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(Convocatoria 2024)**

Implementation of the circular economy in corporate reporting

Company and audit perspective

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IMPLEMENTATION OF THE CIRCULAR ECONOMY
IN CORPORATE REPORTING. COMPANY AND AUDIT
PERSPECTIVE

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1 Introduction

The circular economy can be defined as an economic model that promotes the reduction, reuse and recycling of materials and products, aiming to maximise resource use and minimise waste throughout the value chain. Unlike the traditional linear economy, which follows a "produce, use and discard" cycle, the circular economy establishes a more sustainable system in which materials are reintegrated into the production process across different phases of the outputs' life cycle. This not only contributes to the conservation of the environment but also creates opportunities to innovate in business models and production processes.

The concept of the circular economy began to take shape in the 1960s and 1970s, when the linear economic model started to be questioned due to various challenges, such as the 1973 oil crisis and the debates arising at the 1972 United Nations Conference on the Human Environment held in Stockholm. This traditional approach is heavily dependent on the continuous extraction of natural resources and generates significant amounts of waste, which is unsustainable in the long term. One of the early antecedents of the circular economy was Stahel's concept of "extension of the use-life of goods"¹ and the well-known *cradle to cradle* model developed by William McDonough and Michael Braungart². However, one of the first authors to use the term circular economy, as opposed to linear production systems, was Pearce & Turner (1990) based on the work of Boulding (1966). These ideas proposed a life cycle for products and materials based on maintaining continuous circulation, minimising waste generation as far as possible.

Along the same lines, other theories that influenced the development of the circular economy emerged, such as regenerative design and industrial ecology. The circular economy gradually became established as a model that seeks to replicate natural cycles, in which the waste from one process becomes the input for another. The Ellen MacArthur Foundation, founded in 2010, was one of the organisations that significantly promoted the adoption of this model, working with companies and governments to encourage the redesign of products and processes.

From a microeconomic perspective, the adoption of the circular economy entails changes in environmental management and requires the progressive introduction of specific indicators and measurement practices that reflect circularity, for the preparation of sustainability reports (Llena et al., 2023; Scarpellini et al., 2020). In this regard, the recent adoption of regulations requiring the preparation and disclosure of information on various aspects of sustainability, including matters related to the circular economy addressed in this paper, is particularly relevant. The main regulatory framework on which this study is based is Directive (EU) 2022/2464, the Corporate Sustainability Reporting Directive (CSRD), from which the European Sustainability Reporting Standards (ESRS) derive, published as Commission Delegated Regulation (EU) 2023/2772 (Official Journal of the European Union, 22 December 2023).

1 For a deeper understanding of the origins of this concept, see Stahel (2019)

2 See McDonough, W. & Braungart, M. (2010).

2 Objective of the study

The objective of this study is to analyse the extent to which measures for the circularity of activities have been introduced into management systems, as well as the level of knowledge of the circular economy among those responsible for financial reporting (in particular CFOs) and auditors/verifiers of corporate reporting in Spain. It also seeks to provide a better understanding of the implications that the adoption of the ESRS has on corporate activities and disclosures, with a focus on ESRS E5 Resource use and circular economy.

The study is framed within the context of what is referred to as the circular economy, a dimension integrated into sustainability and promoted by various international (European Circular Economy Package, comprising several regulations and action plans), national (Spanish Circular Economy Strategy) and regional initiatives.

The relevance of the study is justified by the major changes introduced by the recent adoption of Commission Delegated Regulation (EU) 2023/2772 of 31 July 2023, supplementing Directive 2013/34/EU (as amended by the CSRD) as regards sustainability reporting standards. In this regard, the sustainability information required by the Directive must be incorporated into the management report of undertakings as a clearly identifiable section.

In particular, the Non-Financial Statement (NFS), regulated by Law 11/2018 of 28 December, amending commercial legislation on non-financial information and diversity, had already established the obligation to disclose information on various components of sustainability, including "Circular economy and waste prevention and management" and "Sustainable use of resources", among other environmental and social matters. It should be noted that the NFS has been replaced by the sustainability statement governed by Commission Delegated Regulation (EU) 2023/2772.

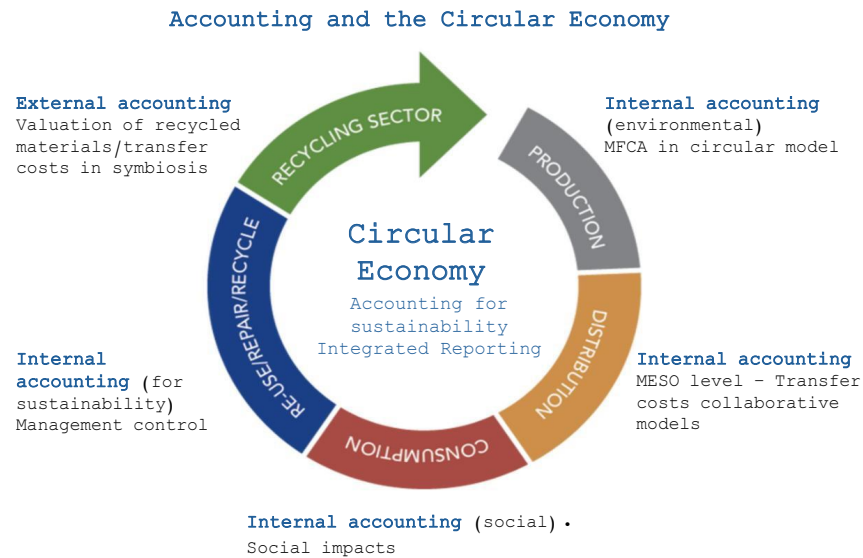
The circular economy and resource use are addressed in Delegated Regulation (EU) 2023/2772, which sets out the standards governing the sustainability statements to be prepared by undertakings subject to the CSRD. This is the case because, among the 12 ESRS standards, one of the five environmental standards is specifically **ESRS E5 Resource use and circular economy**.

Various aspects and activities linked to the circular economy are reflected across different proposals, strategies and action plans aimed at integrating circularity into business activities (European Commission, 2025, 2020; EMF, 2013; Ministry for the Ecological Transition and the Demographic Challenge (MITECO), 2020) and research papers (Marco *et al.*, 2021; Llena *et al.*, 2023; Stewart & Niero, 2018). They can be summarised by the "3Rs" of circularity: reduction, reuse and recycling. However, this simplification can be extended to include many other actions such as remanufacturing, design to extend product durability, dematerialisation, recyclability, reparability and upgradability, energy efficiency, the use of renewable energy, symbiosis and resource sharing, among others. These activities may affect resources, processes or outputs/products.

For effective internal management and transparency in these activities, it is necessary to prepare and disclose information that supports stakeholder decision-making (Figure 1). In this regard, *Environmental Management Accounting* proposes the preparation of two types of complementary information. Firstly, quantitative or qualitative information on the use, physical flows and destination of resources, including energy; and secondly, financial or monetary information on the effects of these activities on corporate accounts.

ESRS E5 appears to follow this approach, as it requires information on policies, actions and resource inflows and outflows, which have a more qualitative or physical nature, while also setting out requirements for disclosures on the financial effects of related impacts, risks and opportunities.

//// **FIGURE 1** Accounting and the Circular Economy



For all these reasons, it is important to assess the level of knowledge and implementation of this regulatory framework among companies and the professional groups involved, as well as the challenges arising from adapting to the new reporting requirements established by the CSRD and Delegated Regulation (EU) 2023/2772.

Accordingly, the aim of this study is to analyse the degree of integration of circularity measures into companies' management and operational systems and the level of knowledge and application of circular economy variables by companies and audit firms within their respective areas of responsibility. And derived from this, the impact that these circular actions have on the corporate information to be published and, specifically, on the sustainability information regulated by the ESRS.

In addition, it aims to analyse the implications of the application of the ESRS, specifically ESRS E5 Resource use and circular economy, in the management and information systems of organisations.

3 Background

The growing importance of sustainability reporting reflects how environmental and social responsibility has become essential for the long-term success of organisations. This shift is driven, among other factors, by greater public awareness of environmental and social challenges, pressure from investors and consumers, and an increasingly stringent regulatory framework (KPMG, 2020).

Within the EU, the European Commission has been responsible for developing a regulatory framework to guide undertakings and other organisations towards greater transparency and accountability, aligning business practices with the objectives of the European Green Deal and the Taxonomy Regulation (Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment). It is within this context that Directive (EU) 2022/2464, the Corporate Sustainability Reporting Directive (CSRD), was developed, from which the European Sustainability Reporting Standards (ESRS) derive.

Directive (EU) 2022/2464, however, is only the latest development in sustainability *reporting* in a long list of developments over the last two decades, both voluntary and regulatory. In order to understand the content, objective and regulatory framework of the Directive and the ESRS, it is necessary to review their origins and the evolution that has taken place over time.

From the 1990s onwards, growing concern about a production and consumption model that was environmentally and socially unsustainable led to the emergence of numerous voices calling for a shift towards a new, more balanced and rational paradigm, one that would be sustainable both in the short and long term and ensure the preservation of the planet's natural resources. The work of authors such as Preston *et al.* (1975), Freeman (1984) and Gray *et al.* (1986), among others, advocating business approaches more closely integrated with society, was complemented by the 1987 United Nations report '*Our Common Future*', better known as the Brundtland Report, which defined sustainable development as: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

The resulting increase in environmental and social awareness, together with the growing demand for sustainable economic development, led companies to shift their focus towards environmental sensitivity (Dincer, 2011) and towards the management model known as Corporate Social Responsibility (CSR). Balancing societal needs with economic progress requires companies to adopt initiatives that enable the distribution of economic, social and political returns among the groups from which they derive their power and legitimacy (Shocker & Sethi, 1973; Carroll, 1991).

The economic and financial crises of 2008 and 2011 further highlighted the importance of developing responsible business models, the need to strike a balance between voluntary initiatives and regulation, and the increasing role of transparency, social pressure, and responsible or "green" consumer groups (Van der Ploeg *et al.*, 2013; Geels, 2013; Rodríguez *et al.*, 2015). Sustainable development addresses a global need, both present and future, with significant implications for current lifestyles and societal values. Companies, along with society as a whole, are now confronted with new dilemmas that set the immediate pursuit of needs and objectives against the need to accept certain sacrifices and adaptations consistent with more sustainable behaviours.

As companies are key actors in the economic development of society, the traditional approach centred exclusively on shareholders, in which corporate responsibility is limited to duties towards shareholders and income generation (Friedman, 1970), is insufficient to promote a sustainable model. The schools of thought advocating for the integration of the interests and needs of other groups related to companies, based on *stakeholder* theory (Freeman, 1984), contributed to the development of the

Corporate Social Responsibility (CSR) model, through which companies commit to sustainable development (Starik, 1995). Business organisations continue to pursue their profit-making objectives while simultaneously reducing their ecological footprint and contributing to social progress (Sharma, 1998).

Under the CSR model, companies must safeguard the interests of shareholders, but also those of other groups or entities affected by their activities, such as employees, suppliers, customers, and the broader community (AECA, 2004). By observing and integrating the needs of these stakeholders, companies develop corporate strategies and economic outcomes aligned with sustainability. In this regard, a two-way communication channel is established between companies and society, represented by multiple stakeholder groups, allowing for mutual influence (Freeman, 1984; Donaldson & Preston, 1995) and the creation of a development model consistent with the needs of all.

The three dimensions of sustainable development, economic, social and environmental, are reflected in companies through the Triple Bottom Line (Elkington, 1997), whereby companies measure and analyse their performance across all three dimensions. The information obtained from this analysis enables companies to reorient their strategies and objectives to better meet the needs of their *stakeholders* and to strengthen their long-term competitive position (Porter & Kramer, 2006).

The voluntary and uneven nature of Corporate Social Responsibility (CSR) practices has posed a clear challenge for society in evaluating corporate performance, as the mandatory traditional corporate reporting did not include information on social or environmental performance (Moneva & Ortas, 2009). At the same time, recognising the efforts made by companies, as well as their commitment to sustainable development, required specific reporting mechanisms to inform stakeholders about these achievements. From this need arose the concept of accountability, the process through which companies openly communicate their performance in the three dimensions of sustainability. Accountability has become an essential element of the CSR model, serving as the primary channel through which undertakings report their achievements and commitments in the areas demanded by society (Gray *et al.*, 1996).

Although companies increasingly incorporate information into their sustainability reports to justify their activities in response to societal expectations (Daub, 2007; Blowfield & Murray, 2011), the instrumentalisation of CSR and accountability as marketing tools has become evident in many cases. Accountability has often been associated with corporate “greenwashing”, serving as a mechanism to offset activities with negative consequences (Cherry & Sneirson, 2011). Ultimately, accountability is the mechanism through which companies assume their commitment to transparency and, consequently, to maintaining relationships with their stakeholders. For this to be effective, the information disclosed must be accessible, comprehensive, relevant, material and reliable.

The uncertainty caused by the voluntary and arbitrary nature of corporate disclosures gave rise to the development of international initiatives and standards designed to determine what information should be disclosed and in what form, among which the Global Reporting Initiative (GRI) framework stands out. In addition to the GRI, other international bodies have issued proposals for sustainability information and indicators to be included in corporate disclosures, such as the eco-efficiency indicators of the United Nations ISAR group, the OECD Guidelines for Multinational Enterprises, the environmental management requirements under the EU EMAS Regulation, and voluntary initiatives such as the AccountAbility AA1000 standards. There are also national proposals, such as the AECA Integrated Scoreboard. All of these include proposals for information or indicators directly related to the circular economy.

These standards have gained significant prominence, with the GRI framework in particular being widely adopted by the business community. Other forms of accountability include third-party certification of management systems (such as quality, environmental, ethical systems, etc.), seals and standards, or even public awards and recognitions. In all these cases, these are voluntary communication mechanisms through which companies choose to disclose information about their performance to their stakeholders. The success of the GRI guidelines does not necessarily imply that companies have become more sustainable; in many cases, companies have viewed GRI reports as a mechanism to legitimise their decisions in the eyes of stakeholders (Deegan & Gordon, 1996; Moneva *et al.*, 2006).

Moreover, it has been noted that the content of sustainability reports often omits negative aspects of corporate performance, thereby presenting a biased image (Caron & Turcotte, 2009). These findings have been confirmed particularly in large companies with high environmental impact activities, which have increased their efforts and budgets devoted to accountability, providing abundant information and highlighting positive aspects in order to gain legitimacy that had previously been denied to them (Patten, 1992; O'Donovan, 2002).

In this context, and until the onset of the 2008 financial crisis, corporate sustainability and social responsibility did not receive the same level of attention as they do today. Companies operated in an environment where financial and non-financial disclosure requirements were less stringent and largely voluntary (Michelon & Parbonetti, 2012). The focus was placed on short-term financial performance, often to the detriment of environmental and social considerations, and responsible business practices were left to the discretion of companies themselves. The 2008 financial crisis highlighted the need for greater transparency and accountability within the corporate sector (Deegan, 2017). In response, a series of regulations and international standards were introduced to enhance the quality and comparability of CSR disclosures (KPMG, 2020; Álvarez-Etxeberria *et al.*, 2023). The drive to standardise CSR reporting was motivated not only by economic crises, but also by the rise of social and environmental movements demanding greater corporate accountability (Larrinaga & Bebbington, 2021), as well as growing concerns about climate change (Eccles & Klimenko, 2019).

As a result of this shift towards corporate sustainability reporting, many countries adopted transparency laws, particularly targeting the public sector, which directly or indirectly affected companies. One such example is Law 19/2013, whose purpose is "to expand and strengthen the transparency of public activity, to regulate and guarantee the right of access to information relating to such activity, and to establish the good governance obligations of public officials, as well as the consequences arising from their breach." Thus, the obligation to disclose information on non-financial matters, particularly good governance, began to be regulated, giving rise to an increasingly comprehensive approach in terms of both content and scope.

At the level of the European Union, the Parliament adopted Directive 2014/95/EU, incorporating guidelines on non-financial information for large undertakings, particularly in the field of diversity, and establishing an institutional framework for the transition towards a sustainable economy. Over the following years, new Guidelines were issued to complement the Directive, especially in relation to climate change, and in 2018, Spain adopted Law 11/2018, laying down requirements for the disclosure of non-financial information linked to corporate social responsibility, aimed at measuring, monitoring and managing companies' performance and their impact on society. The NFS is mandatory for large undertakings and public-interest entities and must include information on the impact of their activities on environmental and social matters, respect for human rights, anti-corruption and anti-bribery measures, as well as on workforce-related matters and compliance with equality, non-discrimination and disability rules.

The law already incorporated the obligation to report on the circular economy, as Article 1(2) established that the NFS must include material information on the following matters:

- Circular economy and waste prevention and management: measures for prevention, recycling, reuse, other forms of recovery and waste disposal; actions to combat food waste.
- Sustainable use of resources: water consumption and water supply management in accordance with local constraints; consumption of raw materials and measures adopted to improve the efficiency of their use; direct and indirect energy consumption, measures taken to improve energy efficiency, and the use of renewable energy sources.

In subsequent years, new regulatory initiatives expanded corporate disclosure requirements in key areas of sustainability, such as climate change, environmental protection and the circular economy. Thus, in 2019, the European Union launched the European Green Deal, aimed at achieving climate neutrality by 2050. Within the framework of the Green Deal, the Green Deal Industrial Plan focuses on the industrial transition towards a green economy, proposing an Industrial Strategy based on modernisation, eco-efficiency, digitalisation and innovation. In this context, the European Climate Law of 2021 established the legal framework for achieving climate neutrality by 2050.

Regarding reporting, in 2022 the European Parliament adopted Directive (EU) 2022/2464 as regards corporate sustainability reporting (CSRD), aimed at improving the quality of sustainability reporting while minimising costs, in order to maximise the potential of the European single market in supporting the transition towards a fully sustainable and inclusive economic and financial system, in line with the European Green Deal and the United Nations Sustainable Development Goals. This Directive, which expands and strengthens the disclosure requirements laid down by Directive 2014/95/EU, introduces significant innovations regarding the companies subject to reporting obligations, the content of sustainability information, the standards for preparing the disclosures, the reporting format, the requirement for independent assurance, and the regulation of key aspects of such assurance. Furthermore, the Directive replaces the term "non-financial information" with "sustainability information", encompassing environmental, social and governance factors. Although the deadline for transposing the Directive into national legislation expired on 6 July 2024, most Member States had not yet completed the transposition by that date.

The Directive also sets out the objective that: "Achieving a climate-neutral and circular economy without diffuse pollution requires the full mobilisation of all economic sectors" (Recital 48).

It is within the framework of these regulatory developments on non-financial reporting, as reflected in Directive (EU) 2022/2464, that the European Sustainability Reporting Standards (ESRS) were developed, with the aim of specifying the sustainability information that companies must disclose, and providing guidelines for the integration of sustainable practices and for the reporting of companies' performance.

Studies such as that of Bravo Navarro *et al.* (2024) stress that the ESRS are designed to provide a coherent and comparable structure for ESG information, which is critical for investors, regulators and other stakeholders seeking to make decisions based on reliable data.

According to Article 29b of the CSRD, "The sustainability reporting standards shall, taking into account the subject matter of a particular sustainability reporting standard:

- (a) specify the information that undertakings are to disclose about the following environmental factors:

...

iv)

resource use and the circular economy,

..."

This requirement is reflected in ESRS E5: Resource use and circular economy, which focuses on the efficient use of resources and the implementation of circular economy practices.

4 European Sustainability Reporting Standard E5: Resource use and circular economy

This study focuses on ESRS E5, which sets out how undertakings should manage, prepare and disclose information regarding their processes for identifying and assessing the main impacts, risks and opportunities associated with resource use, and for establishing targets to improve efficiency and reduce waste.

One of the main objectives of the standard is to support the transition towards more sustainable and responsible economic models, encouraging companies to adopt practices that prioritise the reuse, recycling and recovery of materials over traditional linear production and consumption models. This entails reporting in detail on aspects such as the amount of recycled resources used in production, the quantity of materials reused, the design of products for durability and ease of disassembly, the reduction of waste, and the use of renewable energy within production processes.

The standard also encourages undertakings to adopt systems for assessing their supply chains, identifying resources that may have significant environmental impacts and developing strategies to optimise their use. This is crucial in sectors such as manufacturing, construction and technology, where the environmental impact of materials and energy consumption is considerable. The implementation of practices aligned with this standard enables undertakings not only to improve their operational efficiency and reduce costs, but also to meet the expectations of consumers and investors who demand greater responsibility in resource management.

The specific objective of ESRS E5 is to specify disclosure requirements which will enable users of the sustainability statements to understand the following aspects:

- a) How the undertaking affects resource use, in terms of material positive and negative actual or potential impacts.
- b) Any actions taken, and the result of such actions, to prevent or mitigate actual or potential material negative impacts arising from resource use.
- c) The plans and capacity of the undertaking to adapt its strategy and business model(s) in line with circular economy principles.
- d) The nature, type and extent of the undertaking's material risks and opportunities related to the undertaking's impacts and dependencies, arising from resource use and circular economy.
- e) The financial effects on the undertaking over the short-, medium- and long-term time horizons of material risks and opportunities arising from the undertaking's impacts and dependencies on resource use and circular economy.

In addition, ESRS E5 helps undertakings to communicate transparently their efforts and achievements in this area, generating sustainability statements that reflect both progress made and challenges faced in the transition towards circular models. The comparability and consistency of these statements allow stakeholders to assess and compare the performance of different undertakings in terms of sustainability, which is fundamental for driving a more resilient and low-carbon global economy.

Like every ESRS, E5 is divided into subtopics, in this case three:

- Resource inflows, including use
- Resource outputs related to products and services
- Waste

ESRS E5 also establishes a series of datapoints that allow the measurement and reporting of an undertaking's performance in terms of the circular economy and resource efficiency. These datapoints are essential for assessing the degree of adoption of sustainable practices in resource management and the implementation of circular models. Some of the most relevant *datapoints* include:

- Consumption of Primary and Recycled Materials: This indicator measures the total quantity of materials consumed by the undertaking in its operations, distinguishing between virgin and recycled materials. It enables the assessment of the degree of dependence on natural resources and the adoption of recycled materials, which are key to reducing raw material extraction.
- Material Recycling and Reuse Rate: This *datapoint* reflects the percentage of materials that are recycled or reused instead of being discarded. It is a fundamental indicator for assessing the success of circular economy processes, revealing the recovery of materials and the reduction of waste generated.
- Product Lifecycle: This indicator assesses how the undertaking designs its products to extend their useful life. It includes data on product durability, reparability, and ease of disassembly at the end of the product's lifecycle. It is essential for understanding the extent to which products are designed for the circular economy and to minimise waste.
- Resource Use Efficiency: This datapoint measures the relationship between the resources consumed and the output generated, evaluating the efficiency in the use of raw materials, water and energy. It enables the assessment of the undertaking's operational sustainability and its capacity to optimise resource consumption.
- Waste Reduction and Hazardous Waste Management: The standard requires undertakings to report the total volume of waste generated, as well as the proportion of waste that is recycled, reused or responsibly disposed of. The management of hazardous waste is particularly important to minimise environmental impact and associated risks.
- Product Carbon Footprint: This *datapoint* assesses the greenhouse gas emissions associated with products throughout their entire lifecycle, from resource extraction to end-of-life. It is relevant for understanding the environmental impact in terms of emissions and the undertaking's contribution to carbon reduction targets.
- Renewable Energy Use: This indicator measures the proportion of renewable energy used in the undertaking's production processes and operations. It is key to identifying how the undertaking is reducing its reliance on non-renewable energy sources and lowering its environmental impact.
- Product End-of-Life Strategies: This indicator measures the strategies and programmes implemented to manage products at the end of their useful life, such as collection, recycling or composting. This *datapoint* is essential for evaluating the undertaking's responsibility for its products after they have been sold.
- Product and Material Recovery Rate: This *datapoint* measures the percentage of products or materials that the undertaking succeeds in recovering or reusing at the end of their lifecycle,

including customer returns and buy-back programmes. It is crucial for promoting a closed-loop production and consumption cycle.

- Impact on the Supply Chain: This datapoint assesses the circular economy practices and resource use of the undertaking's suppliers and subcontractors. Undertakings must report the proportion of materials sourced from suppliers that meet sustainability standards, which is essential for creating a supply chain aligned with circular economy principles.

These *datapoints* enable undertakings and their stakeholders to obtain a detailed and measurable view of how circular economy principles are being adopted and implemented. They also facilitate transparency and comparability of sustainability reporting, driving companies towards greater environmental responsibility and resource efficiency.

As with the full set of ESRS, ESRS E5 represents an opportunity for undertakings to adapt to market demands and international sustainability regulations, as well as to improve their performance, competitiveness and market attractiveness. It also entails a real commitment and an investment in adaptation and transparency, which may be challenging in the short term but highly beneficial in the long term.

5 Methodology of the study

The objectives proposed in this project require an approach that makes it possible to measure and evaluate the degree of adoption of management systems linked to the circularity of business activities, as well as the perception of decision-makers regarding the degree of implementation, opportunities, barriers, and necessary actions.

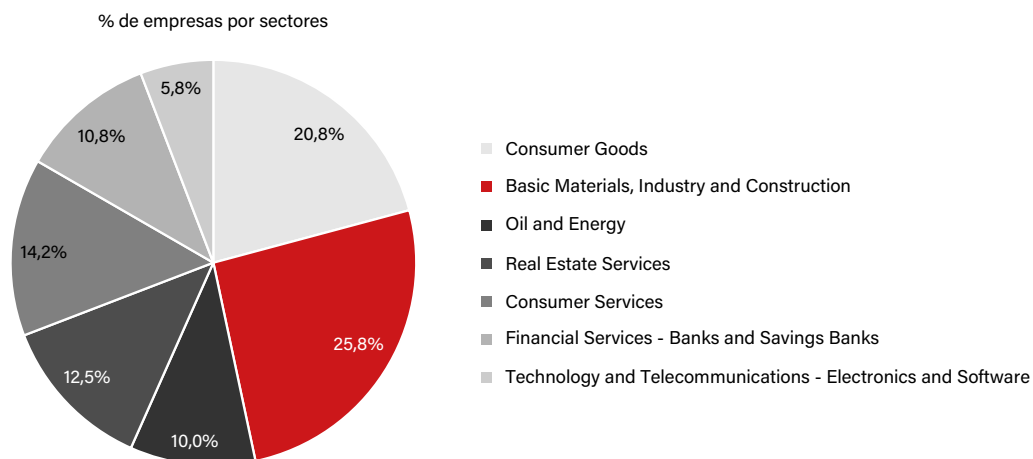
Furthermore, in order to achieve the proposed objectives, it is necessary to assess the degree of knowledge of the ESRS and the implications of their adoption, with a focus on ESRS E5 Resource use and circular economy, both for undertakings required to comply with the standard and for auditors who will verify the statements prepared under it.

Performance of the study required working with a sample of companies and auditors. Regarding companies, the sample comprises 120 Spanish companies, all with a high turnover exceeding EUR 10 billion, most of them listed on the continuous market. The distribution by productive sector can be seen in Table 1 and Figure 1.

//// **TABLE 1** Distribution of the sample by sectors

Production sector	n	%
Consumer Goods	25	20.8%
Basic Materials, Industry and Construction	31	25.8%
Oil and Energy	12	10.0%
Real Estate Services	15	12.5%
Consumer Services	17	14.2%
Financial Services - Banks and Savings Banks	13	10.8%
Technology and Telecommunications - Electronics and Software	7	5.8%
Total	120	100%

//// **CHART 1** Sample distribution



Regarding the auditors, the selected sample consists of the professionals responsible for verification in large audit firms and small and medium-sized practices belonging to the 8th territorial grouping of the Instituto de Censores Jurados de Cuentas de España (ICJCE).

The methodology applied was based on the design and distribution of surveys to the selected samples of companies and auditors. In the case of companies, the aim was to ensure that the questionnaires were answered by the CFO or the person responsible for the sustainability area, in order to ensure that the responses came from those with a certain degree of knowledge of the ESRS and of their implications in terms of implementation within the company and disclosure requirements in sustainability statements. In the case of auditors, the aim was for the surveys to be completed by professionals already previously involved in the verification of NFSs.

The surveys were sent out and responses collected using a Google form, which makes the process easier and cheaper than by any other means. Naturally, the companies and auditors surveyed are assured that the results will be treated in an aggregated and anonymous manner.

The company survey was designed to elicit responses on the following aspects:

- Knowledge of the circular economy
- Degree of incorporation of CE into management systems
- Degree of knowledge of ESRS E5 Resource use and circular economy
- Implications of the adoption of ESRS E5 on management systems
- Implications of the adoption of ESRS E5 on corporate information systems

Accordingly, the survey is composed of a set of direct and simple questions, the responses to which allow the measurement and evaluation of the five differentiated aspects mentioned above. An example of a question included in the survey can be seen in Figure 2. The complete survey is included in Appendix 1.

//// TABLE 2 Example question included in the company survey

Regarding the CE and its implementation in the company, please indicate YES or NO by placing an X in the corresponding box:			
In your company, CE principles are integrated into:	YES	NO	DK/NA
<i>Its general policies</i>			
<i>Its operations</i>			
<i>Only some specific operations</i>			
Does your company determine the following elements related to the CE?:			
<i>Impacts in the company</i>			
<i>Risks for the company</i>			
<i>Opportunities for the company</i>			
In managing CE issues, does your company consider:			
<i>The materiality criterion (environmental and financial materiality)</i>			
<i>Analysis and effects across the entire value chain</i>			
<i>Analysis and effects of only the immediately upstream and downstream links in the value chain</i>			
<i>Analysis and effects of some additional links in the value chain</i>			

The auditor survey was designed to ascertain the opinion of auditors regarding companies' actions in relation to sustainability reporting, both with respect to the verifications already carried out on NFSs and concerning their capacity and readiness to audit sustainability information when ESRS E5 is applied, and the implications of that standard for the audit profession and for companies.

Thus, the survey consists of a set of questions relating to the following aspects:

- Experience as verifiers of NFSs
- Information disclosed by companies in such statements
- Degree of knowledge of ESRS E5 and readiness to audit sustainability statements when the standard is applied
- Opinions on the implications of ESRS E5 for companies and on the potential improvements it may bring to circularity

An example of a question included in the survey can be seen in Figure 3. The complete survey is included in Appendix 2.

//// TABLE 3 Example of a question included in the auditor survey

Regarding the future of sustainability reporting, please rate from 0 (No/Not at all) to 5 (Very much):						
	DK/NA	0	1	2	3	4 5
<i>Do you intend to verify Sustainability Statements?</i>						
<i>Do you consider yourself prepared to verify Sustainability Statements?</i>						
<i>What is your current level of awareness of sustainability reporting standards?</i>						
Specifically, what is your current level of knowledge of the European Sustainability Reporting Standard E5 on Resource use and circular economy (ESRS E5)?						
<i>In your opinion, how difficult is the implementation of ESRS E5 for auditors?</i>						
<i>Do you consider that companies are prepared to prepare information according to ESRS E5?</i>						
<i>In your opinion, how difficult is the implementation of ESRS E5 for companies?</i>						

Once the process of collecting responses from the surveys and interviews was completed, the next step was their processing, whereby the data was processed and frequency tables were prepared, allowing us to identify the percentage of each type of response to the different questions posed. This enables us to gain an overview of the implementation of the CE in companies, as well as of their knowledge of ESRS E5 and the implications they predict its entry into force will have on management systems and corporate reporting.

Similarly, reading the results of the frequency tables for auditors' responses allows us to understand auditors' perspectives regarding the actions and position of companies in this respect, as well as the impact they estimate ESRS E5 will have on their professional work as auditors or verifiers of sustainability statements.

6 Analysis of results

This section presents the results of the empirical work undertaken to determine the level of implementation of the circular economy in the business sector in Spain, and the level of knowledge within the management bodies of the leading companies regarding the new sustainability reporting regulations and, specifically, the information related to the principles of the circular economy and the reduction in the use of resources. It also seeks to gather information on the main current needs and shortcomings for implementing the new regulatory measures, in order to propose support measures for their implementation.

6.1. Survey of companies

Although the number of companies is significant and corresponds to the leading business entities in the country, the response rate was quite low, with only 10 responses (8.3%) obtained from the questionnaire sent to collect data.

This low participation rate leads us to reflect on the reasons for such a low figure, which could be due to several factors: either a widespread lack of knowledge about the regulation, the saturation of surveys that companies may be receiving leading them to decline to participate, or the message not reaching the appropriate person within the company.

It is also worth noting that the vast majority of responses were completed by the person responsible for the company's sustainability area, although in one case it was completed by the person responsible for communication.

With regard to the specific content of the questionnaire, we have obtained the following main results.

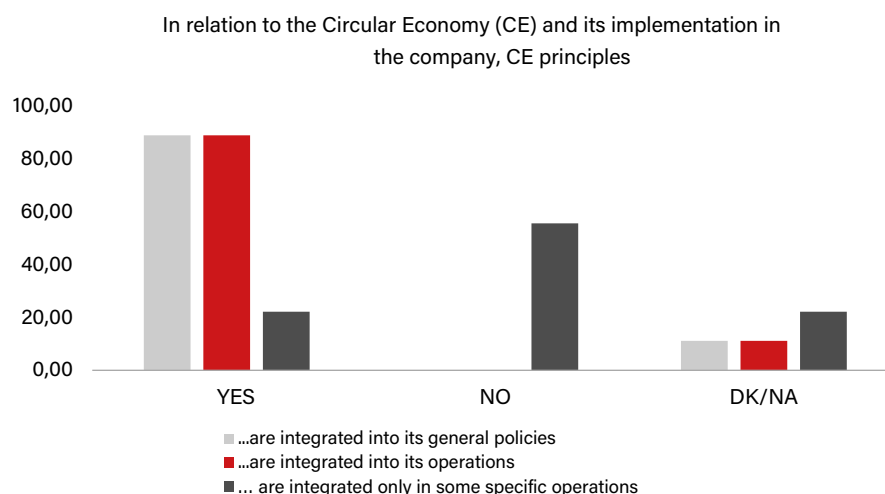
6.1.1. Circular economy actions

//// **TABLE 4** Circular economy and its implementation in the company (in %)

	YES	NO	DK/NA
The principles of CE			
... are integrated into its general policies	88.90	-----	11.10
... are integrated into its operations	88.90	-----	11.10
... are integrated only in some specific operations	22.20	55.60	22.20
Does your company determine impacts related to the CE?	77.80	-----	22.20
Does it determine the risks to the company?	88.90	-----	11.10
Does it determine opportunities?	100.00	-----	-----
In the management of CE aspects			
... Does it consider the double materiality criterion (environmental and financial materiality)?	77.80	11.10	11.10
... Does it analyse and consider the effects across the entire value chain?	66.70	22.20	11.10
... Does it analyse and consider the effects only on the upstream and downstream links of the value chain??	44.45	44.45	11.10
... Does it analyse and consider the effects on some additional links in the value chain?	44.45	33.35	22.20

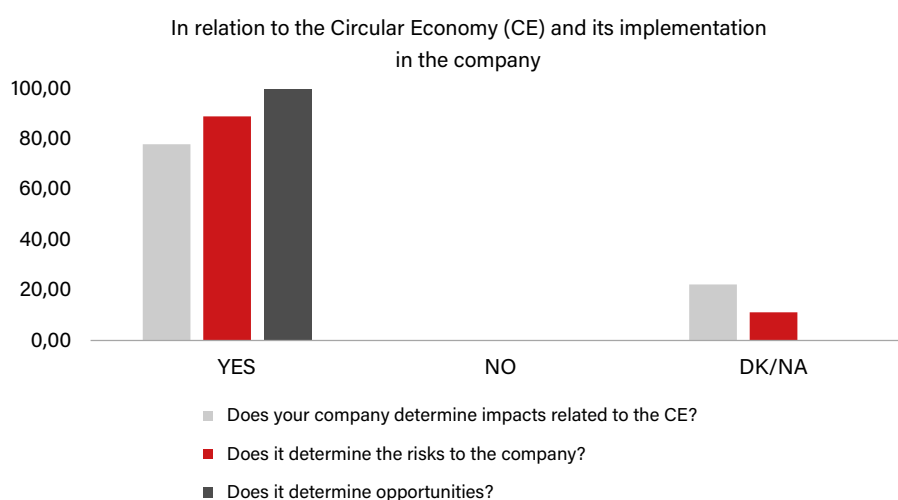
Asked whether CE principles are incorporated into the company's general policy or operations, almost all companies responded positively (90%), while a smaller percentage indicated that they are only incorporated in some specific operations (Table 2 and Figure 2).

CHART 2 Implementation of circular economy principles in the company



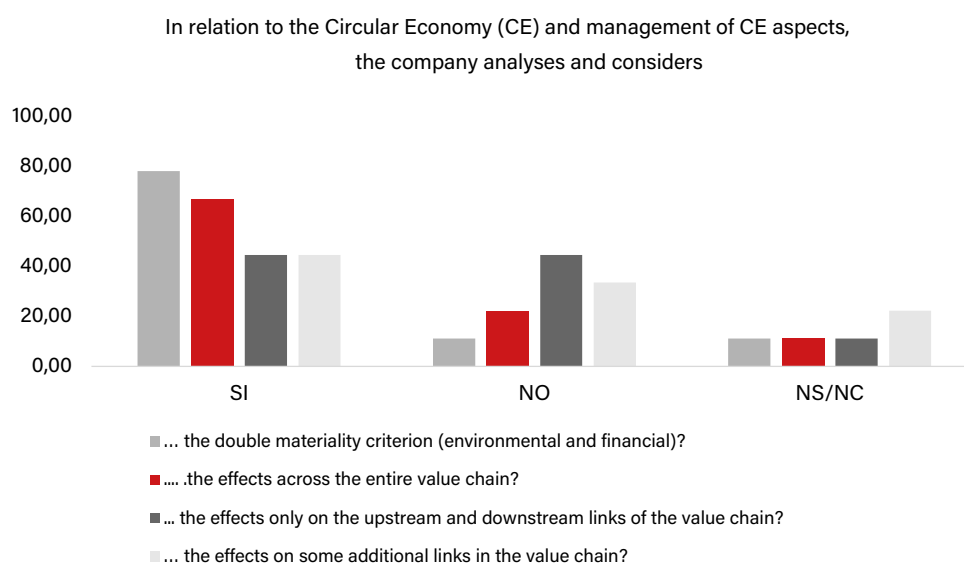
On the other hand, and related to the new sustainability reporting regulation set out in the ESRs, which requires the assessment of impacts, risks, and opportunities (IROs) in sustainability, the aim was to determine whether companies are assessing the IROs of their circular economy actions. In this respect, all of them indicated that they determine opportunities, while 78% and 89% consider impacts and risks, respectively (Table 2 and Figure 3). This seems to indicate that companies see the circular economy as something positive that offers opportunities rather than as a risk that has a negative impact on the entity.

CHART 3 Aspects determined by companies in the implementation of the circular economy



Similarly, in managing the CE, the majority of companies consider double materiality (77.8%) and the entire value chain in which they participate (66.7%), while 44.5% consider only the immediately upstream and downstream links (Figure 4).

CHART 4 Actions undertaken by companies in the management of circular economy aspects



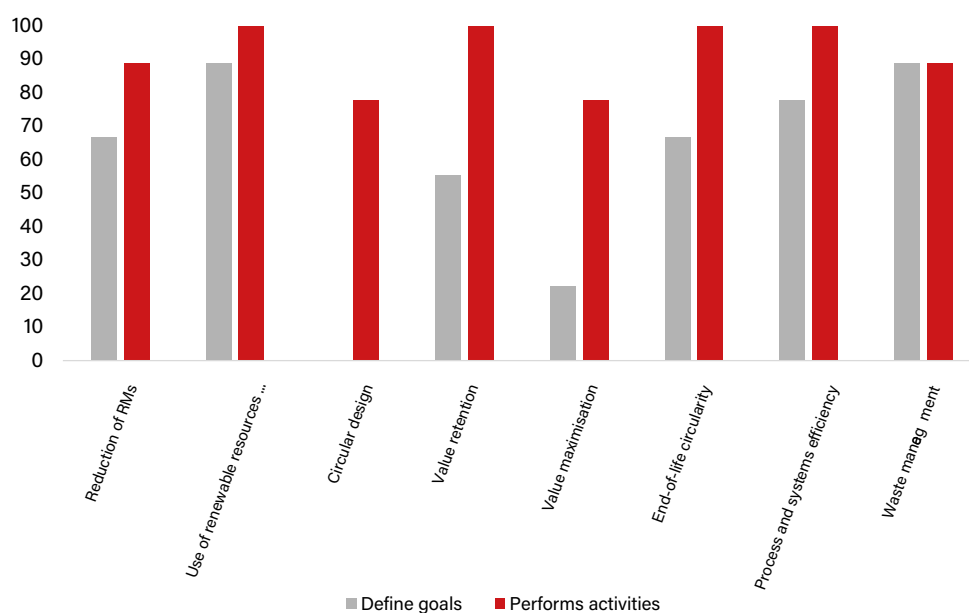
In addition, regarding specific circularity actions, the main results are shown in Table 3 and Figures 5 and 6.

TABLE 5 Circular economy actions undertaken by the company (in %)

	Sets targets	Performs activities	Determines impacts	Determines risks	Determines opportunities
Reduction of raw materials and increase in secondary resources	66.60	88.90	66.60	77.70	77.70
Use of renewable resources or sustainable sourcing	88.90	100.00	66.70	66.70	88.90
Circular design of production/ service (durability, reparability, remanufacturing, etc.)	44.40	77.70	44.40	55.50	77.70
Value retention (maintenance, refurbishment, reverse logistics, etc.)	55.50	100.00	55.50	66.60	55.50
Value maximisation (collaborative and sharing economy with other companies)	22.20	77.70	33.30	22.20	33.30
End-of-life circularity of products (recycling, recovery)	66.60	100.00	55.50	66.60	55.50
Efficiency of processes and systems (energy efficiency, consumption reduction, industrial symbiosis)	77.70	100.00	77.70	88.90	88.90
Waste management according to the waste hierarchy	88.90	88.90	77.70	77.70	66.60

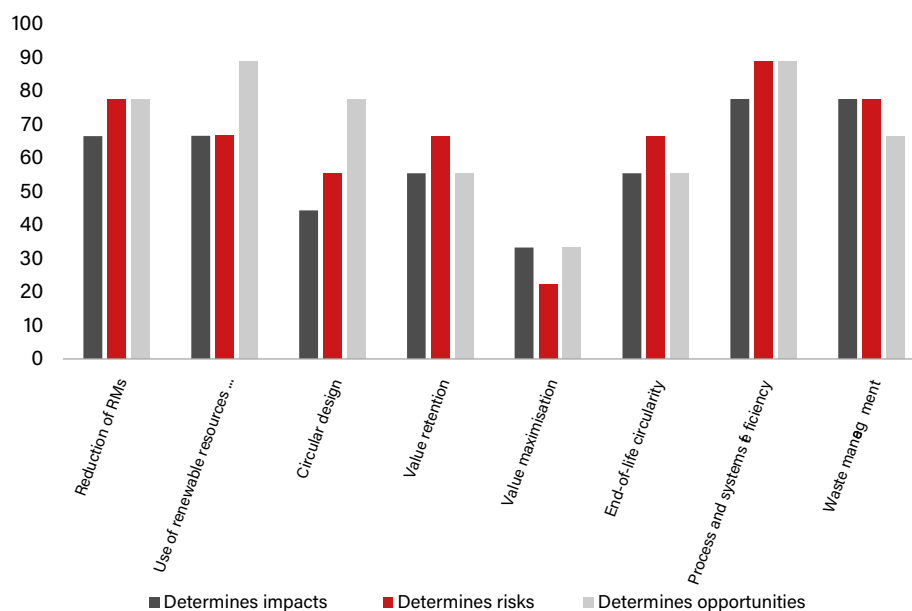
In general, the majority of companies carry out different activities linked to the circular economy, with the use of renewable resources and sustainable sourcing, value retention, end-of-life circularity, and process and system efficiency being the activities carried out by all responding companies. The least frequently undertaken activities (77% of companies) are related to the circular design of products and the maximisation of value through collaborative economy initiatives with other entities.

//// CHART 5 Activities and targets on circular economy issues



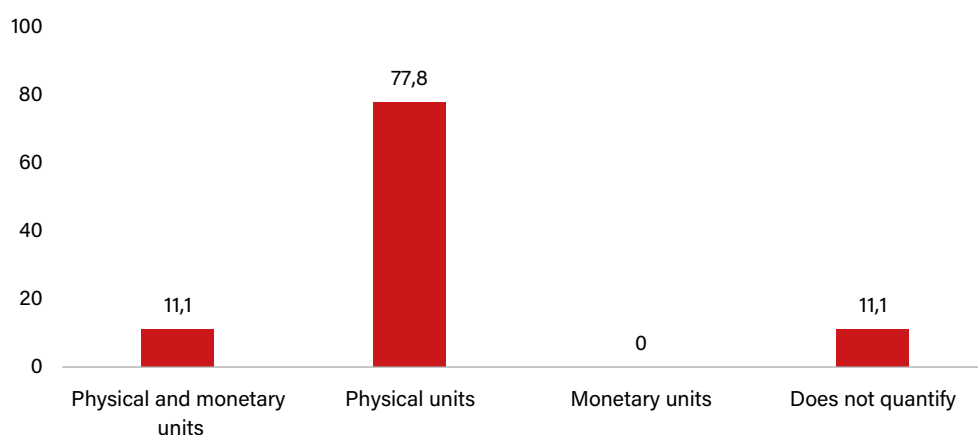
These percentages are slightly lower when companies are asked whether, for each of the various activities, they have identified impacts, risks, or opportunities, with opportunities being the most frequently determined. Once again, the activities mentioned in the previous paragraph show the highest percentages.

//// CHART 6 Impacts, risks and opportunities arising from the circular economy



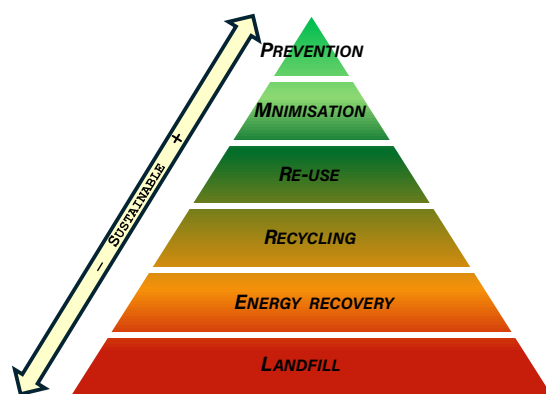
Moreover, companies mostly quantify targets in physical units (77.8%) and only 11.1% quantify them also in monetary units (Figure 7).

//// CHART 7 Quantification of circular economy targets



One of the most relevant aspects of companies' circular actions concerns waste management and treatment. The waste hierarchy establishes the order of preference from best to worst circular action regarding waste, as illustrated in Figure 8.

//// CHART 8 Waste hierarchy



Almost all companies indicate that they undertake actions at all levels of the waste hierarchy pyramid. Table 4 shows that only a small percentage report not carrying out prevention measures to avoid waste generation.

//// TABLE 6 Actions taken on waste-related targets

	YES	NO	DK/NA
Prevention	88.90	-----	11.10
Minimisation	100.00	-----	-----
Re-use	100.00	-----	-----
Recycling	100.00	-----	-----
Disposal	100.00	-----	-----

6.1.2. Actions related to the information presented

Until now, sustainability information has mainly been presented by undertakings in their sustainability reports or in the NFSs, in the case of companies subject to the European directive and the corresponding national regulation (Law 11/2018).

In this context, and as shown in Table 5, a large majority of companies (over 80%, although partially in some cases) report on policies, actions, and targets related to the circular economy and resource use. Moreover, more than half report on aspects linked to resource inflows and outflows (over 60% and 70%, respectively). However, only around 20% report on the monetary quantification of the effects of these actions or of their associated risks and opportunities. Nevertheless, more than half indicate that they are in the process of disclosing such information, possibly due to their awareness of the new regulation, which will require its disclosure for the 2024 financial year in the 2025 management report.

Companies that do not plan to disclose this financial information are those not subject to the new sustainability reporting requirements governed by the ESRs.

//// **TABLE 7** Information disclosed in the NFS (%)

	Yes	Only partially	No, but in process	Not planned in the short term
Policies related to resource use and the circular economy	77.80	22.20	-----	-----
Actions associated with resource use and the circular economy	88.90	11.10	-----	-----
Targets related to resource use and the circular economy	88.90	-----	-----	11.10
Resource inflows (Products and materials, water, facilities etc.)	55.60	22.20	22.20	-----
Resource outflows (products and materials, waste)	66.70	22.20	11.10	-----
Expected financial effects of material risks and opportunities related to biodiversity and ecosystems (monetary amount, time projection for short, medium, and long term)	22.20	-----	55.60	22.20

6.1.3. Implications of the new regulation (ESRS)

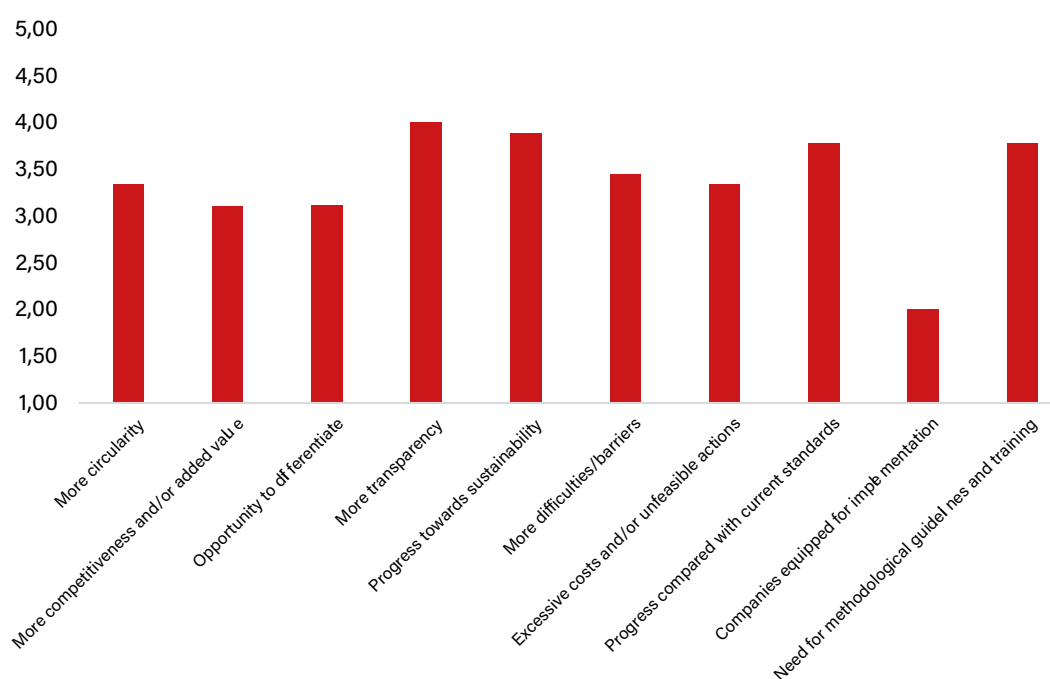
Regarding the impact of the new sustainability reporting standards, companies indicate that it will substantially enhance transparency, circularity, and progress in sustainability (Table 6 and Figure 9). They also agree that it will represent a significant improvement over the current standards. However, these improvements will come at the cost of requiring companies to bear significant expenses.

Moreover, the application of ESRs E5 does not appear to be straightforward, as a high percentage of companies consider that they are neither qualified nor adequately prepared for its application at present and that greater training or methodological guidance would be needed to facilitate its implementation.

//// **TABLE 8** Implications of entry into force of the ESRS E5

	1	2	3	4	5	Mean
It will improve the company's circularity	11.10	-----	55.60	11.10	22.20	3.33
It will improve the company's competitiveness and/or added value	11.10	11.10	44.40	22.20	11.10	3.11
It will be an opportunity for differentiation	11.10	11.10	44.40	22.30	11.10	3.11
It will enhance transparency towards stakeholders	-----	22.20	-----	33.30	44.50	4.00
It is necessary to advance towards sustainability	-----	11.10	22.30	33.30	33.30	3.89
It imposes new difficulties and barriers for companies	11.10	11.10	22.20	33.30	22.30	3.45
It involves costs and/or actions that are difficult for companies to bear	11.10	22.20	22.20	11.10	33.40	3.34
It represents a significant step forward compared with the current standards	-----	11.20	44.40	-----	44.40	3.78
Companies are qualified and prepared for its application	11.10	77.80	11.10	-----	-----	2.00
Methodological guidelines and further training are needed	11.10	11.10	-----	44.40	33.40	3.78

1 not at all; ...; 5 very much

//// **CHART 9** Implications of entry into force of ESRS E5

1 not at all; ...; 5 very much

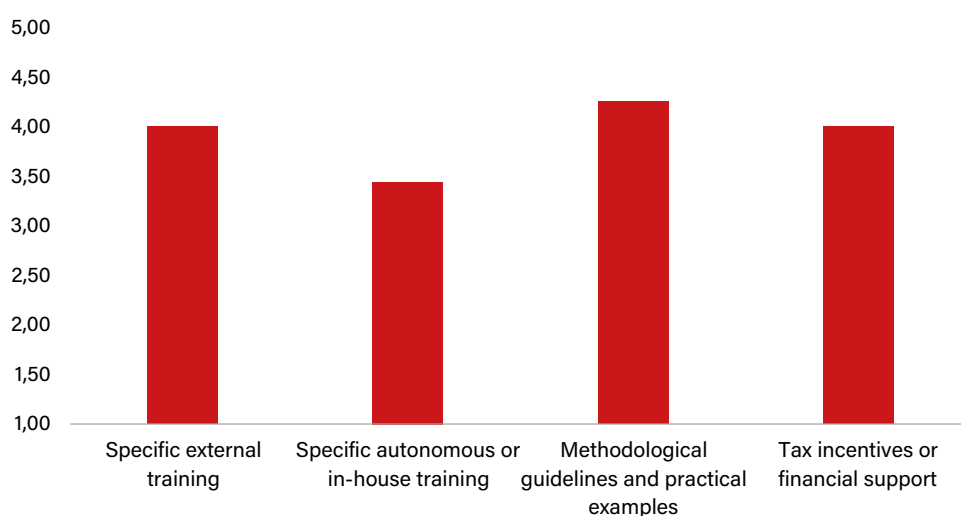
A high percentage of the persons responsible at the companies also indicate that external specific training on the new standards is highly necessary and more effective than internal training (Table 7 and Figure 10). They also note that it would be highly advisable to implement support measures, such as tax incentives or financial assistance, for this purpose. In addition, it is considered necessary to have methodological guidelines and practical examples available to ensure the correct application of the new sustainability reporting regulations.

//// **TABLE 9** Effectiveness of possible measures to improve the implementation of the new regulations

	1	2	3	4	5	DK/NA	Mean
Specific external training	-----	-----	22.20	44.40	22.20	11.20	4.00
Specific autonomous or in-house training	-----	-----	66.70	22.20	11.10	-----	3.44
Availability of methodological guidelines and practical examples	-----	-----	11.10	44.40	33.40	11.10	4.25
Tax incentives or financial support	11.10	-----	11.10	22.30	44.40	11.10	4.00

1 not at all; ...; 5 very much

//// **CHART 10** Effectiveness of possible measures to improve the application of the new regulations



6.2. Survey of auditors

Again, as with the survey conducted among companies, it can be observed that the response rate was very low, with only seven auditors responding, two of whom belong to the Big Four. Moreover, among the responses received, all firms currently perform audits as well as verify NFSs. However, among the auditors who responded to the survey, 85.7% currently perform audits, while 71.4% currently verify NFSs.

//// **TABLE 10** Auditor's current activities

	YES	NO	DK/NA
Currently conducts audits	85.70	14.30	-----
Currently verifies non-financial statements	71.40	28.60	-----

The average number of audits performed annually by the auditors who completed the survey is 20 audits per year, with a maximum of 40, while the average number of NFSs verified is 2, with a maximum of 4.

//// TABLE 11 Average volume of audit and verification activity

	Mean
Number of annual audits	20.00
Number of verified NFSs in 2023	2.00
Number of NFS verification reports with incidents	0.00
Number of people engaged in verification of NFSs	2.00

It should be noted that it is in the NFS that sustainability information is disclosed, so it is relevant to understand the importance of any incidents that the verifiers may have detected. In this regard, none of the auditors indicated having included any incidents in their NFS verification reports. In addition, most report that the team engaged in verifying the NFS usually consists of two people.

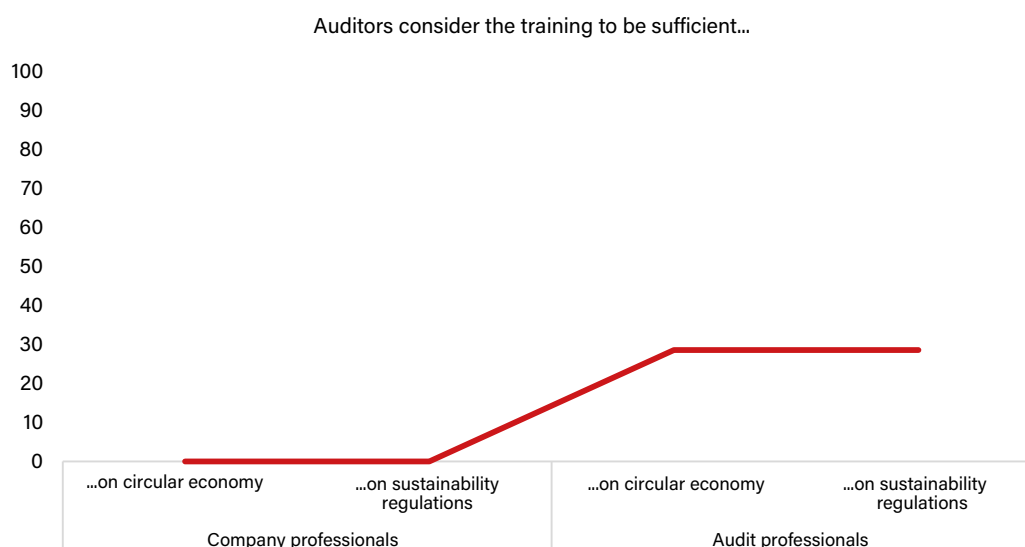
Regarding the auditors' opinion on the level of knowledge of circular economy concepts and the new sustainability reporting regulations, as shown in Table 10 and Figure 11, there is consensus that the business sector is not sufficiently prepared and does not yet have an adequate level of knowledge.

//// TABLE 12 Knowledge of the circular economy and the sustainability reporting regulations (%)

	concept	YES	NO
Company professionals	Circular Economy	0.00	100.00
	Sustainability regulations	0.00	100.00
Audit professionals	Circular Economy	28.60	71.40
	Sustainability regulations	28.60	71.40

Similarly, they consider that, in general, the audit profession is not sufficiently prepared regarding the principles and concepts of the circular economy, nor does it have detailed knowledge of the new framework relating to the ESRs.

//// CHART 11 Auditors' views on circular economy training and sustainability regulations



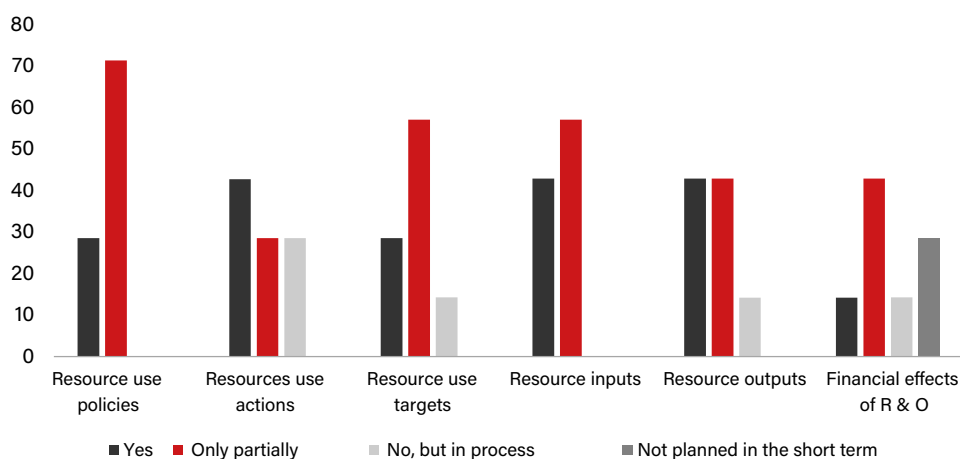
Regarding the information disclosed in the NFSs verified to date (Table 11 and Figure 12), all auditors state that companies incorporate information on policies related to resource use and the circular economy, although the majority (71.4%) indicate that this is done only partially.

//// **TABLE 13** Information disclosed in verified NFSs

	Yes	Only partially	No, but in process	Not planned in the short term
Policies related to resource use and CE	28.60	71.40	-----	-----
Actions associated with resource use and CE	42.80	28.60	28.60	-----
Targets related to resource use and CE	28.60	57.10	14.30	-----
Resource inflows (Products and materials, water, facilities)	42.90	57.10	-----	-----
Resource outflows (Products and materials, waste, etc.)	42.90	42.90	14.20	-----
Financial effects expected from material risks and opportunities related to biodiversity and ecosystems	14.20	42.90	14.30	28.60

As regards circular economy activities, 42.8% indicate that information is disclosed, while the remainder state that either it is disclosed only partially or is still in the process of being prepared. The percentage of information disclosed regarding targets is lower, although 57% of auditors note that partial information is disclosed in this area.

Similarly, regarding resource inflows and outflows, 42.9% of auditors indicate that information is disclosed, while the remainder believe that the information disclosed is partial or still in the process of being prepared.

//// **CHART 12** Information disclosed in verified NFSs

Finally, regarding information on the financial effects expected from risks and opportunities related to these matters, the audit profession mostly indicates that detailed information is generally not disclosed (only one auditor). 42.9% indicate that only partial information is disclosed, while 28.6% state that companies do not plan to disclose such information in the short term.

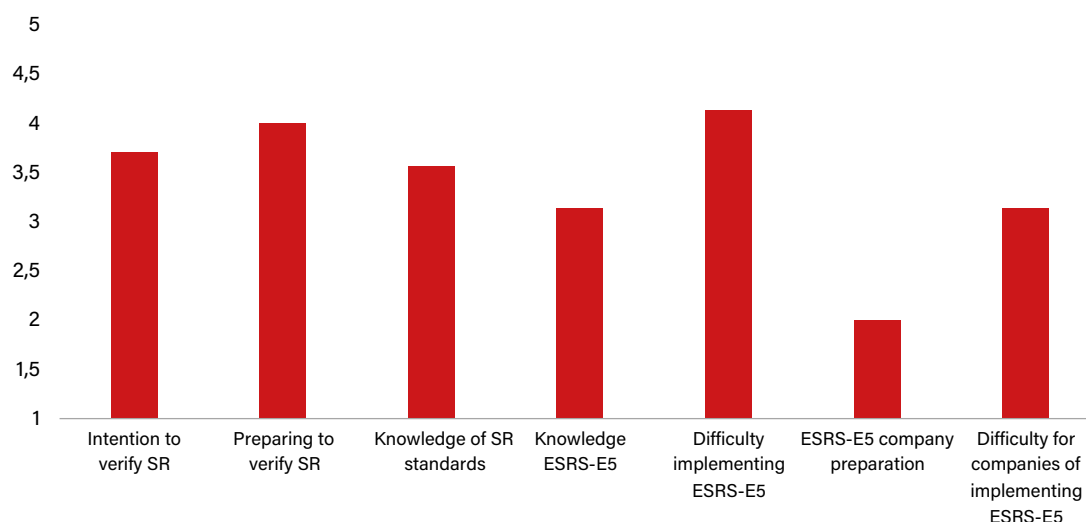
Moreover, auditors were asked about the future of their activity as auditors in relation to sustainability reporting (Figure 13). The average score that auditors assign to their intention to verify sustainability statements is 3.71 (on a Likert scale from 1 to 5). In addition, they consider themselves to be fairly well prepared to verify sustainability statements (average score of 4), whereas their current level of knowledge of sustainability reporting standards is slightly lower but above the average value (3.57).

This average is slightly lower in relation to their current level of knowledge of ESRS E5 on circular economy (3.14).

Likewise, auditors believe that there is a fairly high level of difficulty for them (4.14) when it comes to applying and implementing ESRS E5, whereas the level of preparedness of companies to produce the information required by that standard is quite low (2.00).

However, they consider that the level of difficulty for companies in applying ESRS E5 is medium (3.14).

//// CHART 13 Future of Sustainability Reporting

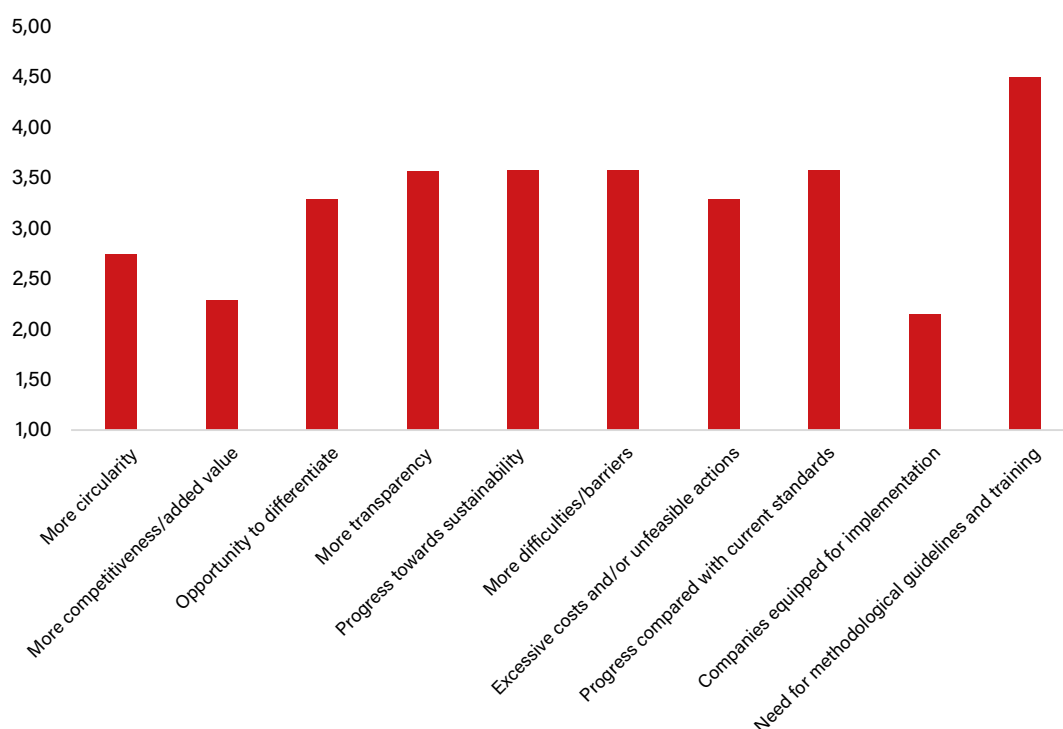


* SR: Sustainability reporting

We have also explored the main implications that the entry into force and implementation of the new sustainability reporting regulations could have, specifically that of ESRS E5 on circular economy. In this regard, auditors consider that it will have a significant impact in achieving greater transparency (3.57), progress towards greater sustainability (3.57) and will provide companies with an opportunity to differentiate themselves from those that do not apply it. However, they consider it less likely that it will improve circularity (2.71) or the competitiveness of companies (2.29).

They also believe, with scores above the average value of the scale, that it will impose new difficulties or barriers (3.57) and costs and actions that are difficult for companies to bear (3.29); and that, in general, companies are currently poorly equipped and prepared for their application (2.14). Finally, auditors indicate on average that the existence of methodological guidance and additional training is highly necessary (4.50) in order to successfully implement what is established by the new regulations.

//// **CHART 14** Implications of entry into force of ESRS E5



For the proper application of the new sustainability reporting regulations, auditors consider measures aimed at external specific training and the availability of practical examples and application guides (4.17) to be highly necessary. They also consider the establishment of tax incentives and financial support (3.83) and internal training within companies (Figure 15) to be appropriate.

//// **CHART 15** Effectiveness of possible measures to improve the application of the new regulations



Finally, we should highlight some additional measures that auditors have indicated could be useful to support the implementation of the new sustainability reporting regulations, as shown in Table 12.

//// TABLE 14 Other measures to improve the implementation of the new regulations

-
- Training activities by sector.
-
- Financial/tax incentives to help promote awareness.
-
- Creation of networks/platforms that enable a formal/serious exchange of business knowledge/experiences.
-
- Preparation of methodological guides with clear examples.
-
- Maximum training.
-
- Maximum training and dissemination.
-

7 Conclusions and implications

Over recent decades, the disclosure of non-financial or sustainability information by companies has experienced continuous development in both content and format. In particular, since Directive 2014/95/EU, institutional drive and accompanying legislation have shaped a regulatory framework, with the ESRS as its most recent development. The sophistication and comprehensiveness of the information now required introduce a level of complexity that can pose a barrier for organisations.

This study aims, firstly, to assess the extent to which companies have adopted management systems related to the circularity of their business activities, and secondly, to analyse how companies and auditors perceive the application of the ESRS, especially ESRS E5.

One of the first conclusions drawn from the study is the limited participation of companies and auditors, revealing a gap and a general lack of awareness among many organisations regarding the ESRS and their specific features.

From the analysis of the responses received from the **companies**, however, the following conclusions can be drawn:

- The vast majority of companies incorporate CE principles into the company's general policy or operations
- In general, they see the circular economy as something positive that offers opportunities and not as a risk that has a negative impact on the entity.
- In managing circular economy matters, nearly 80% of companies apply the principle of double materiality, and most assess and consider impacts across their entire value chain. This indicates progress in circular economy management, taking into account not only economic impacts but also sustainability impacts, including those specifically linked to circularity.
- Most companies undertake a range of actions related to the circular economy. All surveyed entities engage in activities concerning the use of renewable resources, value retention, end-of-life product circularity, and improvements in process and system efficiency. The least developed areas are circular product design and maximising value through collaborative economy initiatives with other entities.
- There has been significant progress in waste management and treatment. All companies report taking action across four of the five levels of the waste hierarchy: minimisation, reuse, recycling, and disposal. The prevention of waste generation remains the level where some companies have yet to act.
- Regarding the information currently disclosed, a large majority of companies report on their policies, actions, and targets related to the circular economy and resource use. However, only around 20% report on the monetary quantification of the effects of these actions or of related risks and opportunities, although many state that they are in the process of doing so.
- Regarding the impact of the new sustainability reporting regulations, companies believe they will substantially improve transparency, circularity, and sustainability, although they also foresee significant associated costs.

- Companies do not expect the application of ESRS E5 to be straightforward, and many do not currently feel capable or prepared, which is why they consider prior training or methodological guidance necessary to facilitate its implementation. They also anticipate an increase in management costs that they will need to absorb.

From the responses received from the **auditors**, the following can be concluded:

- As current verifiers of the NFS, auditors observe that companies are including in the Statement information on policies related to resource use and the circular economy, targets related to resource use, resource inflows and outflows, and the expected financial impacts of risks and opportunities linked to these topics. However, their responses show that in many cases, the information is only partially reported or still in the process of being prepared. This leads to the conclusion that, from the auditors' perspective, there is still work to be done to meet the levels of reporting required by the ESRS.
- In the auditors' opinion, companies do not yet have an adequate level of knowledge of the new sustainability reporting regulations and are not sufficiently prepared to apply them.
- Similarly, auditors themselves, as current verifiers of the NFSs, do not yet feel fully knowledgeable about the ESRS and their implications. They consider themselves prepared to verify sustainability reporting, although they state that their current level of knowledge of ESRS E5 is not very high, and they believe that there is a considerable level of difficulty for them in applying and implementing ESRS E5.
- For the proper application of the new regulations, auditors consider external and internal specific training and the availability of practical examples and application guides to be highly necessary. They also point out that it would be advisable to establish tax incentives and financial support for companies to help cover the costs arising from the application of the new regulations.

In short, it can be stated that the application of the ESRS, and specifically of ESRS E5, will entail a major effort in terms of human resources and the costs of preparation, dissemination, and verification, especially during the initial periods. This issue is compounded by the need for training in sustainability and therefore also in the circular economy. This training is absent from university curricula for accounting, finance and auditing professionals.

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Appendix 1. Survey of companies

0. Company name

1. Regarding the CE and its implementation in the company, please indicate YES or NO by placing an X in the corresponding box:

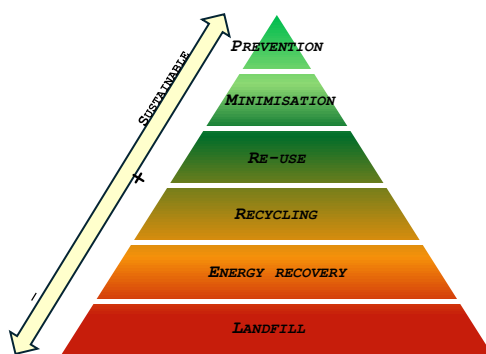
In your company, CE principles are integrated into:	YES	NO
<i>Its general policies</i>		
<i>Its operations</i>		
<i>Only some specific operations</i>		
Does your company determine the following elements related to the CE?:		
<i>Impacts in the company</i>		
<i>Risks for the company</i>		
<i>Opportunities for the company</i>		
In managing CE issues, does your company consider:		
<i>The double materiality criterion (environmental and financial materiality)?</i>		
<i>Analysis and effects across the entire value chain?</i>		
<i>Analysis and effects of only the immediate upstream and downstream links in the value chain?</i>		
<i>Analysis and effects of some links in the value chain?</i>		

2. In relation to the following aspects, please mark with an X the boxes corresponding to what your company does

	Sets targets	Performs activities	Determines impacts	Determines risks	Determines opportunities
<i>Reduction of raw materials and increase in secondary resources</i>					
<i>Use of renewable resources or sustainable sourcing</i>					
<i>Circular design of production/service (durability, repairability, remanufacturing, etc.)</i>					
<i>Value retention (maintenance, refurbishment, reverse logistics, etc.)</i>					
<i>Value maximisation (collaborative and sharing economy with other companies)</i>					
<i>End-of-life circularity of products (recycling, recovery)</i>					
<i>Efficiency of processes and systems (energy efficiency, consumption reduction, industrial symbiosis)</i>					
<i>Waste (Waste hierarchy management)</i>					

3. In relation to the targets set in your company, mark with an X as appropriate

Quantification of targets	YES	NO
<i>Targets are quantified in physical units</i>		
<i>Targets are quantified in monetary units</i>		
<i>Targets are not quantified</i>		
With regard to waste-related targets, if they are set, your company performs (application of the waste hierarchy-figure):		
Prevention		
Minimisation		
Re-use		
Recycling		
Energy recovery		
Disposal		
Does your company quantify the following types of waste?		
Total waste generated		
Waste avoided		
Each type of waste: WEEE, tailings, food waste, etc.		
Each level of the waste hierarchy (recycled, reused, etc.)		
Hazardous waste		
Recovered waste		



4. In relation to the Non-Financial Statement, mark with an X the corresponding box according to the information disclosed by your company:

	YES	Only partially	NO	
			In progress	Not planned in the short term
<i>On policies related to resource use and CE</i>				
<i>On actions associated with resource use and CE</i>				
<i>On targets related to resource use and CE</i>				
<i>On resource inflows (Products (including packaging) and materials (scarce), water, facilities)</i>				
<i>On resource outflows (Products and materials, Waste, etc.)</i>				
<i>On expected financial effects of material risks and opportunities related to biodiversity and ecosystems (monetary amount, time projection for short, medium, and long term)</i>				

5. In relation to ESRS 5, rate the implications of entry into force of this standard from 1 to 5:

	Don't Know	1	2	3	4	5
It will improve the company's circularity						
<i>It will improve the company's competitiveness and/or added value</i>						
<i>It will be an opportunity for differentiation</i>						
<i>It will enhance transparency towards stakeholders</i>						
<i>It is necessary to advance towards sustainability</i>						
<i>It imposes new difficulties and barriers for companies</i>						
<i>It involves costs and/or actions that are difficult for SMEs to bear</i>						
<i>It represents a significant step forward compared with the current standards</i>						
<i>Companies are qualified and prepared for its application</i>						
<i>Methodological guidelines and further training are needed</i>						

Appendix 2. Survey of auditors

0. Name

1. Do you currently audit Annual Financial Statements? Mark with an X the corresponding box, and if YES, indicate the number of annual audits you carry out:

YES		Number of audits	
NO			
DK/NA			

2. Do you currently verify Non-Financial Statements (NFSs)? Mark with an X the corresponding box

YES	
NO	
DK/NA	

3. If you answered YES to the previous question, please answer the following questions:

Number of verifications carried out annually	
Number of verification reports where incidents were recorded	
% of team dedicated to the verification of the Non-Financial Statement	

4. Regarding the Non-Financial Statements you have verified in the past year, mark with an X the corresponding box according to the information disclosed by the majority of companies:

	YES	Only partially	NO	
			In progress	Not planned in the short term
On policies related to resource use and CE				
On actions associated with resource use and CE				
On targets related to resource use and CE				
On resource inflows (Products (including packaging) and materials (scarce), water, facilities)				
On resource outflows (Products and materials, Waste, etc.)				
On expected financial effects of material risks and opportunities related to biodiversity and ecosystems (monetary amount, time projection for short, medium, and long term)				

5. Regarding the future of sustainability reporting, please rate from 0 (No/Not at all) to 5 (Very much):

	DK/NA	0	1	2	3	4	5
<i>Do you intend to verify sustainability statements?</i>							
<i>Do you consider yourself prepared to verify Sustainability Statements?</i>							
<i>What is your current level of awareness of sustainability reporting standards?</i>							
<i>Specifically, what is your current level of knowledge of the European Sustainability Reporting Standard E5 on Resource use and circular economy (ESRS E5)?</i>							
<i>In your opinion, how difficult is the implementation of ESRS E5 for auditors?</i>							
<i>Do you consider that companies are prepared to prepare information according to ESRS E5?</i>							
<i>In your opinion, how difficult is the implementation of ESRS E5 for companies?</i>							

6. In relation to ESRS E5, rate the implications of entry into force of this standard from 1 to 5:

	Don't Know:	1	2	3	4	5
<i>It will improve the company's circularity</i>						
<i>It will improve the company's competitiveness and/or added value</i>						
<i>It will be an opportunity for differentiation</i>						
<i>It will enhance transparency towards stakeholders</i>						
<i>It is necessary to advance towards sustainability</i>						
<i>It imposes new difficulties and barriers for companies</i>						
<i>It involves costs and/or actions that are difficult for SMEs to bear</i>						
<i>It represents a significant step forward compared with the current standards</i>						

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