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Article

# The “Walk” towards the UN Sustainable Development Goals: Does Mandated “Talk” through Nonfinancial Disclosure Affect Companies’ Financial Performance?

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**Abstract:** With its Global Compact, the United Nations (UN) called companies to align strategies and operations with universal principles on human rights, labor, environment, and anti-corruption, while settling and pursuing the seventeen UN Sustainable Development Goals (SDGs). Achieving SDGs in business reporting is part of the lively debate in the literature about the ability of nonfinancial reporting in providing stakeholders with useful and value-relevant information about companies’ behaviors. This paper intends to address this issue in the aftermath of the recent European Union EU policy (Directive 95/2014/EU) of mandating companies to disclose nonfinancial information (NFI) according to some of the SDGs matters. To this end, the Italian context was analyzed, and main findings provide some early evidence of the absence of association between NFI and financial/market performance. At the same time, the positive association between companies’ Beta factor and size and NFI is supported. This implies that stakeholders still do not appreciate NFI reported according to the new rules and probably that more time is needed to assess the possible advantages of an improved regulation about NFI. However, results show that larger companies and/or companies with higher risk profiles (Beta) have already started to improve their NFI.

**Keywords:** SDGs; nonfinancial reporting; Directive 95/2014/EU; financial performance; mandatory disclosure; Italy

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## 1. Introduction

The decrease of trust is something that is widespread across present society. Generally, people progressively ask for more information to better assess if companies and institutions are acting consistently with the interest of the community. Several are the cases of high-profit companies that attracted the attention of the public opinion for their questionable behaviors in the exercise of their activity (among others: Volkswagen, Huawei, Cambridge Analytica, and Foxconn). These behaviors have been deemed questionable as they could result in climate change issues (for example, through high CO<sub>2</sub> emissions), the violation of users’ privacy, corruption and exploitation of workers, waste of natural resources, and so on.

Generally, corporates’ misbehaviors could be assumed in a context of limited or misleading provided information. When consumers, investors, and the general community realize that a company assumed a questionable behavior, they stop placing trust in that company. As a consequence, this fall

of trust could weaken companies and lead them first to a decrease of performance and then to further serious consequences, such as even their final dissolution.

For these reasons, we can identify two groups of initiatives that have been put in place by supranational and international organizations, policymakers and associations of experts during the last decades with a common aim. The first one is to address companies' behaviors toward sustainable, ethical, and responsible choices through the so-called corporate social responsibility (CSR) actions [1,2]. The second one is to address companies' reporting toward an effective communication to users of corporate information such as investors, consumers, and other stakeholders [3–5]. The joint action of these two groups of initiatives should represent the only way to rebuild trust between economic actors and people [6,7], while supporting a sustainable development across the world.

One of the most relevant and pervasive supranational interventions to achieving transformational change through the strengthening of the enabling environment for doing business and building markets around the world is the United Nations Global Compact [8]. With its Global Compact, the United Nations (UN) called companies to align strategies and operations with universal principles on human rights, labor, environment, and anti-corruption, and take actions that advance societal goals. At the same time, the UN took strategic actions to advance broader societal goals, such as the seventeen UN Sustainable Development Goals (SDGs) [9], with an emphasis on collaboration and innovation.

Of course, companies are expected to progressively and successfully implement these goals, while they also have to report to their stakeholders all the information about this process. The main rationale is that disclosure regarding risk management and sustainability issues could help stakeholders to improve the evaluation processes of firms, understand if companies have really adopted certain positive behaviors rather than merely disclosed them (window-dressing), select the investments that deserve trust in a forward-looking perspective, thus producing positive effects on the market value and equity cost [10].

In most cases, this kind of information is deemed to be considered as nonfinancial information (NFI) and, in this regard, there have been numerous initiatives which started to build the theoretical background behind the possible approaches to guide this nonfinancial reporting. Generally, NFI involves issues related to: sustainability; corporate responsibility; environmental, social, and governance (ESG); ethics; human capital; and environment, health and safety (EH&S). Thus, various international organizations have been established, such as the International Integrated Reporting Council (IIRC) and the Global Reporting Initiative (GRI), among others. These institutions have proposed specific guidelines and frameworks with the aim of providing standards for companies' NFI consistently with users' needs.

It should be considered that nonfinancial disclosure has been traditionally voluntary in nature, and this could have mitigated the benefits of sustainability disclosure, owing to credibility, transparency, and irrelevance drawbacks [11].

In October 2014, as part of the 'renewed EU strategy 2011–2014 for Corporate Social Responsibility' [12], the European Union decided to shift from a voluntary disclosure approach to a mandatory one and adopted Directive 2014/95/EU (hereafter the EU Directive), which mandates companies of a certain size to draft and publish a nonfinancial declaration (NFD) related to the disclosure of corporate NFI about society and the environment [13,14]. The EU Directive aims to restore needed trust to the investor and consumer [15,16] and to enhance the consistency and comparability of corporate NFI disclosed throughout the EU by harmonizing the nonfinancial reporting practices [17].

However, social and environmental accounting researchers raised some concerns about the effectiveness of a mandatory regime for reporting on sustainable development, identifying some barriers that impede a mandatory, legislative approach from being an effective tool to foster corporate transparency and accountability [18,19].

With reference to the topic of NFI, generally, extant literature does not find unanimous agreement on the potential benefits deriving from more or improved regulation [11,18,19]. In fact, some scholars call for further investigation of the effect of the disclosure of nonfinancial risks [4,20]. Moreover,

in a context of mandated disclosure, Dobler [21] observed that companies tend to disclose mainly information on their financial risks.

In the literature, we can observe a further gap concerning the scarcity of empirical evidence about the potential benefits of the disclosure of NFI in the stakeholder perspective. In particular, the relationship between risk disclosures and firm value is underresearched, as the NFI literature mainly focuses on the motivations supporting the companies' decision to disclose [4,20,22].

Extant literature also provides evidence that past cost of equity is related to initiating voluntary disclosure [23–27]. However, these studies are prevalently focused on a context of voluntary NFI, while our study focuses on mandatory disclosure of specific risk-related information (as requested by the new regulation).

Therefore, more research is required, especially if we consider the push for authorities to regulate more and more the requirements for companies about NFI disclosure in response to stakeholders' expectations.

To this end, we intend to address the research question whereby improved regulation and mandated NFI disclosure could affect, and eventually improve, companies' financial performance.

Therefore, in order to provide empirical support to the above research question, we opted for analyzing the Italian context, where the directive has been adopted with the legislative decree No. 254/2016, in force since the fiscal year 2017. Through this analysis, we aim to provide an up-to-date portrait of how companies mandated to adopt the new regulation have (or have not) experienced an improvement of their financial performance.

The statistical analysis used for the testing of hypothesis has provided evidence that there is no association between the preparation of NFI and the financial and market performance of the companies, at least in the short term. Therefore, these findings provide some support that the nonfinancial disclosure, for the companies that prepare it, at least two years after the first adoption of the new rule, does not entail directly observable advantages, although we found evidence of the fact that companies with higher Beta factor (systematic firm risk) and larger size tend to cover more nonfinancial information.

The study makes an original contribution as it extends the prior literature by addressing the informativeness of the Italian financial market NFI disclosures. In fact, in the aftermath of the above Decree, it is worth understanding to what extent companies disclose NFI, and if the firms have different behavior in disclosing this information depending on the industry, size, R&D expense, Beta factor, and debt variables. This study could also be useful in the policymakers' perspective, by providing guidance on the various differences between NFI reporting approaches.

The remainder of the paper proceeds as follows. Section 2 provides a literature review about voluntary and mandatory NFI and the theoretical framework we adopted to develop our hypothesis. Section 3 describes the research design along with our sample and test procedures. Section 4 presents descriptive statistics and main results. Section 5 proposes a discussion of the results and presents our conclusions and implications. Limitations and suggestions for further research are also provided.

## 2. Literature Background and Theoretical Framework

### 2.1. Corporate Socially Responsible Behaviors and Financial Outcome

In recent years, the debate surrounding the link between socially responsible behavior of companies and financial outcome has been gaining an increasing relevance in management and business ethics studies.

Extant literature shows disagreement in providing evidence of the possible relationship between nonfinancial information and financial performance. While many studies argue that nonfinancial information such as CSR has a positive impact on financial performance, there are also several studies that provided evidence of a negative link, as well as evidence of no relationship between them.

First appearing in 1958, a study of Levitt [28] presented his arguments of CSR in the political ideologies of individuals, democracy and capitalism. Friedman [29,30], and more recently Jensen [31], later provided the same argument as well. They warned against the dangers of pursuing ambiguous corporate objectives, such as those implied by CSR, rather than the conventional profit-maximization objectives. They supported their rationale by arguing that, as soon as the corporate objective function includes CSR, this allows the managers the luxury of making value judgements on which social issues to pursue and which not to pursue. Therefore, it is undemocratic and unethical, because managers hold no right to assume such a role and no expertise in dealing to succeed with these issues. They, therefore, strongly argue that the responsibility of the public and private sectors ought to be kept separate. The adoption of social responsibility as part of the corporate objective function has been heavily criticized. Besides the political arguments that CSR is antidemocratic, this criticism also pointed to the concept of CSR being too vague and subjective to serve as an objective for management [29–31].

A couple of decades after the first publication of study in this field, Freeman [32] developed what has later been termed as stakeholder theory. Freeman [32] (p. vi) defined and identified the possible stakeholders of the firms as:

*“any group or individual who can affect, or is affected by, the achievement of a corporation’s purpose. Stakeholders include employees, customers, suppliers, stockholders, banks, environmentalists, government and other groups who can help or hurt the corporation.”*

He also presented a method and reasoning for how and why relationships between the firm and these stakeholders may be managed. Stakeholder theory was quickly adopted as a theoretical foundation for a contemporary conceptualization of social initiatives by business. For example, Ruf et al. [33] suggested that Freeman’s [32] stakeholder theory can be complemented by both transaction cost economics and the resource-based view of the firm. He argued that [33] (pp. 143–144):

*“firms that satisfy stakeholder demands or accurately signal their willingness to cooperate can often avoid higher costs that result from more formalized contractual compliance mechanisms (e.g., government regulation, union contracts).”*

Moreover, firms view meeting stakeholder demands as a strategic investment that helps firms to gain a competitive advantage by developing additional, complementary skills that competitors find it hard to imitate.

Classical studies had showed their different opinions on this matter. The debate is still unsolved till the recent time. In fact, Margolis and Walsh [34] provided a literature review of 127 studies on the relationship between social initiatives and financial performance for the period from 1972 to 2002. From these 127 studies, they found 109 studies that treated corporate social performance as an independent variable to predict the financial performance. Of these, 54 studies found a positive relationship, 7 studies reported a negative relationship, 28 studies pointed to nonsignificant relationships, and 20 others found a mixed set of those findings. This indicates that the current debate has not come to the conclusion yet.

Generally, studies that support the positive relationship between socially responsible policies and firm performance provided some evidence of the satisfaction of stakeholders’ goals or improvement of corporate reputation [35–37]. In the same line of thought, several other benefits of nonfinancial information are mentioned, such as reduced operating costs, and financial risks, enhanced efficiency and improving public image and consumer confidence [38–46].

Conversely, studies that support the negative relationship or no relationship between socially responsible policies and firm performance were established based on Friedman [29,30]. Generally, they found that socially responsible policies and their reporting only lead to increased costs and a resulting decrease in corporate return [47–51].

## 2.2. NonFinancial Information (NFI) and Financial Outcome

Some scholars claim that some companies bear higher costs of socially responsible policies only for commercial purposes, and not for altruistic reasons [52], or in some cases, to conceal fraudulent activities in order to preserve a clean-cut external image [53–55]. Moreover, studies mainly framed within the legitimacy theory observed that companies disclose NFI with the aim of legitimating themselves towards society, providing evidence that they operate within the boundaries established by society [56,57]. In this sense, still much criticism has been moved to the ability of nonfinancial disclosure (the “talk”) to show a real commitment and action (the “walk”) of companies to address social and sustainability issues.

Nevertheless, a substantial amount of studies also provided evidence of no relationship between nonfinancial information and firm performance [58–85]. Tsoutsoura [86] and Allouche and Laroche [87] explained that measurement method and limitation in concepts might be the reasons that complicate the relation between nonfinancial information and firm performance.

Previous studies also investigated the possible positive impact of NFI disclosure on the companies' equity value. Of course, it is obvious that companies aim to increase shareholders' trust to access capital funding and contain the effects of adverse events. However, we can group prior studies into two categories. To the first one belong those studies that support the voluntary character of NFI disclosure, while managers have the task to recognize CSR strategic value [88]. In this context, empirical researches provided evidence that, for listed companies, the quality of NFI disclosure positively affects the company equity value [89,90]. To the second group belong those authors who support the mandatory disclosure of NFI, as they posit that it is more complete, accurate, neutral, objective, and comparable than the voluntary disclosure [91,92]. This position was at the basis of the introduction of mandatory disclosure of NFI in the European countries. In fact, on 16 April 2013, the European Commission proposed new requirements for disclosure of nonfinancial information for all large companies in the EU and issued the EU Directive 2014/95/EU.

According to this directive, the nonfinancial information (NFI) to be included is defined as follows [13]: “information to the extent necessary for an understanding of the undertaking's development, performance, position and impact of its activity, relating to, as a minimum, environmental, social and employee matters, respect for human rights, anti-corruption and bribery matters, including:

- a brief description of the undertaking's business model;
- a description of the policies pursued by the undertaking in relation to those matters, including due diligence processes implemented;
- the outcome of those policies;
- the principal risks related to those matters linked to the undertaking's operations including, where relevant and proportionate, its business relationships, products or services which are likely to cause adverse impacts in those areas, and how the undertaking manages those risks;
- nonfinancial key performance indicators relevant to the particular business.”

On December 30, 2016, the Italian government approved Legislative Decree No. 254/2016 implementing the EU Directive on the disclosure of nonfinancial and diversity information by certain large undertakings and groups. Under the new rules, starting with fiscal year 2017, public interest entities (PIEs) shall issue a nonfinancial statement aimed at providing market players with information on certain environmental, social, employment, human rights, anti-corruption, and bribery matters deemed relevant in light of the entity's nature and operations. Compulsory disclosure of nonfinancial information could be the answer to the significant societal demand for greater transparency. In complying to the acts, companies are able to determine whether their economic activities are sustainable, improve internal organization and employee awareness, and increase the trust in and reputation of the entity.

### 2.3. Theoretical Framework and Hypothesis Development

In the context of the debate about voluntary/mandatory NFI, recent studies underlined that regulation had, as a consequence, the short-term standardization of practice because of its coercive nature [93] and impacted more on quantity (number of reports produced), instead of quality [15,18,19,94–96].

More generally, with reference to the topic of NFI, generally, extant literature does not find unanimous agreement on the potential benefits deriving from more or improved regulation [11,18,19], and to the best of our knowledge, only few researchers have sought to understand the relationship of nonfinancial information to the performance and valuation of a firm.

Therefore, more research is required, especially if we consider this new push from authorities and policymakers to regulate more and more the requirements for companies about NFI disclosure in response to stakeholders' expectations. For these reasons, our study would like to intervene on this lively debate with the aim of providing a further contribution about if and how an improved regulation and mandated NFI disclosure could affect, and eventually improve, companies' financial performance.

We decided to run this empirical analysis within the Italian context, as Italy appears to be an interesting country to carry out our research question, for several reasons. First of all, Italian companies are deemed to produce high-quality voluntary CSR reports [97,98]. Moreover, Italy is one of the European countries where the CSR disclosure had a voluntary nature before the transposition of EU Directive 2014/95/EU into Italian law. Therefore, it is interesting to analyze whether mandatory NFI impacted financial performance in the aftermath of the new rule adoption. Two recent researches [1,88] analyzed the level of CSR disclosure in Italy before the introduction of the EU Directive: these studies provided some evidence of an information gap that still remains. Thus, we can expect that the EU directive could potentially contribute to enhance the nonfinancial disclosure in Italy to the level of other more compliant countries, such as the UK [88]. Finally, Legislative Decree No. 254/2016, which transposed the EU Directive in the Italian law, introduced several specific elements in respect to other national regulations which transposed the EU Directive as well. In fact, the Italian Decree appears to be more stringent than the EU Directive, as it introduced a system of external controls; at the same time, it adopts a more flexible approach, because it allows a wide range of reporting NFI methods, even an autonomous one; lastly, the Italian law introduced the possibility for Small and Medium Entities (SMEs) to voluntarily adopt the disclosure of NFI [99].

In order to analyze our research questions, we used a multitheoretic approach. We referred to stakeholder theory [24] and agent theory [100,101] as they are able to provide greater insight in different points of view in explaining and understanding the relationship between nonfinancial reporting and financial performance.

Stakeholder theory assumes that satisfying the interests of different stakeholders, who are all parties that are directly or indirectly involved in the business activities, will ultimately determine the success of products and services [24]. Dissatisfaction in any stakeholder group may potentially impact negatively on financial outcome and even put the firm at risk. In this scenario, companies are expected to fulfil the demands for nonfinancial reports that could effectively show the pledge to social and sustainable behaviors, describe risks companies could face and how they manage these risks, to satisfy the informational needs of stakeholders.

Complementarily, based on agent theory, a company is a part of a whole society so that fulfilment of societal expectations is also a measurement of the company's value creation. It is crucial that management successfully balance the interests of all parties, such that, while managers will be seeking owners' profitability goals, they are also balancing this aim with satisfying other stakeholders' demands, which is, in this case, the publication of nonfinancial reports containing possibly value-relevant information. For these expectations on the part of stakeholders to be fulfilled constantly, sustainability management is required. Sustainability management activities also represent an effective tool of stakeholder communication, implying a positive connection between stakeholder power, sustainable achievement, as well as sustainability reporting [102,103]. As stakeholders are interested in sustainable

strategies of the company, better nonfinancial reporting will lead to better nonfinancial performance measures, like CSR ratings or reputational aspects [104]. As the final consequence, the company can also gain increased financial performance. Therefore, we propose the following:

**Hypothesis 1:** *There exists a positive relationship between nonfinancial information and financial performance.*

### 3. Research Design

#### 3.1. Sample

This study focuses on the effect of the recently issued mandatory disclosure of NFI (Italian Legislative Decree No. 254 of December 30, 2016). As a consequence, we chose a sample of Italian listed companies which are legally subjected to this Decree independently of the industry they belong to. In fact, the new disclosure requirements are mandatory for public interest entities (PIEs) according to Section 2 of Decree No. 254/2016 and Section 16 of Decree No. 39/2010. PIEs are defined as Italian companies meeting the following criteria: exceeding, on an individual or consolidated basis, (i) 500 employees on average during the relevant fiscal year, and (ii) at least one of the following thresholds: total net asset value of €20,000,000 or total net revenues from sales and services of €40,000,000 at the end of the relevant fiscal year.

From a database of “Observatory on Non-Financial Disclosures (NFDs) and Sustainable Practices,” a channel to access the NFDs published by the major Italian companies, managed by the CSR Manager Network and the Department of Business and Law Studies (DISAG) of the University of Siena (<http://www.osservatoriodnf.it/en/home/about-dnf>), we found a total population of 152 listed companies that published their NFDs with reference to the 2017 fiscal year. From this population size, we excluded banks and/or financial service institutions as they are ruled by different legal norms compared to other industries’ companies. We also excluded companies with missing data of the last financial year (2018) as a comparing year data. Therefore, we get *to a final sample for the analysis of 111 Italian listed companies* that issued their NFD. However, this sample size is adequate to represent the target population at 95% of confidence level and 5% of margin of error.

Financial performance data was drawn from Orbis (Bureau Van Dijk) database, while nonfinancial reports were collected from those companies’ websites.

The sample is articulated according to industry as follows:

• Construction	2
• Finance, Insurance, and Real Estate	2
• Manufacturing	66
• Mining	2
• Public Administration	2
• Retail Trade	3
• Services	12
• Transportation and Public Utilities	20
• Wholesale Trade	2
<i>Grand Total</i>	<i>111</i>

#### 3.2. Main Variable

Data on nonfinancial information were manually collected from sustainability reports, integrated reports, nonfinancial statements or annual reports. Content analysis, as a method of analyzing written, verbal, or visual communication messages [105–108], was the chosen method for analyzing nonfinancial disclosures in this study. To make the variable more stable, the study carried out by KPMG [109] has been followed: it identifies the main issues that companies deal with in their NFD report and the total of topics is 20. Given that, for each company the presence (or the absence) of every one of these issues is computed through a manual content analysis, the final report is therefore given by the number of

principles present in the reports (0 to 20). In the model, this variable will take the name of NFI. The instruments in this research are developed as the elements of nonfinancial information in Table 1.

**Table 1.** Instruments and the elements of nonfinancial information.

Instruments	Elements
ENVIRONMENT	Climate
	Impact on the environment
	Laws
	Waste management
	Water
SOCIAL ISSUES	Energy
	Sensitive data
	Safety
	Privacy
	Reputation
PERSONNEL	Customers
	Cyber Security
	Health
	Management
	Key roles
CORRUPTION AND BRIBERY	Laws
	Competences
	Safety
	Active and passive
	HUMAN RIGHTS
	Diversity protection

We implemented content analysis-based disclosure checklists which are designed to measure whether or not an item is disclosed and also to record the form that disclosure takes. As can be seen, this is simply a yes/no checklist of items that may or may not be disclosed. This manual collection of data is also consistent with the recent study of El Haj et al. [110], which makes it clear that automated computer linguistics methods have so far provided little advantage over manual methods in terms of the generated insights.

The use of this type of content analysis checklist form then allowed us to examine the different nonfinancial information elements. The study used content analysis, which involved reading the reports of the sample companies and checking if an item in table X was reported or not. The dichotomous coding was used to mark (1) if the item was disclosed as focused information and (0) if not disclosed as focused information. Information is focused when it provides a meaningful message to the reader rather than being vague or general. From this phase, the first NFI index of each company was calculated by the grand sum of scores provided from each element of nonfinancial information.

For dependent variables, we used two proxies for financial performance from both accounting-based items and market-based items. ROA and Tobin's Q were used respectively as suggested by Choi and Wang [111] and Velte [112]. ROA, as the most famous accounting-based variable of financial performance, shows the percentage of profit a company earns in relation to its overall resources. This ratio is often influenced by earnings management decisions. Therefore, we also used Tobin's Q as market-based items additionally to analyze the research question. The Tobin's Q is the ratio between a physical asset's market value and its replacement value. Since the replacement cost

of total assets is difficult to estimate, it has become common practice in the finance and accounting literature to measure the ratio by comparing the market value of the firm's equity and liabilities with its corresponding total assets values [111].

To evaluate the impact of nonfinancial information on financial performance, we used two sets of different timing data. Firstly, we tested the impact of nonfinancial reporting on financial performance at the year period of time (e.g., in 2017). In this way, we investigated the immediate effect of NFI on the companies' performance. However, one may suggest that nonfinancial reporting will not immediately lead to better financial performance: therefore, as suggested in the studies of Choi and Wang [111] and Velte [112], we also used the one-year lagged variables of ROA and Tobin's Q.

We included several control variables commonly used in this research area [111–113], as presented in Table 2.

**Table 2.** Dependent, independent, and control variables.

Dependent variables	Explanation
ROA_17_PLBT, ROA_18_PLBT	Return on Assets using Profit/Loss (P/L) before tax (%) as of 2017 and 2018
ROA_17_NI, ROA_18_NI	Return on Assets using Net Income as of 2017 and 2018
Q_17, Q_18	Market capitalization/Total assets as of 2017 and 2018
Independent variables	
NFI	Nonfinancial Information index
Control variables	
R&D	R&D expense/Operating revenue
Beta	Beta factor (systematic firm risk)
Debt	Total debt/Total assets
Size	Natural logarithm of total assets
IND	Dummy variable for (1) manufacturing and (0) otherwise, determined by first two digits of Standard Industrial Classification (SIC) code.

### 3.3. Regression Models

We followed the model suggested by Velte [112] and executed separated cross-sectional models for ROA and Tobin's Q, respectively. We used two sets of different timing data. Firstly, we tested the impact of nonfinancial reporting on financial performance at the year period of time (e.g., in 2017). This was done in order to investigate the immediate effect of the nonfinancial information on the performance of the firms.

Secondly, one may suggest that nonfinancial reporting will not immediately lead to better financial performance, such that, in the second set of data, we replaced our dependent variables in the previous models to a one-year post-report financial performance variables (e.g., ROA and Tobin's Q as of 2018). This is consistent with previous studies' suggestions, such as the studies of Choi and Wang [111] and Velte [112], to capture the effect of post-reporting.

$$\text{Model (1): (Financial Performance)} = \beta_0 + \beta_1 \text{NFI} + \beta_2 \text{R\&D} + \beta_3 \text{BETA} + \beta_4 \text{DEBT} + \beta_5 \text{SIZE} + \beta_6 \text{IND} + \varepsilon.$$

where Financial Performance is measured by 6 different proxies, which represent 6 different cross-sectional models.

- At-reporting: ROA\_17\_NI (Return on Assets using Net income as of 2017), ROA\_17\_PLBT (Return on Assets using Profit/Loss (P/L) before tax as of 2017), and Q\_17 (Tobin's Q as of 2017);
- Post-reporting: ROA\_18\_NI (Return on Assets using Net income as of 2017), ROA\_18\_PLBT (Return on Assets using P/L before tax as of 2017), and Q\_18 (Tobin's Q as of 2017).

Moreover:

- R&D is calculated as R&D expense/Operating revenue;
- Beta value is calculated through the methodology of the analysis of the return and the price of a financial asset. Therefore, the Beta is obtained by the relationship between two statistics: the covariance of the returns of the stock and the returns of an index; and the variance of the returns of the index;
- Debt is calculated as total debt/total assets;
- Size is the natural logarithm of total assets;
- IND is an indicator variable for (1) manufacturing and (0) otherwise;
- $\varepsilon$  is the error term.

#### 4. Research results

##### 4.1. Descriptive Statistics

Table 3 provides an overview of the descriptive statistics for the financial performance (panel A and B), nonfinancial disclosure (panel C) and the control variables (panel D). Number of observations is different for every variable according to the available data. Therefore, we omitted the missing data accordingly when running the regression models.

**Table 3.** Descriptive statistics.

	N	Minimum	Maximum	Mean	Std. Deviation
<i>Panel A: Financial performance as of 2018</i>					
ROA_18_NI	109	-38.830	53.440	4.007	8.475
ROA_18_PLBT	109	-37.800	55.820	5.402	9.120
Q_18	102	0.000	4.530	0.701	0.843
<i>Panel B: Financial performance as of 2017</i>					
ROA_17_NI	110	-10.270	57.960	4.099	6.650
ROA_17_PLBT	110	-4.860	24.330	5.495	5.078
Q_17	102	0.000	4.810	0.891	0.925
<i>Panel C: Nonfinancial disclosure</i>					
NFI	111	10.000	20.000	17.110	1.899
<i>Panel D: Control variables</i>					
BETA	107	0.110	1.430	0.571	0.226
DEBT	110	0.155	1.460	0.637	0.200
SIZE	110	11.217	19.045	14.166	1.620
IND	111	0	1	-	-

As there are 20 elements representing 5 instruments of nonfinancial information [109], the NFI score ranges from 0 to 20. The mean of the NFI score in our sample is  $17.110 \pm 1.899$ . The minimum NFI score is 10, while the maximum is 20. These figures indicate that Italian companies covered quite a wide range of topics when preparing their nonfinancial statements.

For the financial performance variables, obviously, the mean of ROA calculated by profit and loss before tax is higher than the counterpart calculated by net income. The financial performance of firms within this sample in 2018 is slightly worse than the year 2017, since we can see generally that the mean of financial performance indicators of 2018 is slightly lower than 2017.

Company's industry is determined by the first 2 digits of the SIC code. SIC codes from 20 to 39 are categorized as manufacturing and other SIC codes are categorized as nonmanufacturing. At the end, the sample comprises 66 manufacturing firms (59.46% of the total sample) and 54 nonmanufacturing firms (40.54% of the total sample).

#### 4.2. Correlation Results

Table 4 presents the Pearson correlation matrix for the dependent, independent, and the control variables. As observed, the financial performance indicators are correlated to each other and also correlated to the previous year's performance.

**Table 4.** Pearson correlation matrix for the dependent, independent, and the control variables.

	ROA_18_NI	ROA_18_PLBT	Q_18	ROA_17_NI	ROA_17_PLBT	Q_17	BETA	DEBT	SIZE	SIC	NFI
<b>ROA_18_NI</b>	1										
<b>ROA_18_PLBT</b>	0.895**	1									
<b>Q_18</b>	0.427**	0.514**	1								
<b>ROA_17_NI</b>	0.300**	0.344**	0.486**	1							
<b>ROA_17_PLBT</b>	0.610**	0.710**	0.825**	0.537**	1						
<b>Q_17</b>	0.464**	0.543**	0.964**	0.524**	0.857**	1					
<b>BETA</b>	0.067	-0.004	-0.092	-0.063	0.004	-0.063	1				
<b>DEBT</b>	-0.147	-0.337**	-0.368**	-0.441**	-0.452**	-0.399**	0.211*	1			
<b>SIZE</b>	-0.073	-0.047	-0.108	-0.131	-0.016	-0.119	0.530**	0.038	1		
<b>SIC</b>	0.102	0.070	-0.001	0.154	0.011	0.011	-0.104	0.144	-0.058	1	
<b>NFI</b>	0.026	0.020	-0.046	-0.089	0.020	-0.035	0.378**	0.053	0.400**	-0.102	1

Note: This table represents the correlation coefficients between financial performance indicators (ROA\_18\_NI, ROA\_18\_PLBT, Q\_18, ROA\_17\_NI, ROA\_17\_PLBT, Q\_17), nonfinancial information (NFI) and control variables (BETA, DEBT, SIZE, SIC) for the whole sample. The variables are defined in Table 3. \*\* indicates significant correlation at 0.01 level (2-tailed). \* indicates significant correlation at 0.05 level (2-tailed).

NFI is shown to be correlated to BETA and SIZE with positive coefficients. Therefore, firms with higher BETA and/or higher SIZE tend to have a higher score for NFI. In addition, we notice some significant correlations among control variables such as DEBT, SIZE, and BETA. Therefore, we decided to calculate variance-inflation factors for each linear model to make sure the models are not influenced by collinearity. The results of Generalized Variance Inflation Factor (GVIFs) are presented in Table 5. No evidence of collinearity is found accordingly.

**Table 5.** Results of GVIFs.

GVIF	Model 1 DV=ROA_17_NI		Model 2 DV=ROA_17_PLBT		Model 3 DV=Q_17		Model 4 DV=ROA_18_NI		Model 5 DV=ROA_18_PLBT		Model 6 DV=Q_18	
	Model 1 DV=ROA_17_NI	Model 2 DV=ROA_17_PLBT	Model 3 DV=Q_17	Model 4 DV=ROA_18_NI	Model 5 DV=ROA_18_PLBT	Model 6 DV=Q_18						
R&D	1.077288	1.077288	1.075591	1.079748	1.079748	1.077746						
BETA	1.510872	1.510872	1.525924	1.496369	1.496369	1.510255						
DEBT	1.136208	1.136208	1.136154	1.126109	1.126109	1.131900						
SIZE	1.733989	1.733989	1.737918	1.711996	1.711996	1.716326						
IND	1.208677	1.208677	1.199323	1.187633	1.187633	1.176062						
NFI	1.282108	1.282108	1.263287	1.274890	1.274890	1.261259						

Note: This table represents the generalized variance-inflation factors for linear models. GVIF describes how much the variance of an estimated coefficient is increased because of collinearity. Values of GVIF up to 5 are usually interpreted as uncritical, values above 5 denote a considerable multicollinearity.

#### 4.3. Dependent Variable Transformation and Normality Model Assumption Tests

In order to ensure the linear model assumptions, we performed the normalizing transformation for the dependent variables (e.g., financial performance indicators). We used a suite of optimal normalizing transformations in R programming language by Peterson [114] to select the best one on the basis of the Pearson P test statistic for normality. The transformation that has the lowest P (calculated on the

transformed data) was selected. As a result, we used ordered quantile transformation [115–117] for ROA variables (e.g., ROA\_18\_NI, ROA\_18\_PLBT, ROA\_17\_NI, and ROA\_17\_PLBT), and Yeo–Johnson transformation [118] for Tobin’s Q variables (e.g., Q\_18 and Q\_17).

The assessment of the linear model assumptions using the global test on 4 degrees of freedom is presented in Table 6. The results show that the assumptions are acceptable for all 6 regression models.

**Table 6.** The assessment of the linear model assumptions.

		Global Stat.	p-Value	Decision
<b>Model 1</b>	<b>DV=ROA_17_NI</b>	9.0882	0.05893	Assumptions acceptable
<b>Model 2</b>	<b>DV=ROA_17_PLBT</b>	4.1069	0.3917	Assumptions acceptable
<b>Model 3</b>	<b>DV=Q_17</b>	7.40009	0.11620	Assumptions acceptable
<b>Model 4</b>	<b>DV=ROA_18_NI</b>	4.2379	0.3748	Assumptions acceptable
<b>Model 5</b>	<b>DV=ROA_18_PLBT</b>	5.9529	0.20269	Assumptions acceptable
<b>Model 6</b>	<b>DV=Q_18</b>	2.37641	0.6669	Assumptions acceptable

Note: This table represents the assessments of the linear model assumptions using the global test on 4 degrees of freedom to test 4 distinct linear assumptions (e.g., Linearity, Homoscedasticity, Uncorrelatedness, Normality). The global procedure indicates a violation of at least one of the assumptions.

#### 4.4. Regression Results

Multiple regression analyses were conducted to examine the relationship between financial performance indicators and predictor NFI. Table 7 provides the results of the multivariate regression analysis.

**Table 7.** Results of the multivariate regression analysis.

	At-Reporting						Post-Reporting					
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	DV=ROA_17_NI	DV=ROA_17_PLBT	DV=ROA_18_NI	DV=ROA_18_PLBT	DV=Q_17	DV=Q_18	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error
Intercept	2.500*	1.069	1.534	1.069	2.884*	1.106	2.355*	1.197	2.012	1.168	3.086**	1.136
R&D	0.090*	0.051	0.108*	0.051	0.108*	0.051	0.112*	0.057	0.116*	0.055	0.089*	0.052
BETA	0.338	0.474	0.278	0.474	0.185	0.497	0.457	0.541	0.005	0.528	0.073	0.520
DEBT	-2.365***	0.450	-2.301***	0.450	-2.433***	0.461	-0.847	0.552	-1.650**	0.539	-2.481***	0.521
SIZE	-0.087	0.069	-0.037	0.069	-0.115	0.071	-0.152	0.078	-0.079	0.076	-0.086	0.073
IND	0.222	0.192	0.124	0.192	0.270	0.196	0.401	0.216	0.276	0.211	0.357	0.202
NFI	-0.007	0.058	0.011	0.058	0	0.06	-0.009	0.065	-0.003	0.063	-0.031	0.062
Residual Std. Error	0.868		0.868		0.877		0.969		0.946		0.898	
F-statistic	5.676		5.683		6.222		1.804		2.764		5.316	
DF	96		96		93		94		94		91	
p-value	$4.414 \times 10^{-5}$		$4.35 \times 10^{-5}$		$1.605 \times 10^{-5}$		0.1067		0.01612		$9.699 \times 10^{-5}$	
Adjusted R-squared	0.216		0.216		0.240		0.046		0.096		0.211	

Notes: This table presents results from multivariate regressions of the financial performance indicators on nonfinancial information and controls for the whole sample. ROA\_17\_PLBT and ROA\_18\_PLBT are Return on Assets using P/L before tax (%) as of 2017 and 2018. ROA\_17\_NI and ROA\_18\_NI are Return on Assets using Net income as of 2017 and 2018. Q\_17 and Q\_18 are calculated as Market capitalization/Total assets as of 2017 and 2018. NFI is the Nonfinancial information index. R&D is calculated as R&D expense/Operating revenue. Beta is the beta factor representing systematic firm risk. Debt is calculated as total debt/total assets. Size is the natural logarithm of total assets. IND is an indicator variable for (1) manufacturing and (0) otherwise; The symbols \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% level, respectively.

Significant regression equations were found except in model 4. The results indicated that the models were a significant predictor of financial performance, except for Return on Assets using Net

income post reporting (e.g., as of 2018). R-square of at-reporting models are above 21%. R-square of post-reporting models varies from 9.6% to 21%. Generally, at-reporting models obtained R-square higher than post-reporting models. This indicates that information right at the same year of reporting with financial performance has higher capability to predict the financial performance.

For all six models, NFI is not significantly related to ROA, as an accounting-based variable of financial performance, as well as to Tobin's Q, as a market-based variable of financial performance. Further analysis indicates that the impact of DEBT on financial performance indicators is stronger than the one of other variables. For all the models, this relationship shows a negative relationship between DEBT and financial performance. Instead, R&D shows a positive effect. This indicates that the stronger the R&D intensity, the higher the financial performance a firm can achieve.

Insofar, these results do not support our main hypothesis. Furthermore, we find that NFI shows significant positive correlation with SIZE (coefficient = 0.4004 with  $t = 4.5409$ ) and with BETA (coefficient = 0.3778 with  $t = 4.1803$ ) by Person product-moment correlation test.

## 5. Discussion and Conclusions

In a context of markets' complexity and strong competition, together with the constant growth of the stakeholder base, companies engage with numerous actors such as customers, suppliers, institutions, shareholders, competitors, and communities through which they establish temporary or lasting relationships [103]. Those who are unable to provide communication about the creation of present and future value, towards the major categories of stakeholders, will find themselves in a disadvantageous position compared to the competitors.

However, across time, several corporates' misbehaviors have been observed along with some corporate scandals. This has led to a slow but relentless decrease of trust among companies and their stakeholders. In order to favor the rebuilding of this trust, as a driver of sustainable development, some initiatives from supranational and international organizations, policymakers, and associations of experts have addressed the companies' behaviors toward sustainable, ethical, and responsible choices, while policing companies' reporting toward an effective communication to users of corporate information (investors and other stakeholders).

For example, with its Global Compact, the United Nations [8] called companies to align strategies and operations with universal principles on human rights, labor, environment, and anti-corruption, and defined the seventeen UN Sustainable Development Goals (SDGs) [9], in order to pursue sustainable development across the world.

While implementing these goals, companies should also report to their stakeholders all the information about this process in order to show that they "walk the talk." In fact, stakeholders (including investors and customers) would benefit from this improved information in their evaluation processes of firms, in understanding if companies have really adopted certain positive behaviors rather than merely disclosed them, and in selecting the investments that deserve trust in a forward-looking perspective, so producing positive effects on the market value and equity cost [10].

This kind of information, defined as nonfinancial information (NFI), has been the object of numerous initiatives which started to build the theoretical background behind the possible approaches to guide this nonfinancial reporting (i.e., IIRC, GRI, and others). Generally, NFI involves issues related to: sustainability; corporate responsibility; environmental, social and governance (ESG); ethics; human capital; and environment, health, and safety (EH&S).

Thus, NFI has historically started as being typically forward-looking and voluntary in nature. Anyway, given its pervasive relevance in the stakeholder perspective and the importance of SDGs, the European Union decided to shift from a voluntary disclosure approach to a mandatory one and adopted Directive 2014/95/EU, which mandates companies of a certain size to draft and publish a nonfinancial declaration (NFD) related to the disclosure of corporate NFI about society and the environment.

Following the main concerns that prior studies highlighted about the effectiveness of a mandatory regime for reporting on sustainable development, and on the potential benefits deriving from more or

improved regulation, we intended to address the research question whereas improved regulation and mandated NFI disclosure could affect, and eventually improve, companies' economic performance.

It was analyzed whether, following the transposition of the Directive, by considering 20 specific contents as defined by KPMG [109], the Italian joint-stock companies present in the sample (111) have obtained superior economic and financial results considering two profitability indices (ROA and ROE) and a market index (Tobin's Q). The nonfinancial information was assessed by 5 aspects. They are environment, social, personnel, corruption, and human rights.

Differently from some previous studies that provided evidence of positive correlation between improved NFI and financial performance [22–25], the multivariate regression used to test the hypothesis has provided evidence that there is no association between the preparation of NFI and the financial and market performance of the companies, both in the current year of first adoption (2017) as well as the following one (2018). Therefore, these findings provide a first evidence that the nonfinancial disclosure, for the companies that prepare it in a context of mandatory disclosure, does not entail directly observable advantages on the accounting-based variable of financial performance ROA and on the market-based one in Tobin's Q. These results are in line with previous studies that provided evidence that socially responsible policies and their reporting only lead to increased costs and a resulting decrease in corporate return [47–51]. Our results are also in line with those studies that provided evidence of no relationship between nonfinancial information and firm performance [58–85]. However, we observed a negative correlation between DEBT and financial performance indicators as easily predictable. Moreover, R&D intensity shows a positive effect on the financial performance. Finally, we found that NFI shows significant positive correlation with SIZE and with BETA.

This observed phenomenon suggests that only a minority of users of NFI use structured, systematic methods to evaluate it. Moreover, it is probable that many investors who usually do not use NFI are unable to assess the extent to which NFI is material to investment decisions. However, as investors access nonfinancial information and deem it increasingly significant, they reveal higher expectations for it to be timely, comparable, and verifiable. Probably, in the aftermath of the new regulation, the impactful increase of available nonfinancial information could have created a risk of information overload. Stakeholders could experience difficulties in properly identifying the information that is relevant to them, while it could also be inconsistent or not verified, and is often not comparable with that of other companies.

Therefore, if on the one hand, organizations are progressively recognizing that reporting NFI could potentially improve their performance, on the other hand, users of that information should be ready to assess and compare it as well as be confident about its reliability. It follows that improved NFI and the shift from voluntary to mandatory contents do not affect immediately companies' performances because it takes time to ease the perception of reliability of that information by investors and customers. This could also explain why the EU Directive along with its Italian transposition law settled the NFI assurance rule: an external auditor must assess if the NFI disclosed by a company complies with the regulation and the adopted reporting standards.

We believe that it is easy to expect a certain number of years to allow companies' ability to develop reliable NFI [119], because they face several obstacles to that, such as:

- weak governance structure to oversight and approve reports;
- difficulties in activating new documented processes/controls;
- difficulties in providing reliable measures for their new policies;
- difficulties in building their internal auditing processes;
- difficulties in defining an unambiguous set of estimation methodologies and or available principles;
- difficulties in making financial reporting information consistent and complementary to NFI;
- difficulties in building a reliable technology for NFI data management;
- difficulties in implementing a deep organizational change management to "walk the talk."

It follows that the positive meeting between companies' NFI and its value relevance in the performance and stakeholders' perspective, will arise only after a series of process steps: companies should start from building business and management controls, then revising finance and control functions, and finally settling on an internal audit program and procedures. Only after all those phases, external assurance could effectively find place in order to positively affect performance and meet stakeholders' expectations.

Anyway, although the stated hypothesis is not verified, the results should not be discarded, for the following reasons.

In fact, the construction of the model has some limits constituted by a limited sample of analysis, along with the exclusion of the companies operating in the financial/credit sector as well as the other public interest entities addressed by the Directive, since they are governed by different regulatory obligations. Furthermore, the nonfinancial reports analyzed are the one issued within the 2018 financial year, since the Directive mandatory began in 2017, there was not a large enough sample for the analysis. Therefore, it is assumed that the positive effects can be detected in the long period, as it takes time to be optimally prepared by companies and taken seriously by stakeholders.

We believe that this study provides an original contribution to the present debate about the mandatory disclosure on NF risks in the Italian context in the aftermath of the new regulation. In fact, we observe that financial performance is still linked to traditional information (such as debt/equity ratio) in the stakeholders' perspective. Additionally, we observe that companies facing higher risks (with high Beta) are more propense to disclose NFI. This could be something positive if we consider that stakeholders could benefit from a better NFI as its contents include risk descriptions and risk management policies descriptions. However, the same results could have a negative explanation, if we think that more risky companies (with higher Beta) could be more propense in providing better NFI only with a "window-dressing" approach.

As for the policy implications of the study, since the improvement of company disclosure of social and environmental information represents one of the SDGs and one of the eight areas in which EU policy has put forward an action agenda, our results could represent relevant evidence for European policy-makers of the action agenda in a twofold way: improving the convergence between European Policies and the global approach to NF disclosure, and improving the company disclosure and, in turn, management of risks. Moreover, the shift to mandatory NFI implies the necessity for regulators to better define the standards to refer to in a way that NFI could be more easily compared in the stakeholders' perspective. Besides, the assurance of NFI disclosure plays a key role in the value relevance of such information. Companies should revise their organizational processes and internal audit procedures in order to allow the assurance of their disclosure and provide material information to stakeholders.

Of course, our study suffers from some limitations. First, it assesses the nonfinancial information index for the first and the second year right after the issuance of the decree and the short time passed by could affect the results as discussed above. Second, with the aim to generalize the findings, further research should be addressed with the data several years later or of many countries, especially for European countries, given that the new regulation is the result of a European Directive.

Therefore, further research should run a comparative cross-country analysis of the differences over the regulatory transposition of Directive 95/2014/EU into national law and the related levels of mandatory compliance. Further research is also encouraged in order to extend the study to a global context and/or to underdeveloped countries on the premise that these countries and their regulations are shifting (or intend to shift) from voluntary to mandatory NFI.

Lastly, even though the results do not allow for highlighting particular relationships between NFI and financial performance, it can be said that nonfinancial information is not a negative factor for the companies that prepare it. In fact, size appears to be still a relevant driver of a wider coverage of NFI contents, which can be translated into a greater predisposition of nonfinancial content by larger and more structured companies.

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