



# Article Mandatory Non-Financial Information Disclosure under European Directive 95/2014/EU: Evidence from Portuguese Listed Companies

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Abstract: This paper investigates the effects of Directive 95/2014/EU on the quality of non-financial information (NFI) disclosed by Portuguese listed companies and explains the reporting practices adopted in this context. For this purpose, a content analysis of non-financial disclosures made a year before (2016) and in the first and second years of the implementation of the Directive (2017 and 2018) was performed. A self-constructed index that covers the disclosure matters required by the Directive was used to measure the quality of NFI. The findings showed that the major effects on the quality of non-financial disclosures were observed in the first year of implementation. Furthermore, it was observed that companies that had high-quality voluntary reporting practices, such as the presentation of a sustainability report, the use of GRI Standards and the certification of NFI, maintained these practices after the Directive. After two years of implementation, there were still companies that did not mention the framework used or did not disclose information on sensitive matters such as human rights or anti-corruption and bribery. The evidence found supports the existence of a 'routine' effect that has influenced the reporting practices adopted. The results obtained have implications for policymakers helping them to identify aspects of the Directive's requirements that need to be improved.

**Keywords:** non-financial reporting; EU Directive; mandatory disclosure; institutional theory; sustainability reporting

# 1. Introduction

The European Union Directive 2014/95/EU (henceforward, the Directive) brought a new framework for the corporate reporting of companies located in EU Member States, imposing on them non-financial information (NFI) disclosure requirements, from the year 2017 [1].

In Europe and all over the world, disclosure of NFI by companies has been mostly voluntary and has been presented in various formats, from information included in the Annual Report, more precisely in the Management Report, to information presented in separate reports, such as Sustainability Reports, and, more recently, Integrated Reports. The evolution of these reporting practices has been accompanied by the presentation of several designations for what the Directive call NFI disclosure, and the literature also refers to as NFI reporting [2]. As examples of those designations, we can mention: Corporate Social Responsibility Reporting; Sustainability Reporting; Intellectual Capital Reporting; Value Reporting; Economic, Social and Governance Reporting; Social, Ethical and Environmental Reporting; and Integrated Reporting [3–5].

Companies disclose NFI to respond to the expectations, pressures and criticisms from stakeholders who want to be better informed about the social and environmental impacts of their business activities [6]. NFI disclosure is also important in reducing information



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**Copyright:** © 2022 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). asymmetries and, thus, reducing the cost of capital [7,8]. However, the expected benefits presuppose that the information disclosed is as transparent as possible and depicts the companies' true performance and impacts [6].

The disclosure of NFI on a voluntary basis has proven ineffective, as empirical research has shown that social and environmental information often lacks completeness, accuracy, neutrality, objectivity and comparability [6,9–12]. In this context, mandatory disclosure, based on legally specified disclosure requirements and enforcement mechanisms, seems necessary to promote more extensive and better-quality reporting on non-financial matters [3]. This idea is, at least theoretically, correct, and some studies have shown an increase in the number of companies reporting and in the quantity of NFI provided after the enactment of a disclosure regulation [3,4,13–17]. Nevertheless, several studies have revealed low levels of compliance with the new regulations, with a high proportion of companies failing to disclose any of the required information or providing only partial compliance [18–23]. Furthermore, companies have been using mandatory disclosure as a legitimization device, avoiding disclosing bad news, making disclosures merely symbolic and not including quantitative information [16,20,24–27].

These problems are due to the considerable discretion left to companies by some regulations, resulting in a mixed mandatory-voluntary regulation regime [28]. The degree of specification of disclosure requirements and the enforcement mechanisms implemented, that is, the 'construction of the regulation', decisively influence the compliance levels and the quality of non-financial disclosures [4]. For this reason, some regulations have only had a significant impact on the quantity and quality of information disclosed after the introduction of amendments that made them tighter [3,28].

The evidence described highlights the need for studies that assess the degree of compliance with new disclosure regulations and analyze their effects on the quality and quantity of information provided by companies. The implementation of the Directive by European countries provides a field of study for this topic since it represents a shift from a voluntary to a mandatory model of NFI disclosure.

As far as we know, the level of compliance with the Directive and its effect on nonfinancial disclosures made by European companies are not yet fully documented. The existing studies cover only a few countries: Spain [29], Germany [30], Romania [31], Poland [32], Italy [30,33–39] and Hungary [40]. Most of these studies analyzed the effects of the Directive in the first year of implementation [29–33,35,38], with few analyzing two years [37,39,40] and Korca et al. [36] analyzing the period up to 2020 for a single entity. Additionally, these studies do not provide a complete picture of the reporting practices adopted, as NFI assurance was not addressed by any of them. Furthermore, the effect of the Directive on the quality of the NFI disclosed is only known for Italy, Germany, Romania and Hungary.

To bridge these gaps, this work presents an in-depth analysis of the reporting practices adopted in the context of the Directive, partially addressed in previous studies. The effects of the Directive on reporting practices and quality of NFI disclosed are studied considering the year before (2016) and two years after (2017 and 2018) its entry into force. The options made by companies and the effects of the Directive on the quality of NFI are explained through the Institutional Theory isomorphisms, following previous studies [34,36,40].

In the European context, we can describe Portugal as a code-law country [41], with a small stock exchange (47 listed companies and 63.107 million euros of market capitalization at the end of 2019), whose companies remain heavily dependent on bank loans and with a scant presence of institutional investors [42]. In Portugal, banks still base their credit decisions on private communication channels, which may reduce the importance of published reports in assessing companies' credit risk. Thus, the incentives underlying the choices made by Portuguese-listed companies in the context of the Directive may differ from other countries, justifying the scope of this study. Additionally, the transposition of the Directive in Portugal took a little longer, being crucial to know their effects beyond the first year of implementation.

In line with other studies that analyze the impact of regulatory changes on the extent of disclosure [43], we use a self-constructed index to measure the quality of NFI. For this purpose, we perform a content analysis of non-financial disclosures made by Portuguese listed companies a year before (2016) and in the first and second years of the implementation of the Directive (2017 and 2018) to answer the following Research Questions (RQ):

- RQ1: What choices have been made by Portuguese companies, under the Directive, regarding the following disclosure practices of NFI: presentation format, framework for preparation and type of assurance adopted?
- RQ2: Have previous voluntary non-financial disclosure practices influenced the options made after the implementation of the Directive?
- RQ3: To what extent has the implementation of the Directive influenced the quality of the NFI disclosed?
- RQ4: Did previous experience in voluntary non-financial disclosure influence the quality of NFI disclosed after the implementation of the Directive?

The results showed that companies' prior experience with voluntary non-financial reporting determined both the disclosure practices and the quality of NFI. Companies that had high-quality voluntary reporting practices before the Directive, such as the presentation of a sustainability report, the use of GRI Standards and the certification of NFI, have maintained these practices. Regarding the quality of NFI, the major effects of the Directive were observed in the first year of implementation, largely due to companies disclosing NFI for the first time. After two years of the Directive's implementation, different presentation formats coexist among companies, and several companies do not mention the framework used or do not disclose information on sensitive matters such as human rights or anticorruption and bribery. Significant differences also remain in the quality of NFI between the more and less experienced companies, with the former exhibiting better NFI than the latter.

These findings contribute to the NFI disclosure literature in a twofold manner. Firstly, it extends the knowledge on the effects of the Directive's implementation by presenting the reporting practices adopted and the impact on the NFI disclosed in a country that represents a specific institutional context and where the transposition into national law left much discretion to companies. The evidence collected in this context contributes to the debate on 'mandatory against voluntary' disclosure and may help policymakers to introduce improvements to the current regulation [44–46]. Secondly, the results of this study contribute to a better understanding of the extent and quality of NFI disclosure in Portugal, adding to the empirical evidence of previous studies, most of which are based on voluntary disclosures made by companies about environmental, social and ethical matters [47–53].

#### 2. Literature Review

## 2.1. Non-Financial Reporting Regulation: European and Portuguese Context

Directives are legal instruments that have the particularity that they are not binding in their entirety, but only as regards the result to be achieved. They thus leave the Member States free to choose the form and methods of transposition such as 'copying out parts of the text of a directive in a new national regulation, transposing the text with minor or major terminology changes or other adjustments, opting for elaboration and/or formulation' [54]. Member States were required to transpose the Directive 2014/95/EU into their own national laws by 6 December 2016, for the targeted entities to publish their first non-financial statement for the financial year starting on 1 January 2017 or during the calendar year 2017. Portugal missed the 2016 deadline, only transposing the Directive through the Decree-Law 89/2017, of 28 July 2017, but imposing its application to the financial year starting on 1 January 2017. When transposing the Directive to Portuguese company law, no specific requirements or modifications were made.

As stated by the Directive 2014/95/EU (henceforward, the Directive), large undertakings that are public-interest entities, headquartered in Member States, which exceed the criterion of the average number of 500 employees on their balance sheet dates, were required to publish a non-financial statement with information concerning the following matters: environmental, social, employees, respect for human rights, anti-corruption and bribery. Specifically, the non-financial statement must include: (i) a brief description of the business model; (ii) a description of the policies pursued in relation to the matters described above, including the due diligence processes implemented; (iii) the results of those policies; (iv) a description of the main risks to and adverse impacts made on the entity's operations, and of how these have been managed; and (v) the non-financial key performance indicators relevant to the particular business.

The definition of the content of the non-financial statement is based on two principles: the materiality principle and the 'comply or explain' principle. According to the former, the information to be included in the non-financial statement should be selected to the extent necessary for an understanding of the development, performance, position and impact of the entity's activity. The 'comply or explain' principle means that the information required should be disclosed, unless the entity does not pursue policies related to one or more of the matters described, in which case it should provide a clear and reasoned explanation for not doing so. The non-financial statement shall also, where appropriate, include references to, and additional explanations of, amounts reported in the annual financial statements.

No model or format was proposed by Portuguese law for the non-financial statement. In line with the provisions of the Directive, when an entity prepares a separate report corresponding to the same financial year and covering the information that the non-financial statement should contain, it is exempt from the obligation to prepare the non-financial statement. For this exemption to occur, the separate report: (i) must be published together with the Management Report; or (ii) be made publicly available on the entity's website no later than six months after the balance sheet date, and reference to it must be made in the Management Report. This exemption is justified by the fact that most of the entities now required to report NFI had already been voluntarily disclosing it in stand-alone reports such as Sustainability Reports or Social Responsibility Reports.

The Directive established that the preparation of NFI may rely on national frameworks, European Union frameworks (e.g., Eco-Management and Audit Scheme) or international frameworks (e.g., United Nations Global Compact, International Organization for Standardization's ISO 26000, Global Reporting Initiative), and entities should specify on which frameworks they have relied on. In Article 2 of the Directive, the Commission declared its commitment to prepare non-binding guidelines for NFI reporting. These guidelines were provided through the Communication 2017/C215/01 with the aim of helping entities to disclose material information consistently and coherently to ensure comparability across companies and sectors [55].

Regarding NFI assurance, the Directive only required the statutory auditor or audit firm to check whether the non-financial statement or the separate report has been provided. Member States were given the option to require the non-financial statement or the separate report be verified by an independent assurance services provider. In Portugal, the independent external assurance of NFI was not imposed, being an option for companies to carry it out.

#### 2.2. Mandatory Non-Financial Reporting in Europe: Empirical Evidence

Following the publication of the Directive, studies began to emerge analyzing the degree of preparedness of companies, in a given country, to meet the requirements of the Directive. In general, these studies assessed the extent to which information disclosed by companies, prior to the implementation of the Directive, already complied with its requirements. Some studies also tested the potential influence of chosen determinants on NFI disclosure levels.

These studies provided an ex ante evaluation of non-financial reporting practices deemed useful to understand the changes that would occur with the entry into force of the Directive. The evidence showed that large European companies revealed a high level of compliance with the Directive requirements before its implementation [56]. Nevertheless,

there were countries where NFI disclosure levels were very low, such as Poland and Romania [57–59]. The company size, measured by total assets, turnover or number of employees, were highlighted as important determinants of non-financial disclosure [58,60–62]. It was also found that companies belonging to environmentally sensitive industries tend to provide more information about social and environmental matters compared to companies belonging to other industries [56,58,60]. Finally, it was observed that companies had placed little emphasis on the disclosure of matters such as human rights, anti-corruption and diversity policies [59,61,63].

The first NFI disclosures, following the implementation of the Directive, were made by European companies for the fiscal year of 2017. Henceforward, researchers have started to study how the companies were responding to the new corporate reporting obligation. So far, the existing empirical evidence comes from listed companies in six countries: Spain [29], Poland [32], Italy [30,33–39], Germany [30], Romania [31] and Hungary [40].

The results of these studies highlight three topics related to the effects of the Directive. The first topic concerns the choices made by companies, in 2017, regarding the presentation format and the framework for preparing NFI. As for the presentation format, there is evidence that some companies abandoned the presentation of NFI in separate reports in 2017 [29,34], but it cannot be said that there is a trend toward the adoption of a specific format, as some studies found most companies presented the NFI in the Management Report [33], while others showed a preference for separate reports [29,35]. Regarding the framework used for preparing the NFI, most companies used the GRI Standards [33,35]. It should be noted that there is no evidence on the type of assurance adopted by companies for NFI in the context of the Directive.

The second topic analyzed by these studies was the impact of the Directive on the quality of the NFI disclosed. Overall, the results showed an increase in the quality of the NFI disclosed in 2017 compared to 2016 [30,31,40] or to 2015 [33]. The highest levels of disclosure were found for information related to the business model [33] or environmental matters [40]. However, there are some categories of information, such as the outcome of policies and human rights matters, still not disclosed by some companies [31,40]. Carungu et al. [34] observed no significant improvements in the content and structure of non-financial reports in 2017 for companies that already published NFI in 2016, suggesting that the positive effect of the mandatory regime is driven by companies reporting NFI for the first time in 2017. For the specific case of non-financial key performance indicators, Raucci and Tarquinio [38] found an overall reduction in its number when comparing the years 2012 and 2017, and Loprevite et al. [37] and Tarquinio et al. [39] reached similar results when studying the period from 2016 to 2018. These findings may be interpreted as a selective behavior of companies focusing on more relevant indicators, or, on the contrary, they could be the expression of a certain caution, whereby companies disclose the minimum quantity of information that allows them to comply with the requirements of the law.

Finally, the third topic concerns the factors that may have generated differences between companies regarding the impact of the Directive on the quality of the NFI disclosed. One of the factors identified was the business sector in which the company operates, with the Oil and Gas sector being the one disclosing more information related to environmental issues [29]. Another factor that influenced the quality of the NFI disclosed was the presentation format, with the highest rates of disclosure of NFI corresponding to companies that provided this information in sustainability reports [29] or in integrated reports [33]. Finally, the expertise and skills that companies had in voluntary sustainability reporting prior to the adoption of the Directive, also had a positive effect on the quality of NFI disclosed in 2017 [30,33,35].

From the studies reviewed, we can conclude that evidence on the effects of the Directive's requirements on the quality of NFI and on the reporting practices of European companies is still scarce, covering only a few countries and giving an incomplete picture of the reporting practices adopted in each of them. More specifically, none of the studies analyzed the type of assurance adopted for NFI and the effects of the Directive on the quality of the NFI disclosed are still only known in Italy, Germany, Romania and Hungary.

#### 2.3. Mandatory Non-Financial Reporting Practices: Theoretical Framework

We explain the practices adopted by companies and the changes in the quality of NFI disclosed following the implementation of the Directive, based on the Institutional Theory isomorphisms. Although the first studies in this field did not provide an explanatory theory of the effects of the Directive, more recent studies considered Institutional Theory isomorphisms as an appropriate theoretical approach to explain the choices made by companies when switching from a voluntary to a mandatory reporting regime [34,36,40].

Institutional Theory establishes that organizational structures, processes and practices are created and adopted as a result of institutional pressures, such as regulations, norms, routines and social values, which influence its behaviors and formal structures, emerging as an alternative to the view that the organizational actions are solely attributed to rational management decisions [64–66]. Institutional isomorphism is a constraining process that forces an organization to resemble others facing the same institutional pressures, leading to a homogenization of the organization's behavior and structure. According to DiMaggio and Powell [64], institutional isomorphism can be created by three types of pressures: coercive, mimetic and normative.

Coercive isomorphism results from formal and informal pressures exerted on organizations by other organizations on which they are dependent and by cultural expectations in the society in which organizations operate [64]. With the implementation of the Directive, companies that did not prepare NFI are required to do so, bringing them closer in terms of reporting practices to companies that have already done so on a voluntary basis.

Mimetic isomorphism arises when the environment creates symbolic uncertainty, and then companies model themselves on other organizations in their field, which they perceive to be more legitimate or successful [64,65]. The Directive is flexible concerning the presentation format, the framework for preparation and the level of assurance to be adopted by companies. This flexibility creates uncertainty in companies about the options to be taken, giving room for imitation of what are considered the best practices.

Normative isomorphism stems primarily from professionalization, which is the collective struggle of members of an occupation to define the conditions and methods of their work [64]. It takes place when companies seek professional guidance in the form of consultants or guidelines, internalizing a set of norms or practices because they believe it is 'the right thing to do' [67].

In other words, according to Institutional Theory, non-financial reporting practices and the quality of NFI could be shaped by imitation (what other companies in the same context do), routine (what the company has done in the past) and institutions (regulations, laws and customs) [68].

Prior to the implementation of the Directive, the obligation of Portuguese listed companies to disclose NFI was closely tied to the Companies Act requirements of information to be presented in the Management Report regarding environmental and employee matters. The Portuguese regulation did not provide specific guidelines on this disclosure, so each company decided on the extent and detail of the information to be disclosed in the Management Report on these matters. The presentation of sustainability reports, and their assurance, were also voluntary practices, even for listed companies. Previous empirical evidence about NFI reporting by the largest Portuguese companies concluded that GRI guidelines were the dominant standard orienting the production of sustainability reports, and these reports were mainly assured by the Big 4 accounting firms [51].

The transposition of the Directive into national law may stimulate a form of coercive isomorphism among companies in Member States since an increase in the quality of the NFI disclosed is expected, especially by companies that have not previously disclosed this type of information. Furthermore, the Directive is flexible concerning the presentation format, the preparation framework and the level of assurance to be adopted by companies. Member

States, in general, maintained this flexibility in their national legislation [69]. This flexibility creates uncertainty in companies about the options to be taken, giving room for imitation (mimetic isomorphism) of those considered the best practices. The flexibility of the Directive also leaves room for preparers and auditors to impose their past practices, especially when companies have already voluntarily prepared NFI (normative isomorphism).

The RQ1 and RQ2 concern the reporting practices adopted by Portuguese listed companies, under the Directive, in the years 2017 and 2018. The evidence presented in the previous section does not provide complete explanations for the options made by companies. For example, Caputo et al. [33], Doni et al. [35] and Sierra-Garcia et al. [29] found that, although the presentation of separate reports is associated with better disclosure, not all European companies made this choice in 2017, without providing possible explanations for this result. The analysis of the reporting practices made by Portuguese-listed companies over two years, in the light of the Institutional Theory isomorphisms, will allow a better understanding of how companies dealt with 'uncertainty' in this new reporting context. The small size of the Portuguese stock market, the predominance of the Big 4 auditors and the presence of companies with previous sustainability practices are factors that may favor mimetic or normative isomorphisms.

The RQ3 and RQ4 concern the effects of the Directive on the quality of NFI disclosed in the years 2017 and 2018 and the possible effect of prior experience in non-financial reporting on it. With the implementation of the Directive, companies that did not prepare NFI are compelled to do so. For this reason, we would expect an overall increase in the quality of the NFI disclosed by companies in 2017, as observed in previous studies [30,31,33].

Previous evidence showed that experience in voluntary non-financial reporting had a positive effect on the quality of the NFI disclosed after the Directive [30,33,35]. By comparing the impact of the Directive in two countries with different experiences in sustainability reporting, the results of Mion and Adaui [30] suggested the implementation of the Directive may have created a coercive isomorphism, bringing the quality of NFI of companies with no experience in sustainability reporting, closer to those that voluntarily prepared sustainability reports before the Directive. The answer to RQ4 will allow us to make inferences about the presence of a coercive isomorphism based on companies in the same country.

#### 3. Research Design

This research aims to provide the first evidence on the effects of the Directive on non-financial disclosures of Portuguese-listed companies. For this purpose, the analysis was conducted to answer the Research Questions (RQ) presented in the Introduction.

The data analyzed consisted of NFI disclosed in Management Reports, Sustainability Reports and Integrated Reports by Portuguese companies listed in the Euronext Lisbon. We chose listed companies because they are considered public interest entities, according to national law, and because the required information is publicly available. We only considered companies with an average number of employees, at year-end 2017, over 500. We excluded football firms as their reporting period does not match the calendar year. The final sample consisted of 34 companies, with information for the years 2016, 2017 and 2018. All of them are parent companies, so they are ultimately responsible for their reporting practices.

Based on previous work in this field [29,33,61], the quality of the NFI disclosed was assessed through an index, which we refer to as the Non-Financial Information Index (NFII). This index was composed of six sub-indexes based on the main areas addressed by the Decree-Law 89/2017: business model (BUS), environmental matters (ENV), social matters (SOC), issues related to employees, gender equality and non-discrimination (EMP), human rights matters (HUM) and anti-corruption and bribery matters (CORR).

An assessment grid was constructed, including a list of specific items to be disclosed for each of the six areas. Since, in Portugal, there are no specific guidelines to prepare NFI, the items included in the grids were based on the document 'Linking the Global Reporting Initiative Standards and the European Directive on non-financial and diversity disclosure' [70]. Except for the business model, the following items were considered in all areas: a description of the policies pursued, including the due diligence processes implemented, the outcome of those policies, a description of the main risks and how these have been managed, non-financial key performance indicators and references to amounts in annual financial statements.

The NFI disclosed by entities was analyzed, and the grids were filled using as the unit of analysis the presence or absence of the item, treated as a binary code (1 = presence or justification for the absence; 0 = absence without justification). Each of the sub-indexes was calculated by dividing the score obtained by the maximum possible score for the specific area. The overall index (NFII) resulted from the aggregation of all the sub-indexes (SI<sub>i</sub>), considering the weight (W<sub>i</sub>) of each in the global index. The sub-indexes and the overall index were expressed as a percentage.

SI = (Score obtained/Maximum score)  $\times$  100

NFII = 
$$\sum W_i \times SI_i$$

The assessment grid is presented in Appendix A, and Table 1 summarizes the maximum score for each area.

	BUS	ENV	SOC	EMP	HUM	CORR
Policies		1	1	1	1	1
Outcome		1	1	1	1	1
Risks		1	1	1	1	1
Non-financial KPI		29	2	22	7	3
Amounts in FS		1	1	1	1	1
Maximum score Weight	19 19%	33 32%	6 6%	26 25%	11 11%	7 7%

Table 1. Disclosure items and maximum scores.

To identify the reporting practices adopted and the items of NFI disclosed, the corporate reports were content analyzed by each of the researchers, manually and separately. The reliability of the self-constructed indexes was addressed using multiple coders, and discrepancies were discussed and reconciled through further testing among coders [71,72]. Additionally, internal consistency of the employed scale was assessed through Cronbach's alpha coefficient. The alpha coefficient value for the scale was computed in each of the years, for the entire list of items and for each separate area (BUS, ENV, SOC, EMP, HUM and CORR). Except for the year 2016 and for the list of social matters items (SOC), whose value was 0.614, the alpha coefficient revealed values above 0.7, indicating a sufficient level of reliability [73].

The items included in the sub-indexes cover all the matters required by the Directive. As we can see in Table 1, the non-financial Key Performance Indicators (KPIs) represent an important number of items to be disclosed. KPIs consist of numerical or quantitative data, which is considered more informative than narrative information [68]. However, we do not assign different weights to narrative and quantitative information.

To answer RQ1, the non-financial disclosure practices adopted by companies in the years 2016, 2017 and 2018 were identified and tabulated. Then, possible associations between the options made in light of the Directive and the previously adopted disclosure practices were assessed through the Fisher's Exact Test, allowing to answer RQ2. To answer RQ3, we compared the quality of NFI disclosed, measured by the NFII and sub-indexes, before and after the entry into force of the Directive, testing the differences through the paired sample *t*-test and the Wilcoxon signed-rank test.

To test the effect of previous experience in voluntary non-financial disclosure on the quality of NFI disclosed after the implementation of the Directive, and thus, to answer RQ4,

a multiple linear regression model was built. In this model, the independent variables were the following: the experience of the company in non-financial disclosure [33,35,61] and the size and sector as control variables [74]. We used two proxies for experience: the quality of NFI disclosed and the presentation of a Sustainability Report, both for the year prior to the implementation of the Directive. The quality of NFI disclosed was captured by the NFII in 2016 (NFII<sub>2016</sub>), and the presentation of a Sustainability Report consisted of a dummy variable that takes the value 1 if the company presented a Sustainability Report in 2016 and 0 otherwise (SRep<sub>2016</sub>). Size was measured by the logarithm of total assets. Following an approach similar to Venturelli et al. [62], the sector was defined as a dummy variable for which the value 1 was assigned to companies in high-risk sectors and value 0 to companies in low-risk sectors. In Table 2, we present the distribution of the companies in the sample by sector and the classification in the high-/low-risk sector.

Sectors	n
High-risk	
0001—Oil and Gas	1
1000—Basic materials	4
2000—Industrials	6
7000—Utilities	3
Low-risk	
3000—Consumer goods	2
4000—Healthcare	1
5000—Consumer services	9
6000—Telecommunications	1
8000—Financials	4
9000—Technology	3
Total	34

Table 2. Sample distribution by sector.

In general terms, the model is represented by the following expression:

Disclosure =  $\beta_0 + \beta_1$  Experience +  $\beta_2$  Size +  $\beta_3$  Sector +  $\varepsilon$ 

In the estimation, we considered four dependent variables for Disclosure: quality of disclosure in 2017 (NFII<sub>2017</sub>), change in the quality of disclosure between 2016 and 2017 ( $\Delta$ NFII<sub>2016–2017</sub>), quality of disclosure in 2018 (NFII<sub>2018</sub>) and change in the quality of disclosure between 2017 and 2018 ( $\Delta$ NFII<sub>2017–2018</sub>). Combining two proxies for Experience and four dependent variables, we estimated eight models using the ordinary least squares method.

# 4. Results and Discussion

## 4.1. Non-Financial Disclosure Practices Adopted under the Directive

This section presents the empirical findings concerning the choices made by companies under the Directive (RQ1) and analyzes the possible influence on these choices of previous voluntary disclosure practices (RQ2), allowing us to test the presence of mimetic or normative isomorphisms.

Table 3 summarizes the information regarding the disclosure practices adopted by companies in all the years analyzed. As to the presentation format (Panel A), in 2017, 15 companies chose to present NFI in the Management Report (MR) or in the Integrated Report (IR), and 19 companies chose to present NFI in a separate report. All the separate reports were Sustainability Reports (SR), and, in most cases, they had already been prepared in the previous year since all 11 companies that prepared separate reports in 2016 maintained this format in 2017.

		Panel A—Pres	entation Format		
	None	Included in the MR or IR	Separate Report	Total	Reconciliation Table
2016	15	8	11	34	-
2017	0	15	19	34	18
2018	0	20	14	34	20
		Panel B—	Framework		
	GRI	Other	None	Total	
2016	13	1	20	34	
2017	20	0	14	34	
2018	19	0	15	34	
		Panel C-	-Assurance		
	None	Declaration	Independent assurance report	Total	
2016	14	-	10	34	
2017	0	21	13	34	
2018	0	24	10	34	

Table 3. Reporting practices (number of companies).

The Fisher's exact test presented in Table 4 suggests the adoption of a separate report in the year 2017 is associated with the voluntary presentation of NFI in this format, in 2016. This result corroborates the 'routine' effect on the choices made, pointed out by Cormier et al. [68]. To mention that in 2018, six companies abandoned the preparation of separate reports, and one company switched to this format. In three of these six companies, the reason for abandoning separate reports was the switch to integrated reporting.

		2017 Presentation Format			Fisher's l		
		Included in Separate Total <sup>a</sup> the MR or IR Report		Total <sup>a</sup>	Exact Sigma (2-Sided)	Exact Sigma (1-Sided)	Cramer's V
2016	Included in the MR or IR	5	3	8			0.701 *
Presentation format	Separate report	0	11	11	0.005 *	0.005 *	
	Total	5	14	19			

Table 4. Cross-tabulation analysis of presentation format.

<sup>a</sup> Only companies with NFI disclosures in 2016. \* Significant at 1% level.

It was also noted that companies that include NFI in the MR often do so in a specific and clearly identified section. Regarding separate reports, they were structured in several ways and were sometimes supplemented with NFI included in the MR. For this reason, several companies included a reconciliation table in the MR. This table seems to have been prepared not only to make it easier to locate the information required within the corporate reports, but also to demonstrate compliance with the requirements of the Decree-Law 89/2017.

The reconciliation table does not follow any pre-established model, and it is not a mandatory requirement under Decree-Law 89/2017. However, as can be seen in Table 3 (Panel A), a substantial number of companies have adopted this practice: 18 companies in 2017 and 20 companies in 2018. Table 5 shows that in the year 2017, of the 19 companies choosing the separate report format, 15 companies presented a reconciliation table. The Fisher's exact test supports the existence of an association between the use of a separate report and the presence of the reconciliation table.

Carungu et al. [34] and Doni et al. [35] had already documented the use of this table by Italian companies, considering that it provides more efficient disclosure. In our opinion, the generalization of this practice among companies is a response to the uncertainty

faced regarding compliance with the requirements of the Directive. Since this practice was observed immediately after the implementation of the Directive, it must have been driven by professional guidance rather than imitation, indicating the presence of normative isomorphism.

		2017 Prese	ntation Forn	nat	Fisher's	_	
		Included in Separate the MR or IR Report Total			Exact Sigma (2-Sided)	Exact Sigma (1-Sided)	Cramer's V
2017	No	12	4	16		0.001 *	0.586 *
Reconciliation	Yes	3	15	18	0.001 *		
Table	Total	15	19	34	-		

Table 5. Cross-tabulation analysis of reconciliation table and presentation format.

\* Significant at 1% level.

Regarding the framework used for preparing the NFI, Table 3 (Panel B) shows that GRI standards (or Guidelines) are the choice of most Portuguese companies (20) in 2017. The remaining 14 companies, which represent a substantial proportion, did not mention any framework. This number increased in 2018, with one company abandoning the use of the GRI standards without identifying any framework. In 2018, there was a diversification of the frameworks used, with 16 companies using only the GRI standards and three using the GRI Standards together with Sustainable Development Goals and/or the principles of the United Nations Global Compact.

Table 6 shows that of the 20 companies adopting the GRI Standards in 2017, 16 presented NFI in separate reports. The Fisher's exact test corroborates the existence of an association between the presentation format and the framework adopted for the preparation of NFI, which is consistent with the widespread use of GRI standards in SR by Portuguese companies [51]. We cannot conclude whether this choice has a normative isomorphism behind it because we cannot rule out the possibility that some companies have chosen the GRI standards because they were not sure about what to disclose, which is consistent with mimetic isomorphism [67].

		2017 Framework			Fisher's l		
		GRI	GRI Other or None		Exact Sigma (2-Sided)	Exact Sigma (1-Sided)	Cramer's V
2017 Presentation format	Included in the MR or IR	4	11	15		0.001 *	0.581 *
	Separate report	16	3	19	0.001 *		
	Total	20	14	34			

Table 6. Cross-tabulation analysis of presentation format and framework.

\* Significant at 1% level.

Regarding NFI assurance, as in Table 3 (Panel C), in 2017, most companies (21) had just presented the declaration of the statutory auditor or audit firm certifying that the nonfinancial statement or the separate report had been provided. Nevertheless, the number of entities (13) that voluntarily engaged independent assurance providers to verify the NFI should not be underestimated. It should be noted that, of these 13 companies, nine had already published an independent assurance report in 2016. The Fisher's exact test, presented in Table 7, suggests that the decision to provide independent assurance on NFI in 2017 was associated with the adoption of that practice in the previous year, corroborating the existence of a 'routine' effect [68]. In 2018, four companies stopped publishing an independent assurance report, and one company started doing so. All the independent assurance providers were the Big 4 accounting firms, corroborating the trend observed in previous years in Portugal by Gomes et al. [51].

Table 7. Cross-tabulation analysis of assurance.

		2017 Assurance			Fisher's l		
		Declaration	Independent laration Assurance Total <sup>a</sup> Report		Exact Sigma (2-Sided)	Exact Sigma (1-Sided)	Cramer's V
	Declaration	8	2	10			
2016 Assurance	Independent assurance report	0	9	9	- 0.001 *	0.001 *	0.809 *
	Total	8	11	19	_		

<sup>a</sup> Only companies with NFI disclosures in 2016. \* Significant at 1% level.

As can be seen in Table 8, of the 21 companies that presented only the declaration of the statutory auditor, the majority (12) included NFI in the MR or in the IR; of the 13 companies that published an independent assurance report, 10 prepared separate reports. The Fisher's exact test indicates the existence of an association between the type of assurance chosen and the presentation format used for NFI.

Table 8. Cross-tabulation analysis of presentation format and assurance.

		2	2017 Assurance			Fisher's Exact Test		
		Declaration	Independent cclaration Assurance Total Report		Exact Sigma (2-Sided)	Exact Sigma (1-Sided)	Cramer's V	
2017	Included in the MR or IR	12	3	15		0.055 ***	0.333 ***	
Presentation format	Separate report	9	10	19	0.079 ***			
	Total	21	13	34	-			

\*\*\* Significant at 10% level.

Answering RQ1, the results revealed that in 2017 the format adopted by most Portuguese companies for the presentation of NFI was a separate report consisting of an SR complemented by a reconciliation table. As for the framework used, the preference was for the GRI standards (or Guidelines), but a significant number of companies did not disclose any framework. Regarding assurance, a practice not analyzed in previous studies, most companies in our sample only presented the declaration of the statutory auditor or audit firm certifying the non-financial statement or a separate report has been provided. However, most of the companies presenting separate reports provided an independent assurance report. The coexistence of different presentation formats and the lack of mention of the framework used are aspects that compromise the desired comparability of the NFI and should urgently deserve the attention of policymakers.

Regarding RQ2, the evidence shows most of the companies that have adopted 'good practices', such as the presentation of a sustainability report, the use of GRI standards and the certification of NFI by an independent assurance provider, were companies that have already applied these practices in 2016, on a voluntary basis, through the presentation of SR. Beyond the fact that some companies changed to integrated reporting, there is no evidence of an improvement in non-financial reporting practices in 2018. These results are consistent with those of Carungu et al. [34], who observed no significant improvements in the content and structure of non-financial reports for Italian companies already preparing them on a voluntary basis before the Directive.

Consistent with the predictions of the Institutional Theory, the evidence indicates that the 'options' made by companies in 2017 and 2018 regarding non-financial reporting practices were mainly determined by 'routine' and were not necessarily guided by the aim

of adopting those considered the best reporting practices. This result may shed light on the reasons why previous studies have not observed a trend toward the adoption of separate reports [29,33,35].

# 4.2. Influence of the Directive on the Quality of NFI Disclosed

This section presents the results of the analysis conducted to assess the effect of the Directive on the quality of NFI disclosed (RQ3) and to test the existence of a relationship between the quality of NFI disclosed after the implementation of the Directive and the previous experience in voluntary non-financial disclosure (RQ4). The answer to RQ4 also allows us to conclude on the possible presence of a coercive isomorphism.

Table 9 presents the descriptive statistics for the NFII and sub-indexes over the years analyzed. As expected, the minimum values for the year 2016 revealed the existence of companies that did not disclose any type of NFI. Furthermore, after two years of implementation of the Directive, there were still matters not disclosed by some companies, such as human rights (HUM) and anti-corruption and bribery matters (CORR). In contrast with this scenario, the maximum values showed the existence of fully compliant companies, not only after the Directive, but even before, in the context of voluntary disclosure. The business model (BUS) presented, consistently throughout the years analyzed, the highest mean values.

Table 9. Descriptive statistic	s.
--------------------------------	----

		NFII	BUS	ENV	SOC	EMP	HUM	CORR
2016	Minimum	0	0	0	0	0	0	0
	Mean	29%	51%	24%	36%	24%	17%	22%
	Maximum	89%	100%	97%	100%	77%	82%	86%
2017	Minimum	16%	42%	3%	0	8%	0	0
	Mean	51%	82%	41%	54%	50%	32%	40%
	Maximum	91%	100%	97%	100%	96%	91%	86%
2018	Minimum	24%	63%	3%	17%	8%	0	0
	Mean	55%	95%	43%	55%	53%	35%	41%
	Maximum	90%	100%	100%	83%	92%	91%	86%

Table 10 presents the results of the tests performed to determine the significance of differences between the quality of NFI disclosure in the years 2016 and 2017 and in the years 2017 and 2018. Both the Wilcoxon signed-rank test and the paired sample *t*-test indicate significant differences in disclosure quality in the years 2016 and 2017, with higher values in 2017 for the NFII and all the sub-indexes. These results suggest the disclosure requirements of the Directive had, in the first year of implementation, a positive impact on the quality of NFI disclosed by Portuguese companies, as observed by Caputo et al. [33] in Italy; by Mion and Adaui [30] in Italy and Germany; by Tiron-Tudor et al. [31] in Romania; and by Lippai-Makra et al. [40] in Hungary. The number of companies (15) that did not report any NFI in 2016, but started to do so in 2017, certainly contributed significantly to this effect.

Regarding the quality of disclosure in the years 2017 and 2018, the difference was only statistically significant for the business model matters (BUS), with a higher quality of disclosure in 2018, suggesting that in the second year, companies only improved the disclosures related to the business model. This is an interesting finding, considering that BUS is the sub-index with the highest mean values in both years analyzed and with the largest mean differences in both comparisons, revealing special attention from companies regarding the business model disclosures. These results may complement those obtained by Doni et al. [35], who found that companies more experienced in sustainability reporting are more likely to comply with the Directive's disclosure requirements regarding the business model.

			2016-2017		2017–2018					
	Paired Sample <i>t</i> -test			Wilcox	on Test	Paired	Sample t	-test	Wilcoxon Test	
_	Mean Difference	t	Sigma (2-Tailed)	Z	Asymp. Sigma (2-Tailed)	Mean Difference	t	Sigma (2-Tailed)	Z	Asymp. Sigma (2-Tailed)
NFII	21	6.608	0.000	-4.732 <sup>a</sup>	0.000	4	1.671	0.104	-2.490 <sup>a</sup>	0.013
BUS	31	4.611	0.000	-3.668 <sup>a</sup>	0.000	13	3.389	0.002	-3.085 <sup>a</sup>	0.002
ENV	17	4.780	0.000	-4.057 <sup>a</sup>	0.000	2	0.600	0.553	-0.510 <sup>a</sup>	0.610
SOC	18	3.977	0.000	-3.506 <sup>a</sup>	0.000	1	0.333	0.741	$-0.451^{a}$	0.652
EMP	27	6.559	0.000	-4.791 <sup>a</sup>	0.000	3	0.638	0.528	$-0.141^{\text{ b}}$	0.888
HUM	15	3.050	0.004	-3.110 <sup>a</sup>	0.002	3	0.822	0.417	-0.751 <sup>a</sup>	0.452
CORR	18	4.797	0.000	-3.658 <sup>a</sup>	0.000	1	0.285	0.778	-0.303 <sup>a</sup>	0.762

Table 10. Changes in the quality of non-financial disclosure after the Directive.

Mean differences are presented in percentual points. <sup>a</sup> Based on positive ranks (disclosure in 2017 > disclosure in 2016; disclosure in 2018 > disclosure in 2017). <sup>b</sup> Based on negative ranks (disclosure in 2017 < disclosure in 2016; disclosure in 2018 < disclosure in 2017).

Table 11 shows the comparison of the quality of NFI between 'Less experienced' and 'More experienced' companies in non-financial disclosure. Consistent with the proxies used for experience, in Panel A, we consider 'Less experienced' the companies that did not prepare NFI before the implementation of the Directive (NFII<sub>2016</sub> = 0) and 'More experienced' the remaining. In Panel B, 'More experienced' are the companies that prepared a sustainability report before the implementation of the Directive (SRep<sub>2016</sub> = 1) and 'Less experienced' the remaining. The results demonstrate, for both proxies of experience, that 'More experienced' companies had a better quality of NFI in both years after the implementation of the Directive than 'Less experienced'. However, the difference narrowed from 2017 to 2018, suggesting that, over time, 'Less experienced' and 'More experienced' get closer together in terms of NFI quality.

Panel A—Experience Measured by NFII <sub>2016</sub>										
		Less Experienced (NFII <sub>2016</sub> = 0) N = 15	More Experienced (NFII <sub>2016</sub> > 0) N = 19	Difference	Test Statistics <sup>a</sup>	Asymp. Sigma (2-Tailed)				
NEW	Mean	0.341	0.642	0.301	4.618	0.000				
NFII <sub>2017</sub>	Median	0.280	0.660	0.380	-3.593	0.000				
NIEW	Mean	0.421	0.651	0.230	3.264	0.003				
NFII <sub>2018</sub>	Median	0.310	0.660	0.350	-2.900	0.004				
		Panel B—	Experience measured l	by SRep <sub>2016</sub>						
		Less Experienced (SRep <sub>2016</sub> = 0) N = 23	More Experienced (SRep <sub>2016</sub> = 1) N = 11	Difference	Test Statistics <sup>a</sup>	Asymp. Sigma (2-Tailed)				
NEED	Mean	0.403	0.733	0.330	5.573	0.000				
NFII <sub>2017</sub>	Median	0.310	0.780	0.470	-3.629	0.000				
	Mean	0.479	0.698	0.219	2.840	0.010				
NFII <sub>2018</sub>	Median	0.400	0.760	0.360	-2.617	0.009				

Table 11. Quality of non-financial disclosure and previous experience.

<sup>a</sup> Independent samples *t*-test for means; Mann–Whitney U test (*Z*) for medians.

The correlation matrix for the variables of the regression model is presented in Table 12. The correlations between independent and dependent variables suggest that experience in voluntary non-financial disclosure, proxied by NFII<sub>2016</sub> and SRep<sub>2016</sub>, is positively related to disclosure quality after the implementation of the Directive (NFII<sub>2017</sub> and NFII <sub>2018</sub>) and negatively related to the change in disclosure quality induced by the Directive ( $\Delta NFII_{2016-2017}$  and  $\Delta NFII_{2017-2018}$ ). The highest correlations between independent variables were 0.747 for SRep<sub>2016</sub> with NFII<sub>2016</sub> and 0.567 for Size with SRep<sub>2016</sub>. The high correlation for SRep<sub>2016</sub>

with NFII<sub>2016</sub> is consistent with the fact that companies presenting SR tend to provide more NFI [29]. Considering that these two variables will not be introduced in the models simultaneously, there is no need to be concerned with multicollinearity. In addition, none of the regressions (Table 13) had a variance inflation factor (VIF) above 1.495, corroborating that multicollinearity was unlikely to be a problem.

Table 12. Correlation ma	atrix.
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	NFII <sub>2016</sub>	SRep <sub>2016</sub>	Size	Sector
NFII <sub>2017</sub>	0.734 *	0.632 *	0.504 *	0.412 **
△NFII <sub>2016–2017</sub>	-0.601 *	-0.382 **	-0.260	0.098
NFII <sub>2018</sub>	0.555 *	0.456 *	0.540 *	0.284
△NFII <sub>2017-2018</sub>	-0.354 **	-0.321 ***	-0.165	-0.275
NFII <sub>2016</sub>	1	0.747 *	0.549 *	0.233
SRep <sub>2016</sub>	-	1	0.567*	0.060
Size	-	-	1	0.189
Sector	-	-	-	1

Pearson correlations for continuous variables and Spearman correlations for dummy variables. \*, \*\* and \*\*\* Significant at 1%, 5% and 10% level, respectively.

Table 13. Re	gression	estimation	results.
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	Dependent Variables								
	NFI	I <sub>2017</sub>	△NFII <sub>2016–2017</sub> N		NFI	NFII <sub>2018</sub>		FII <sub>2017–2018</sub>	
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
(constant)	-0.234	-0.615 *	-0.191	0.043	-0.140	-0.341	0.169	0.464 ***	
NFII <sub>2016</sub>	0.670 *	-	-0.821 *	-	0.375 ***	-	-0.375	-	
SRep <sub>2016</sub>	-	1.002 *	-	-0.521	-	0.523	-	-0.807 ***	
Size	0.145	0.183	0.099	-0.139	0.333 ***	0.365 **	0.042	0.087	
Sector	0.491 **	0.708 *	0.560 **	0.305	0.290	0.411	-0.366	-0.490	
N. ° of obs.	34	34	34	34	34	34	34	34	
Adj. R <sup>2</sup>	57.4%	49.9%	39.0%	5.2%	34.9%	31.8%	7.6%	11.3%	
F Statistic	15.850 *	11.946 *	8.036 *	1.598	6.902 *	6.122 *	1.899	2.405 ***	
Durbin Watson	1.491	1.794	1.903	1.747	1.451	1.390	1.336	1.646	
Max. VIF	1.495	1.466	1.495	1.466	1.495	1.466	1.495	1.466	

\*, \*\* and \*\*\* Significant at 1%, 5% and 10% level, respectively.

Table 13 presents the regression analysis results. In all models, except for (4) and (7), the F-statistic was significant at the 1% and 10% levels, indicating that independent variables, taken together, explain the dependent variables considered. The adjusted  $R^2$  show that model (1), where Disclosure is measured by NFII<sub>2017</sub> and Experience by NFII<sub>2016</sub>, has the best fit, with approximately 57.4% of the variation in the quality of disclosure between companies being explained by independent variables.

Consistently with the previous bivariate analysis, the coefficients of NFII<sub>2016</sub> were statistically significant, at the standard levels, in all models except (7), and their signs confirmed the positive relationship with NFII<sub>2017</sub> and NFII<sub>2018</sub> and the negative relationship with  $\Delta$ NFII<sub>2016–2017</sub> and  $\Delta$ NFII<sub>2017–2018</sub>. The coefficients of SRep<sub>2016</sub> were statistically significant only in models (2) and (8). As for the control variables, Size was statistically significant in models (5) and (6), corroborating the positive relationship observed in previous studies between the size of the company and the quality of non-financial disclosure [74]. Sector was statistically significant in models (1), (2) and (3), with a positive sign indicating that companies in riskier sectors disclosed better than companies in less risky sectors.

Answering RQ3, the findings show that the major effects of the Directive on the quality of NFI disclosed were observed in the first year of implementation (2017). In the second year (2018), only an improvement in the business model disclosures was observed. This result adds to those of previous studies, which analyzed the effects of the Directive in the year 2017 [30,31,33]. Despite the positive effect of the Directive on the quality of NFI

disclosures, after two years of implementation, there were still companies that did not disclose matters such as human rights or anti-corruption and bribery, nor did they explain the reason for not doing so, which is a problem already identified by Tiron-Tudor et al. [31] in Romania and by Lippai-Makra et al. [40] in Hungary.

The effect observed in the first year of the implementation of the Directive may have been due to companies that disclosed NFI for the first time. The answer to RQ4 confirms this expectation, as a negative relationship was observed between the experience in NFI disclosure (proxied by the quality of NFI disclosure in 2016) and the increase in the quality of NFI between 2016 and 2017. The negative relationship also holds for the increase between 2017 and 2018, corroborating a greater effect of the Directive on the quality of NFI for less experienced companies.

Despite the approximation of the quality of NFI of less experienced companies to the more experienced ones, after two years of implementation of the Directive, the less experienced companies exhibit lower levels of NFI quality compared to those that had experience in voluntary disclosure before the Directive, and there are still companies that do not disclose all the matters required by this regulation. These results confirm that the coercive effect exerted by the Directive only improved the quality of NFI for companies with no previous experience in NFI reporting, disclosing it for the first time in 2017. In line with the studies of Mion and Adaui [30] and Carungu et al. [34], these findings show that the isomorphic coercive mechanism embodied in the Directive has limited effects on companies with prior experience in voluntary non-financial reporting. This evidence supports the idea that flexible regulations, such as Directives, tend to have only a small impact on the quality of the information disclosed, requiring intervention by policymakers to make them tighter [3,28].

# 5. Conclusions

The implementation of the European Union Directive 2014/95/EU by Member States, as of 2017, represents an opportunity for academics to research and extend knowledge on the effects of regulations on corporate reporting. This study aimed to contribute to this evidence by analyzing how the obligatoriness imposed by the Directive affected the reporting practices, and the quality of the NFI disclosed, based on a sample of Portuguese listed companies. In this research, a content analysis was applied to corporate reports from the previous year (2016) and the first and second years of implementation of the Directive (2017 and 2018), identifying the reporting practices adopted and the NFI disclosed. The quality of non-financial disclosures was assessed through an index that captures the presence or absence of the information required by the Directive.

This study provided evidence on the reporting practices adopted by listed companies in the two years of implementation of the Directive in Portugal. It also compared the quality of NFI disclosures before and after the Directive. In addition, it tested the effect on the quality of NFI disclosed on a mandatory basis of companies' previous experience in voluntary disclosure.

Regarding reporting practices (RQ1 and RQ2), it was found that companies adopt different presentation formats, and several do not mention the framework used—aspects that compromise the desired comparability of the NFI. A particular finding was the presentation of a reconciliation table by most of the companies that prepared separate reports, a practice already identified in Italy by Carungu et al. [34] and Doni et al. [35]. The presentation of this table suggests the presence of a normative isomorphism as a response to the uncertainty arising from the flexibility underlying the Directive. Furthermore, the evidence showed that reporting practices considered to be of high quality, such as the presentation of an SR, the use of the GRI Standards and the certification of NFI by an independent assurance provider, are interrelated and were adopted because companies already had these practices in place prior to the Directive. This finding is consistent with a 'routine' effect [68] and may explain why previous studies have not observed a trend toward the adoption of practices considered to be of higher quality, such as the presentation of separate reports [29,33,35]. As for the impact of the Directive on the quality of the NFI disclosed (RQ 3 and RQ4), the results showed that the most significant effects occurred in the first year of implementation, in line with previous studies [30,31,33,40]. The tests carried out showed that this result is largely due to companies that disclosed NFI for the first time, which adds an explanation to the previous studies. Nevertheless, it was the companies with previous experience in non-financial reporting that exhibited higher quality disclosures after the implementation of the Directive. Despite the imposed obligation, after two years of implementation of the Directive, significant differences in the quality of NFI between the more and less experienced companies remain. Moreover, several companies still fail to mention the framework used or to disclose information on sensitive matters such as human rights or anti-corruption and bribery (nor explain the reason for not doing so). In line with previous studies [30,34], these findings show that coercive isomorphism exerted by the Directive has a limited effect on companies with prior experience in voluntary non-financial reporting.

The Directive represented an important step in the harmonization of non-financial disclosures of the Member States to enhance their consistency and comparability. Nevertheless, our findings support the view that regulations with a high degree of flexibility, such as European Directives, have a positive, but limited, effect on the quality of disclosures [3,28].

This study has important theoretical and practical implications. Theoretically, it provides an in-depth analysis of the effects of the Directive on non-financial reporting practices and on the quality of NFI disclosures, in the light of Institutional Theory isomorphisms, confirming that choices made by companies were determined by a 'routine' effect and there was a limited coercive effect of the Directive. As for the practical implications, this study identifies two important areas that need the attention of policymakers: definition of more specific guidelines for the preparation and presentation of NFI to improve its comparability and consistency; and the requirement of some level of assurance regarding its content, to ensure completeness (in particular, regarding sensitive matters) and credibility to NFI. Considering the existent proposal for a new Directive on Corporate Sustainability Reporting [75], our findings corroborate that the success of future regulation depends on the objectivity of its content, for which the creation of non-financial reporting standards is crucial. Furthermore, as the proposal envisages an extension of the scope of sustainability reporting to other companies, our results provide an incentive for companies to start preparing for such requirements, as previous experience in voluntary reporting enables companies to better respond to mandatory requirements in the future.

Although the results of this study provide a thorough understanding of the effects of the Directive implementation in Portugal, this study is not free of limitations. First, the small size of the sample (34 companies) did not allow the use of more sophisticated statistical methods and the fact that it only includes listed companies prevents the generalization of results to other public-interest entities. Second, although the content analysis was carried out by both researchers to provide a double check, there is always some degree of subjectivity inherent in this method of data collection. Third, the measure of disclosure quality applied, while considered adequate for the purpose of this study, does not capture more complex dimensions of NFI quality as those embodied in the key principles set out in Communication 2017/C215/01 [55].

Future research may focus on other Portuguese entities to which the Directive applies, as well as other countries. In addition, since the Directive left some discretion to the Member States, it would be interesting to analyze how institutional factors influence the reporting practices and the quality of disclosure across countries. Specifically, it would be interesting to study how NFI disclosures are shaped by coercive isomorphism, exerted by specific requirements of national regulations; by normative isomorphism from audit firms or national professional bodies; and by mimetic isomorphism, patent in the generalization of certain practices, as the presentation of a reconciliation table. As more data becomes available on NFI disclosed by companies, other research avenues are opened in this area. For example, the study of the effects of internal and external corporate governance mechanisms

on the quality of NFI [76]. These suggestions for future research are mainly focused on the social actors mentioned by La Torre et al. [45]: regulators, undertakings, standard-setters and auditors. However, future research may also focus on the users of NFI, analyzing the perceptions of corporate stakeholders about the usefulness of NFI through different methodological approaches to data collection, such as interviews or focus groups.

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## Appendix A

Table A1. Assessment grid.

Item	Description	GRI Standard
1	Business Model	
1.1	Name of the organization	102-1
1.2	Location of headquarters	102-3
1.3	Activities, brands, products and services	102-2
1.4	Location of operations	102-4
1.5	Ownership and legal form	102-5
1.6	Markets served	102-6
1.7	Scale of the organization	102-7
1.8	Supply chain	102-9
1.9	Significant changes to the organization and its supply chain	102-10
1.10	Precautionary Principle or approach	102-11
1.11	External initiatives	102-12
1.12	Membership of associations	102-13
1.13	Statement from senior decision-maker	102-14
1.14	Values, principles, standards and norms of behavior	102-16
1.15	Stakeholder engagement—List of stakeholder groups	102-40
1.16	Stakeholder engagement—Collective bargaining agreements	102-41
1.17	Stakeholder engagement—Identifying and selecting stakeholders	102-42
1.18	Stakeholder engagement—Approach to stakeholder engagement	102-43
1.19	Stakeholder engagement—Key topics and concerns raised	102-44
2	Environmental matters	
		103-1
0.1	Policies pursued by the undertaking, including due diligence processes	103-2
2.1	implemented/Non-application of policies/Information omission	103-3
		101-3.2
2.2	The outcome of those policies	-
2.3	The principal risks and how the undertaking manages those risks	102-15
2.4	Non-financial key performance indicators	
2.4.1	Materials	
2.4.1.1	Materials used by weight or volume	301-1
2.4.1.2	Recycled input materials used	301-2
2.4.1.3	Reclaimed products and their packaging materials	301-3
2.4.2	Energy	
2.4.2.1	Energy consumption within the organization	302-1
2.4.2.2	Energy consumption outside of the organization	302-2
2.4.2.3	Energy intensity	302-3

Table A1. C	cont.
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Item	Description	GRI Standard
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Item	Description	GRI Standard
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