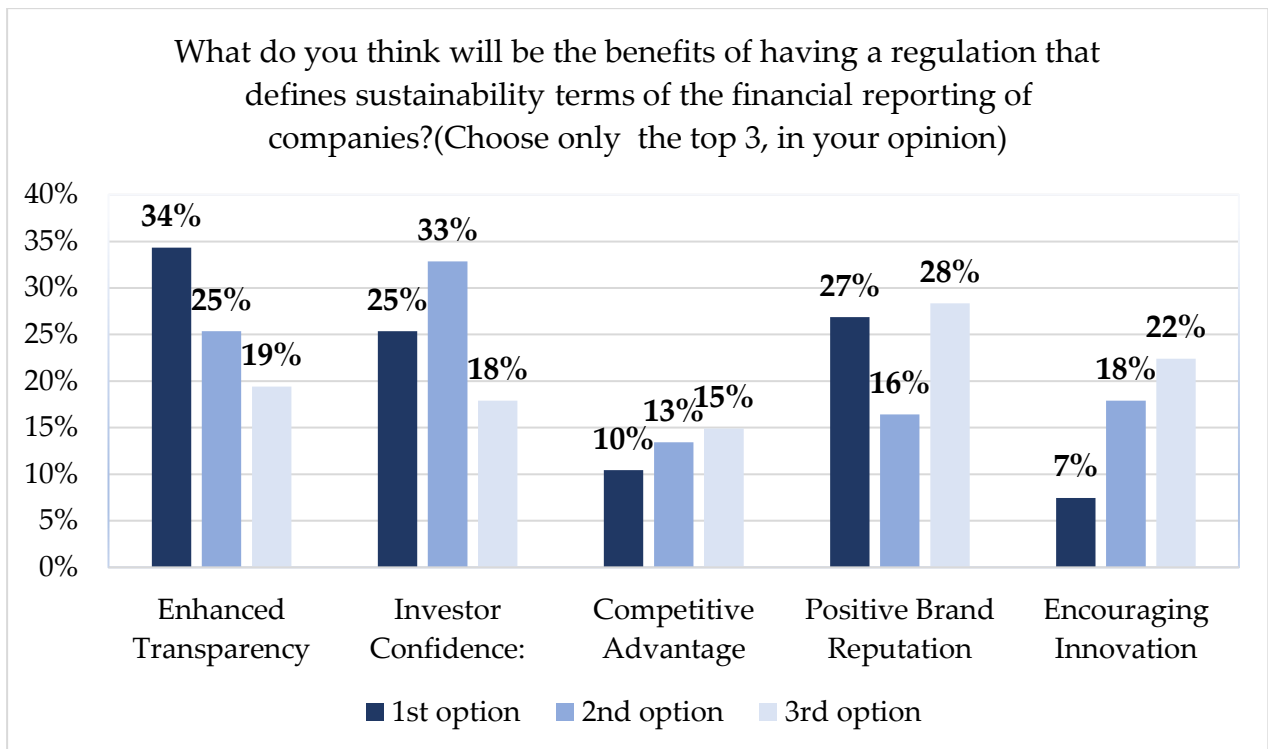


Figure 8 – Participants opinion of the benefits of having ESG regulation.

Based on the preceding findings Enhanced Transparency, Positive Brand Reputation, and Investor Confidence emerge as the top choices, with 34%, 27%, and 25% of participants, respectively, considering them as the primary and most significant options. In the secondary selection, preferences were more diversified, with Investor Confidence receiving 33%, Enhanced Transparency at 25%, and Encouraging Innovation at 18%. For the third option, Positive Brand Reputation, Encouraging Innovation, and Enhanced Transparency remain prominent choices, with 28%, 22%, and 19% of participants, respectively, indicating their significance on the benefits of having ESG regulation.

3.4. Discussion of results

The findings from this research provide important insight on the perceptions and opinions of both auditors and non-auditors regarding ESG factors in audit engagements. The examination of participant responses reveals several significant

patterns and insights that hold significance for the future of the audit profession and the drive for businesses to implement ESG standards.

Most participants (60%), hold an optimistic view that ESG factors will have a positive impact on the future of the audit profession and 18% expected a very positive outlook. This optimistic attitude reveals an increasing awareness of the potential advantages and relevance of ESG considerations in the realm of auditing. This pattern aligns with the observations made by Alsaahli & Malagueño (2022), who noted that consumers are progressively becoming more acquainted with and exhibiting greater demands for sustainability-related initiatives across various facets of life and society. This favorable influence that most of participants believed, can be reflected on the opinions of the integration of regulation on non-financial information of the companies reports. Arising a range of benefits that participants emphasized in this study. Notably, they highlighted the significance of enhanced transparency through the creation of a clear and comprehensive non-financial report, echoing findings discussed by Tysiac (2022) in their research. Another popular benefit among the participants was the recognition of a strong reputational impact for ethical and responsible business practices. Furthermore, the increase in investor trust which combines with the vision of (Hazaea et al., 2021), that ESG compliance with auditing, grows investor's reliability, constitutes the third more popular on this topic.

Regarding the section exclusive for the audit professionals, the research focused on the challenges they can face when implementing of IFRS S1 and IFRS S2 in their audit procedures and the necessary abilities and expertise for successfully addressing opportunities and risks associated with ESG. The main challenge that almost every participant voted for, was the scarcity of reliability and consistent data. This aligns with the greater difficulty auditors experience in assuring data quality and integrity (Rahman, 2014.). This challenge is linked with the assurance of the reliability and ESG data, which auditors recommended that verifying the methodology of data collection and calculation of ESG indicators, while conducting comprehensive investigations into data origins, are procedures that should be considered. However, from this

emerges a major challenge elucidated by Saini et al., (2022) explained by the intricate task of ensuring the entire supply chain of a company being sustainable efficient. This problematic is directly tied with the Scope 3 of the IFRS S2, posing a fundamental question for auditors: How can they validate information and assess the sustainability of a supply chain that operates beyond the view of the audited firm itself?

Another main challenge that was pointed out, was the difficulty in assessing the materiality of ESG factors, supported by (Calabrese et al., 2017) explaining the complexity of defining ESG materiality and the need for standardized methodologies and clear guidelines in ESG reporting.

Technology emerged as another focal point on the results of this study, with a significant majority of auditors considering that data analytics and technology will play a pivotal role in the future, a sentiment echoed by Munoko et al. (2020). This underlines how technology is acknowledged in the sector as a transformative force on fomenting the audit efficiency, data quality and risk assessment.

4. Conclusion

This study shows valuable insights into the perceptions of auditors and non-auditors regarding ESG factors in audit engagements. The detailed analysis of participant responses reveals several significant patterns and insights that carry profound implications for the future of the audit profession and the growing importance of ESG standards for businesses. Most participants are optimistic about the positive impact of ESG on the audit profession, reflecting a growing awareness of its advantages. These benefits include enhanced transparency, improved reputation for ethical practices, and increased investor trust.

In the context of audit professionals, the study focused on challenges associated with implementing IFRS S1 and IFRS S2 and the expertise required to address ESG-related opportunities and risks. The primary challenge identified by participants is the lack of reliable and consistent data, aligned with auditors' struggles to ensure data quality and integrity. Auditors recommend verifying data collection methodologies and conducting thorough investigations into data sources. Additionally, the complexity of ensuring the sustainability of an entire supply chain (Scope 3 of IFRS S2) poses a significant challenge.

Assessing the materiality of ESG factors is another challenge, emphasizing the need for standardized methodologies and clear guidelines in ESG reporting. Technology, particularly data analytics, is seen as a transformative force in the audit profession, enhancing efficiency, data quality, and risk assessment.

4.1. Limitations and Future research

This study has identified certain limitations that offer opportunities for enhancement. Firstly, the sample population was confined to audit professionals and

non-auditors in Portugal. To enrich the study's findings and offer broader perspectives, it would be beneficial to expand the research to include participants from different countries with even more diverse viewpoints. This broader geographical scope would yield a more comprehensive dataset, enabling a more robust analysis of trends and implications.

Furthermore, considering the relatively recent emergence of this topic and the limited available content, this study can serve as a foundational framework for future research endeavors. These subsequent studies could contribute significantly to the academic community, further advancing our understanding of the subject. Ultimately, this collective knowledge could foster the development of a more sustainable and socially responsible audit profession and society.

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Appendices

Appendix 1. Survey

This survey was elaborated both in English (EN):

I am currently conducting a scientific study for my master's thesis on the topic of the future of ESG in audit. The purpose of this study is to understand some trends and perspectives about this topic, also exploring the new regulation of IFRS S1 and IFRS S2. Answering the survey will take around 7 minutes.

We ask you to thoroughly answer every question. Your answers are very important to the accuracy of our survey. All answers will be treated confidentially and anonymously. There are no right or wrong answers. If you have any questions, feel free to contact bernardo.h.albuquerque@gmail.com

Best regards

Bernardo Albuquerque

Gender:

- Male

- Female

Are you an Auditor?

-Yes

-No

What is your profession or area of expertise?

Challenges of the IFRS S1/S2

International Sustainability Standards Board (ISSB) launched new regulation regarding sustainability on the financial reports of the companies, called IFRS S1/ IFRS S2. These standards are designed to provide investors and other stakeholders with more consistent, comparable, and decision-useful information about a company's sustainability-related risks and opportunities.

IFRS S1- General Requirements for Disclosure of Sustainability-related Financial Information.

IFRS S2 - Specifies the requirements for the disclosure of climate-related disclosures.

In your view, what are the main challenges auditors may face when integrating IFRS S1 & S2 considerations into their audit processes?

	strongly disagree	Disagree	undecided	Agree	strongly agree
Difficulty in assessing the materiality of ESG factors	(1)	(2)	(3)	(4)	(5)
Scarcity of reliable and consistent data	(1)	(2)	(3)	(4)	(5)
Lack of ESG knowledge and skills among auditors	(1)	(2)	(3)	(4)	(5)
Resistance or lack of engagement from audited companies	(1)	(2)	(3)	(4)	(5)
Transition planning from another guidelines (Global reporting initiative/Sustainability accounting standards Board) to ISSB	(1)	(2)	(3)	(4)	(5)
Absence of standardized methodologies for scenarios analysis	(1)	(2)	(3)	(4)	(5)

If you believe there are more challenges, among the others mentioned, please write bellow:

As mentioned in IFRS S1/S2, what abilities and knowledge do you believe auditors need to properly handle ESG-related opportunities and risks?

	strongly disagree	Disagree	undecided	Agree	strongly agree
In-depth knowledge of ESG principles and standards	(1)	(2)	(3)	(4)	(5)
Ability to interpret and communicate ESG information clearly	(1)	(2)	(3)	(4)	(5)
Analytical skills to assess company ESG performance	(1)	(2)	(3)	(4)	(5)
Familiarity with ESG data technologies and analytics tools	(1)	(2)	(3)	(4)	(5)

Which procedures do you believe auditors should take to ensure accuracy and reliability of ESG data used in audits? (Select all relevant options)

	strongly disagree	Disagree	undecided	Agree	strongly agree
Do a comprehensive investigation of the data's origins.	(1)	(2)	(3)	(4)	(5)
Verify the methodology of data collection and calculation of ESG indicators	(1)	(2)	(3)	(4)	(5)
Use independent and reliable data sources	(1)	(2)	(3)	(4)	(5)
Hire ESG specialists to aid with the audit	(1)	(2)	(3)	(4)	(5)

What role do you think technology and data analytics will play in enhancing ESG auditing practices?

- A significant function, enabling more accurate and thorough examination of ESG data
- A secondary role, complementing traditional audit analyses
- A limited role, as the reliability of ESG data is still a challenge

Benefits on Integration of ESG Factors

ESG stands for Environmental, Social, and Governance. It's a way to measure a company's sustainability and ethical practices, covering environmental impact, social responsibility, and corporate governance.

In your opinion the incorporation of ESG factors will impact the future of the audit profession?

- () Very positively
- () Positively
- () Neutral
- () Negatively
- () Very Negatively

What is your opinion on the next ideas, to motivate businesses to go above and beyond the bare minimum in terms of ESG performance and disclosure?

	strongly disagree	Disagree	undecided	Agree	strongly agree
Recognition and Awards for ESG Leaders	(1)	(2)	(3)	(4)	(5)
ESG Investment Support	(1)	(2)	(3)	(4)	(5)
Providing Tax Incentives for High ESG Performers	(1)	(2)	(3)	(4)	(5)

If you believe there are more incentives, among the others mentioned, please write bellow:

What do you think will be the benefits of having a regulation that define sustainability terms of the financial reporting of companies? (Choose only the top 3, in your opinion)

Enhanced Transparency	(1)	(2)	(3)	(1) – First option
Investor Confidence:	(1)	(2)	(3)	(2) – Second option
Competitive Advantage	(1)	(2)	(3)	(3) – Third option
Positive Brand Reputation	(1)	(2)	(3)	
Encouraging Innovation	(1)	(2)	(3)	

Free space for any comment:
