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# Determinants and Value Relevance of Voluntary Assurance of Sustainability Reports in a Mandatory Reporting Context: Evidence from Europe

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**Abstract:** This paper investigates the determinants of sustainability report (SR) assurance and whether this assurance is value relevant within the context of the European Union (EU), where, under the Non-Financial Reporting Directive (NFRD), sustainability reporting is mandatory for large public interest entities (PIE) as of fiscal year 2017. Using a sample of 1832 firm-year observations from 660 European listed companies over the period 2017–2020, the results of a logistic regression analysis indicate that firm size, environmental, social and governance (ESG) performance and industry affiliation are important drivers of the demand for SR assurance. The value relevance regressions suggest that SR assurance is positively associated with the stock market value. The study contributes to the existing knowledge on SR assurance by documenting its determinants and value relevance in a context where sustainability reporting is mandatory and that is predominantly stakeholder-oriented. The results may be of interest to companies that consider to adopt SR assurance in such a context and to the European Commission (EC), which has included a mandatory SR assurance requirement in the proposed Corporate Sustainability Reporting Directive (CSRD), the successor to the NFRD.

**Keywords:** sustainability reporting; sustainability report assurance; value relevance; firm value



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## 1. Introduction

The growing interest of stakeholders in environmental, social and governance issues has increased companies' focus on sustainability reporting [1]. Academic literature as well as surveys by international accountancy and consultancy firms revealed that the credibility of the information disclosed in sustainability reports (SRs) is crucial, yet problematic, and that third-party assurance has the potential to improve this credibility [2–5]. Consequently, stakeholders are not only increasingly interested in SRs but also in the assurance thereof [6]. A study by EY [7], for example, showed that around 98% of investors consult firms' non-financial (i.e., sustainability) disclosures and that more than two thirds of investors recognize the usefulness and importance of the independent verification of these disclosures [3]. In line with that, over the past years, the number of companies opting for assurance has been growing and, currently, almost two thirds of the world's largest companies (G250) seek assurance of their SR [5]. While such assurance can potentially benefit companies in terms of market value [5,6,8], to date, there is only little and mixed evidence on this. While some studies find that SR assurance is not value relevant [9,10], others find indications that market participants do value SR assurance [11,12]. Moreover, with the exception of Benschop [13], the few existing studies were conducted in contexts where not only assurance but also sustainability reporting itself is at companies' own discretion [9–12]. The results of those studies, however, need not to hold in mandatory sustainability-reporting contexts, as mandatory reporting may in itself serve as a tool to enhance the credibility of SRs [12–14]. By contrast, the importance of SR assurance to signal a firm's commitment towards sustainability may gain significance in a mandatory

sustainability reporting context. Further, given the pace of the developments in the area of sustainability reporting and the finding by Peters and Romi [10] that the time period in which the value relevance of SR assurance is studied may be important, the existing evidence is rather dated, with all evidence pertaining to periods or years before 2017. Another limitation is that, with the exception of Radhouane et al. [12] and Benschop [13], the prior studies were conducted in the U.S. [9,10] or in an international context dominated by observations from shareholder-oriented countries [11]. It is, however, not unlikely that capital markets in more stakeholder-oriented environments value SR assurance differently than capital markets in other countries. Regarding the adoption of SR assurance for example, prior studies have already documented differences between stakeholder- and shareholder-oriented countries [15,16] and Radhouane et al. [12] suggest that the institutional context may determine how capital markets value SR assurance.

The purpose of this paper is to fill these gaps by studying the value relevance of SR assurance in the context of the European Union (EU), a frontrunner regarding sustainability reporting, where, under the Non-Financial Reporting Directive (NFRD), large public interest entities (PIEs) are, as of fiscal year 2017, required to disclose non-financial information. In addition, the majority of EU member states is more stakeholder-oriented. To obtain some insight into the characteristics of firms that adopt SR assurance in this mandatory-sustainability reporting and stakeholder-oriented setting, the value relevance analysis is preceded by an investigation into the determinants of SR assurance.

The remainder of this paper is organized as follows. Section 2 provides background information, followed by an overview of the literature on the value relevance of SR assurance and the development of the hypothesis. In the Section 3, the sample selection procedure and the research methodology are described. Section 4 reports and discusses the empirical findings and Section 5 concludes.

## 2. Background, Literature Review and Hypotheses Development

### *2.1. Background*

Over the last decade, regulations concerning the disclosure of environmental, social and governance (ESG) information by companies have been growing worldwide [17,18]. Regulatory bodies and policy makers are increasingly demanding companies to engage in sustainability initiatives and, more specifically, in sustainability reporting [5]. As for the EU, in 2014, the Non-Financial Reporting Directive (NFRD) (Directive 2014/95/EU) concerning the disclosure of non-financial information (NFI) and diversity information, an amendment to the Accounting Directive (2013/34/EU), was adopted [19–21]. This Directive requires that large public interest entities (PIEs), i.e., listed companies, banks and insurance companies, with on average more than 500 employees over the financial year, disclose environmental, social and employee-related matters and information regarding respect for human rights, anti-corruption and bribery and board diversity in their reports as of fiscal year 2017 [20,22]. Another minimum requirement of the NFRD is that the statutory auditor checks the presence of NFI in corporate reports [21,22]. Under the NFRD, companies are, however, free as regards the place to publish their NFI, the choice of the reporting framework or the reporting standards and the adoption of assurance of their reports [21]. EU member states had to incorporate the minimum NFRD requirements in their national law and are free to adopt additional requirements, such as a requirement to have the NFI assured [5,21,22].

With the intention to further pursue sustainable investment decisions and more sustainable finance in support of the European Green Deal [23], the European Commission (EC) announced, in 2019, the revision of the NFRD. This resulted in the adoption of the proposal for a Corporate Sustainability Reporting Directive (CSRD) in April 2021. If adopted, this Directive will affect the reports published as of 2024 concerning financial year 2023 [17,24,25]. This Directive will not only expand the scope of the sustainability reporting requirements to all large companies and all listed companies (except for listed micro-companies) on regulated markets within the EU [17,20,24], but will also impose

specific reporting requirements, including the mandatory application of a set of EU sustainability reporting standards, which are currently being designed by the European Financial Reporting Advisory Group (EFRAG) [20,25]. Further, assurance, albeit limited assurance, of the non-financial (i.e., sustainability) statement by an independent assurance provider will become mandatory [20,26] and companies will have to digitally tag their disclosures [20]. These new requirements should provide capital-market participants with improved access to relevant, reliable and comparable sustainability information in order to manage financial flows towards a sustainable and climate-neutral economy and to stimulate a responsible attitude to business [20,23,27].

### *2.2. Literature and Hypothesis Development*

Even in non-mandatory SR contexts, many companies have been spending efforts and money on the disclosure of non-financial information [28]. While high-performing firms may do so to signal their superior performance [9,29], other, low-performing firms may disclose NFI to "greenwash" and to enhance legitimacy [11]. Among stakeholders, concerns have, then, also arisen regarding the accuracy, objectivity, completeness and credibility of the reported sustainability information [6,9]. A possible solution to those doubts is third-party assurance of the information [6,30]. Choosing SR assurance in response to stakeholder demands might, then, also have consequences in terms of better stakeholder relations [6]. It might also benefit companies in terms of improved company reputation and might have positive capital market effects, such as a reduced cost of debt and equity capital and fewer analyst forecast errors. The results of prior studies on the capital market effects of SR assurance show that investors and lenders are interested in assurance [5,8,14,31–36]. Notwithstanding that the stream of literature pertaining to SR assurance is growing, studies on the consequences of SR assurance with regard to firm value are rather scarce [6,8,37]. Some studies have been conducted in the US [9,10]. Drawing on a sample of 216 large US companies, Cho et al. [9] observed that assurance is not associated with higher market value and concluded that investors apparently do not value assurance efforts. In addition, using U.S. data, Peters and Romi [10] reported mixed results: while they found no association between stock price and SR assurance *per se*, their results show that, in the second part of their sample period, markets seemed to value the SR assurance provided by accounting firms. Peters and Romi [10] interpret this as an increase in the value relevance of SR assurance over time. In addition to the above studies in the U.S. context, Clarkson et al. [11] analyzed the market valuation of SR assurance using a sample of observations from 40 countries over the period 2009–2015 and found that capital market participants not only value SR assurance *per se* but also especially value SR assurance provided by Big 4 accountancy firms. It must be noted, however, that the observations in their cross-country sample are predominantly from the US, the UK, Japan and Canada. Benschop [13] examined the value relevance of SR assurance for a set of European listed companies in 2016 and reported a positive association between SR assurance and market value. Further analysis reveals that this holds only for companies located in a voluntary sustainability reporting context. Another study, i.e., Fazzini and Dal Maso [38], examined the value relevance of SRs and the assurance thereof of listed Italian firms in the period 2008–2013. They focused on environmental disclosures and found that those disclosures are valued by market participants but not the assurance thereof. Similarly, Radhouane et al. [12] studied the value relevance of environmental disclosures and the assurance thereof in the French context over the period 2003 to 2011 and discovered that, while high environmental disclosure and voluntary assurance are generally positively associated with company value, this is not so for firms operating in environmentally sensitive industries (ESI). For the latter, they found a negative relationship, which they attribute to shareholders' belief that, for ESI firms, the costs of the assurance of environmental disclosures do not outweigh the benefits. Nevertheless, they also concluded that the combination of a higher level of environmental disclosure by ESI firms and the choice for a higher *level* of assurance is valued by capital market participants [8,12].

The results of these prior studies are not only mixed in that some find no and others find some positive effects of SR assurance; they need also not to hold in the current EU context. First, with the exception of Fazzini and Dal Maso [38], Benschop [13] and Radhouane et al. [12], prior studies were conducted on samples of observations from countries that were (mainly) shareholder-oriented, whereas the majority of countries in the EU is stakeholder-oriented. It is not unlikely that capital markets in more stakeholder-oriented environments value SR assurance differently. Regarding the adoption of SR assurance, for example, prior studies [15,16] have already documented differences between stakeholder- and shareholder-oriented countries and Radhouane et al. [12] suggest that the institutional context may determine how capital markets value SR assurance. Second, given the pace of developments in the area of sustainability reporting and assurance and the finding by Peters and Romi [10] that the time period in which the value relevance of SR assurance is studied may be important, the existing evidence is rather dated with data stemming from before 2017. Third, a common characteristic of the prior studies is that they were conducted in environments where sustainability reporting is (predominantly) voluntary, whereas in the current EU context, i.e., since the passage of the NFRD, sustainability reporting is mandatory. This is not unimportant, as a mandatory reporting requirement may serve as an alternative tool to enhance the credibility of SRs if shareholders believe that SR disclosures are monitored and/or firms' fear repercussions for misleading information [12,14]. Consistent with this idea, Benschop [13] found that, in the pre-NFRD period, market participants value SR assurance only in EU countries with voluntary SR disclosures. Ioannou and Serafeim [39], by contrast, argued that a mandatory SR requirement likely increases the overall level of SR disclosures which, in turn, increases the need of firms that engage in sustainable practices to signal their commitment and to distinguish themselves from other firms by sending a costly signal, i.e., paying for assurance. In line with this, they found evidence that the demand for voluntary SR assurance increases after a mandatory SR requirement, suggesting that firms believe that there are benefits to assurance, e.g., effective signaling of their commitment, that outweigh the costs. Whether and to what extent the SR assurance adopted by listed EU companies is valued by capital markets in the post NFRD period is then also an open question. On the one hand, for firms that are highly committed to sustainable practices, third-party verification may become a crucial tool to credibly signal their commitment. To the extent that shareholders perceive this benefit of assurance adoption to be higher than the cost, SR assurance is expected to increase firm value. However, if mandatory sustainability reporting is perceived as an alternative credibility enhancing tool, i.e., a substitute to third-party verification, the adoption of assurance may not materialize in terms of higher firm value in the post-NFRD context. Based on the above arguments, the following hypothesis is formulated:

**H1.** *Ceteris paribus, in a mandatory sustainability-reporting context, the assurance of the sustainability report (SR) is value relevant.*

## 3. Materials and Methods

### *3.1. Sample and Data*

The sample consists of all publicly listed companies with domicile, legal registration and trading instruments in one of the 27 member states of the EU [40], with on average more than 500 employees per year and total assets higher than EUR 20 million or net turnover higher than EUR 40 million, and with financial data in Eikon and ESG data in and SRs according to Refinitiv's ESG database. As the UK left the EU, observations from the UK were not included. Data collection starts in 2017, the first year of mandatory disclosure according to the NFRD, and ends in 2020, the last year with available data at the start of the project. Observations with a fiscal year end differing from 31/12, observations with missing values and observations from countries where assurance is mandatory (i.e., France, Italy and, as of 2018, also Spain [22]) were removed. There is no requirement to explicitly report that an SR is not assured, neither do firms have incentives to voluntarily do so. Therefore,

and in line with Refinitiv's treatment of Boolean data [41], when data on assurance are not available, the value for assurance is set to zero. The final sample consists of 1832 firm-year observations from 660 individual firms across 19 EU members states.

### *3.2. Research Method*

The factors that drive the demand for SR assurance appear to be context-specific [8]. To gain insight into the characteristics of the firms that adopt SR assurance in a mandatory sustainability reporting context, the analysis starts with an examination of the determinants of SR assurance. To this end, the following logistic regression model was estimated:

$$\begin{aligned}\text{Assurance}_{i.t} = {} & \beta_0 + \beta_1\ \text{Size}_{i,t} + \beta_2\ \text{ROA}_{i,t} + \beta_3\ \text{Free\_float}_{i,t} + \beta_4\ \text{Leverage}_{i,t} + \\ & \beta_5\ \text{ESI}_{i,t} + \beta_6\ \text{Finance}_{i,t} + \beta_7\ \text{Stakeholder}_{i,t} + \beta_8\ \text{CSR\_performance}_{i,t} + \\ & \beta_9\ \text{CSR\_info}_{i,t,} + \varepsilon_{i,t}\end{aligned} \quad (1)$$

Table 1 presents the definitions of the variables employed in the analysis. Here, *i* and *t* denote firms and years, respectively. Based on the prior literature [8–11,15,16,42], the following most common determinants of SR assurance were identified: size, profitability (ROA), leverage, whether or not the company operates in an environmentally sensitive industry (ESI), whether or not the company operates in the financial industry (Finance), whether or not the company is domiciled in a stakeholder-oriented country (Stakeholder), corporate social responsibility performance (CSR_performance) and the extent of sustainability disclosures (CSR_info). The expectations were that larger firms and firms operating in environmentally sensitive industries and in the financial industry are more likely to seek assurance, as they are more exposed to environmental and/or social risks [9,15]. Consequently, positive coefficients on Size, ESI and Finance were predicted. It was also expected that firms operating in countries where not only shareholders but also other stakeholders are considered to have a legitimate interest in corporate activities, i.e., stakeholder-oriented countries, are more likely to demand SR assurance than firms operating in shareholder-oriented countries, where stakeholders other than shareholders are deemed to have a less legitimate interest [15,16], implying a positive coefficient on Stakeholder. Further, based on signaling theory and legitimacy theory, Clarkson et al. [11] posit that, especially, firms with a high environmental and social commitment, proxied by CSR performance, will solicit assurance of their SR. Thus, a positive relationship between CSR_performance and Assurance was expected. In addition, based on the presumption that the extent of CSR-related information provided to the public is a function of the firms' environmental and social commitment, Cho et al. [9] argue that firms that provide more information will be more likely to seek assurance in order to signal this commitment. Accordingly, a positive coefficient on CSR_info was expected. Further, more profitable and more leveraged firms may be subject to increased public scrutiny and monitoring, increasing the demand for assurance [8,14]. More profitable firms are also more likely to have the necessary financial resources [43]. By contrast, while highly leveraged firms are considered to face higher agency costs of debt [44], increasing the demand for assurance, they may face financial constraints, inhibiting them from purchasing costly assurance [8,14]. For these reasons, a positive coefficient on ROA was expected and no prediction for Leverage was made. Finally, in the context of sustainability reporting, SR assurance can mitigate the information asymmetry and agency problems (i.e., opportunistic sustainability reporting) created by the separation of ownership and control. As the agency costs of equity increase in the level of outside equity [45,46], a positive coefficient on free float (Free_float), a measure of ownership dispersion [46,47], was expected.

Once the determinants of SR assurance were established, the analysis turned to the investigation of its value relevance. Similar to prior studies on the value relevance of social and/or environmental information and its assurance [9–11], a variant of the Ohlson

valuation model [48,49] was used to test the hypothesis that SR assurance is value relevant. In particular, the following linear regression model was estimated to test H1:

$$P_{i,t} = \beta_0 + \beta_1\ BVS_{i,t} + \beta_2\ EPS_{i,t} + \beta_3\ EPS_{i,t} \times Negative_{i,t} + \beta_4\ Assurance_{i,t} + \beta_5\ CSR\_performance_{i,t} + \beta_6\ CSR\_info_{i,t} + \beta_{7–15}\ Industry_i + \beta_{16–34}\ Country_i + \beta_{35–37}\ Year_t + \varepsilon_{i,t} \quad (2)$$

In line with Aboody et al. [50] and Barth et al. [51], the model relates fiscal year-end price per share (P) with book value per share (BVS) and earnings per share (EPS). The model further includes an interaction between EPS and the dummy Negative, indicating negative EPS values, to allow for the different persistence, as perceived by market participants, of negative and positive EPS numbers [52–54]. From the Ohlson model, the coefficients of EPS and BVS are expected to be positive [50,51]. To test H1, Equation (2) further includes the variable of interest, Assurance, which indicates whether or not an SR is assured. A positive and significant coefficient on Assurance would be consistent with H1. In line with prior work, the regression also includes a measure of firms' environmental and social performance (CSR_performance) [11] and of the extent of sustainability information (CSR_info) [9,11], as those variables may not only influence the decision to have the SR assured but may also be valued by the market. Based on prior work [9,11], positive signs on the coefficients of CSR_performance and CSR_info were expected. Finally, to control for systematic differences in company valuation across industries, countries and years, the model includes industry, country and year fixed effects (i.e., the vectors Industry, Country, Year).

**Table 1.** Variable definitions [§].

| Variable | Definition |
|---|---|
| Size | Natural logarithm of total assets (in EUR) at the end of fiscal year t. |
| ROA | Measure for profitability calculated as EBIT (in EUR) earned over fiscal year t divided by total assets (in euro) at the end of fiscal year t. |
| Leverage | Total liabilities (in EUR) at the end of fiscal year t divided by total assets (in EUR) at the end of fiscal year t. |
| ESI | Dummy variable equal to 1 if the company is a member of an environmentally sensitive industry, 0 otherwise. In line with Simnett et al. [15] and using the Global Industry Classification Standard (GICS), the utilities, energy, materials and industrials sectors are designated the ESIs. |
| Finance | Dummy variable equal to 1 if the company is a member of the financial industry, 0 otherwise. Industry membership is based on the Global Industry Classification Standard (GICS). |
| Stakeholder | Stakeholder orientation, dummy variable equal to 1 if the company is located in a country that is stakeholder-oriented, 0 otherwise [#]. |
| Assurance | Dummy variable equal to 1 if the company has an external auditor for the SR for fiscal year t, 0 otherwise. |
| P | Share price (in EUR) at the end of fiscal year t. |
| BVS | Book value of equity per share (in EUR) at the end of fiscal year t. |
| EPS | Earnings per share (in EUR) over fiscal year t. |
| Negative | Dummy variable equal to 1 if EPS is negative in year t, 0 otherwise |
| CSR_performance | Score for environmental, social and governance (ESG) performance for fiscal year t (values ranging from 0 to 100). |
| CSR_info | Percentage of the company's activities covered in its environmental and social reporting for fiscal year t (values ranging from 0 to 100). |
| Free_float | Free float as a percent of total traded shares at the end of fiscal year t. |

[§] Financial statement and market data from Eikon, data on CSR_performance, CSR_info and Assurance from Refinitiv's ESG database. [#] Following Simnett et al. [15] and consistent with Ball et al. [55], companies domiciled in common-law countries are considered to have a more shareholder-oriented corporate governance model and those in code (civil) law countries a more stakeholder-oriented model. Except for Ireland, Malta and Cyprus, all EU Members States have a civil-law legal system. While Ireland has a common-law system, Malta and Cyprus have a mixed legal system, i.e., a mix of a common-law and civil-law legal system. Together with Ireland, Malta and Cyprus were classified as shareholder-oriented countries. Information on the legal status of the countries in the sample was retrieved from the JuriGlobe database from the University of Ottawa [56].

## 4. Results

### *4.1. Descriptive Statistics*

Table 2, panels A–C, presents a breakdown of the sample by year, country and industry (based on the Global Industry Classification Standard (GICS) sectors), respectively. Table 2, panel A, reveals that the number of observations increases over time, which is consistent with the gradual expansion of the coverage of the ESG database [41]. Table 1, Panels B and C, reveals that German and Swedish companies and companies in the sectors industrials and financials are noticeably present.

Table 3 provides the descriptive statistics for the variables in both the assurance and value relevance regression models. In order to temper the effects of outliers, the continuous variables were winsorized at the 1st and 99th percentiles. The table shows that about 58 percent of the sample firms' SRs are assured. This is significantly higher than the assurance rates reported in prior studies, i.e., about 12 percent for the North American samples used by Cho et al. [9] and Peters and Romi [10] for the year 2010 and the period 2002–2010, respectively, about 16 percent for a worldwide sample over the 2009–2015 period used by Clarkson et al. [11] and 27 percent for the sample of French listed companies (excluding financial institutions, insurance companies and real estate firms) over the 2003–2011 period used by Radhouane et al. [12], and is consistent with both the lower demand for SR assurance in the U.S. [9,10,16,57] and the increased demand for external verification of SRs over time [4]. Before excluding observations from countries with mandatory SR assurance, the percentage of SRs in the sample with external assurance is around 69 percent, which is in line with the assurance rate of about 70 percent reported in the "Study on the Non-Financial Reporting Directive" that was commissioned by the European Commission [58]. Table 3 further reveals that 47 percent of the firm years are from firms operating in environmentally sensitive industries, 14 percent from firms operating in the financial sector, and that the far majority, i.e., 98 percent, of the sample observations are from companies domiciled in civil-law countries whose corporate governance model is deemed to be more stakeholder-oriented. Table 3 also reveals that the sample firms are, on average, profitable, i.e., positive average and median earnings per share (EPS) and return on assets (ROA), but that the income before extraordinary items is negative in 13 percent of the firm years (Negative). The sample firms have a mean (median) total asset value (Size) of around EUR 4.4 (EUR 3.6) billion. On average, about 62 percent of those assets are financed with liabilities (Leverage), which is in line with some prior studies on listed firms (e.g., Cho et al. [9]). Finally, environmental, social and governance performance (CSR_performance) shows quite some variability, with values ranging between 19.18 and 91.31 and an average (median) value of 58.51 (59.79). Finally, the information in the sample firms SRs covers, on average, the majority, i.e., 91.05 percent, of the companies' activities (CSR_info).

Table 4 presents the pairwise Pearson correlations between the variables in the assurance and value relevance model. In line with expectations, the table shows significantly positive correlations between P, on the one hand, and BVS and EPS, on the other hand. In addition, the significantly positive correlation between BVS and EPS is in line with prior studies [50,59]. Additionally, in line with H1, there is a positive and significant correlation between Assurance and P ($p$-value < 0.05, one-tailed). Further, a t-test for differences in means (not reported) shows that the mean value of P is significantly higher for observations with a SR that is assured than for observations with a SR that is not assured ($p$-value < 0.05, one tailed) and the results of a non-parametric Wilcoxon rank-sum test (not reported) indicate that the samples of observations with assured and unassured SRs are from populations with different distributions ($p$-value < 0.05). Finally, the size of the correlation coefficients does not indicate multicollinearity problems.

**Table 2.** Breakdown of sample by year, country and industry.

| **Panel A: Breakdown by Year** | | |
|---|---|---|
| | **Frequency** | **Percent** |
| 2017 | 341 | 18.61 |
| 2018 | 426 | 23.25 |
| 2019 | 475 | 25.93 |
| 2020 | 590 | 32.21 |
| Total | 1832 | 100 |
| **Panel B: Breakdown by Country** | | |
| | **Frequency** | **Percent** |
| Austria | 77 | 4.2 |
| Belgium | 101 | 5.51 |
| Cyprus | 4 | 0.22 |
| Czech Republic | 12 | 0.66 |
| Denmark | 130 | 7.1 |
| Finland | 156 | 8.52 |
| Germany | 495 | 27.02 |
| Greece | 63 | 3.44 |
| Hungary | 15 | 0.82 |
| Ireland | 28 | 1.53 |
| Luxembourg | 33 | 1.8 |
| Malta | 5 | 0.27 |
| Netherlands | 150 | 8.19 |
| Poland | 117 | 6.39 |
| Portugal | 45 | 2.46 |
| Romania | 7 | 0.38 |
| Slovenia | 4 | 0.22 |
| Spain | 40 | 2.18 |
| Sweden | 350 | 19.1 |
| Total | 1832 | 100 |
| **Panel C: Breakdown by Industry** [§] | | |
| | **Frequency** | **Percent** |
| Communication Services | 113 | 6.17 |
| Consumer Discretionary | 176 | 9.61 |
| Consumer Staples | 110 | 6 |
| Energy | 63 | 3.44 |
| Financials | 255 | 13.92 |
| Health Care | 129 | 7.04 |
| Industrials | 524 | 28.6 |
| Information Technology | 150 | 8.19 |
| Materials | 204 | 11.14 |
| Real Estate | 40 | 2.18 |
| Utilities | 68 | 3.71 |
| Total | 1832 | 100 |

[§] Based on the Global Industry Classification Standard (GICS) sectors.

**Table 3.** Descriptive statistics [§].

| Variable | N | Mean | St. Dev. | Min | Q1 | Median | Q2 | Max |
|---|---|---|---|---|---|---|---|---|
| Assurance | 1832 | 0.580 | 0.490 | 0 | 0 | 1 | 1 | 1 |
| ESI | 1832 | 0.470 | 0.500 | 0 | 0 | 0 | 1 | 1 |
| Finance | 1832 | 0.140 | 0.350 | 0 | 0 | 0 | 0 | 1 |
| Stakeholder | 1832 | 0.980 | 0.140 | 0 | 1 | 1 | 1 | 1 |
| Negative | 1832 | 0.130 | 0.340 | 0 | 0 | 0 | 0 | 1 |
| P | 1832 | 50.750 | 94.050 | 0.540 | 9.050 | 22.890 | 51.680 | 723.400 |
| BVS | 1832 | 17.860 | 28.150 | 0.120 | 4.180 | 9.380 | 21.360 | 213.380 |
| EPS | 1832 | 1.570 | 2.850 | −7.000 | 0.250 | 0.890 | 2.160 | 15.240 |
| Size | 1832 | 22.200 | 1.820 | 18.670 | 20.900 | 22.010 | 23.250 | 26.930 |
| Leverage | 1832 | 0.620 | 0.180 | 0.190 | 0.500 | 0.610 | 0.740 | 0.960 |
| ROA | 1832 | 0.070 | 0.060 | −0.100 | 0.020 | 0.060 | 0.090 | 0.320 |
| CSR_performance | 1832 | 58.510 | 17.230 | 19.180 | 45.540 | 59.790 | 71.770 | 91.310 |
| CSR_info | 1832 | 91.050 | 20.400 | 7.000 | 100 | 100 | 100 | 100 |
| Free_float | 1832 | 67.690 | 23.730 | 14.420 | 48.780 | 69.290 | 88.990 | 100 |

[§] For variable definitions, see Table 1.

### *4.2. Regression Results*

Table 5, Panel A, presents the results of the estimation of the logistic regression model on the determinants of assurance. Standard errors are robust and clustered at firm level. The table shows that Size and CSR_performance are significantly positively related to the adoption of SR assurance ($p$-value < 0.01, one-tailed). This indicates that larger firms and firms that perform better on corporate social and environmental issues are more likely to seek assurance, consistent with expectations and prior findings ([14,15,60] for Size; [11] for CSR_performance). Further, also in line with expectations and prior findings [15], the coefficient on ESI is positive and significant, though only at a marginal level ($p$-value < 0.10, one-tailed), which indicates that companies in environmentally sensitive companies (ESI) are more likely to seek assurance than firms in other (non-financial) sectors. Finally, in contrast to expectations, Finance is significantly negatively correlated with assurance. A potential explanation might be that the high regulation and monitoring of this industry serve as alternative tools to enhance credibility. Inferences are unaffected if time fixed effects are included in the analyses.

Table 5, Panel B, summarizes the OLS estimation of the value relevance regression. Column (1) shows the results of the primary value relevance regression with P, price per share at year end, as the dependent variable. As a robustness check, column (2) shows the results of the OLS estimation of the value relevance regression where P is alternatively defined as price per share three months after year end [59]. Standard errors are robust and clustered at the firm level. In line with expectations and prior studies, the table shows that BVS and EPS are significantly positively related to price per share [10,50,51,59] and that the interaction between EPS and Negative is significantly negatively associated with price per share [52–54]. Further, the coefficients on the control variables CSR_performance and CSR_info are not significant. The coefficient on the variable of interest, i.e., Assurance, is marginally significant in column (1) ($p$-value < 0.10, one-tailed) and significant in column (2) ($p$-value < 0.05, one tailed), which supports the hypothesis that, in the post NFRD period, the value of large listed EU companies is positively related to assurance of the SR. This finding suggests that European capital markets recognize the added value of the voluntary SR assurance *per se*, even in the presence of the mandatory sustainability reporting requirement, a potential alternative to third-party verification.

**Table 4.** Pairwise Pearson correlations [§].

| | Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | P | 1 | | | | | | | | | | | | | |
| (2) | BVS | 0.500 | 1 | | | | | | | | | | | | |
| | | <0.001 | | | | | | | | | | | | | |
| (3) | EPS | 0.445 | 0.597 | 1 | | | | | | | | | | | |
| | | <0.001 | <0.001 | | | | | | | | | | | | |
| (4) | EPS x Negative | −0.064 | −0.138 | 0.464 | 1 | | | | | | | | | | |
| | | 0.006 | <0.001 | <0.001 | | | | | | | | | | | |
| (5) | Assurance | 0.040 | 0.098 | 0.069 | 0.015 | 1 | | | | | | | | | |
| | | 0.085 | <0.001 | 0.003 | 0.535 | | | | | | | | | | |
| (6) | CSR_performance | 0.021 | 0.124 | 0.108 | 0.010 | 0.455 | 1 | | | | | | | | |
| | | 0.359 | <0.001 | <0.001 | 0.662 | <0.001 | | | | | | | | | |
| (7) | CSR_info | −0.091 | −0.049 | −0.102 | −0.013 | −0.072 | −0.072 | 1 | | | | | | | |
| | | <0.001 | 0.037 | <0.001 | 0.573 | 0.002 | 0.002 | | | | | | | | |
| (8) | Size | 0.048 | 0.302 | 0.199 | −0.007 | 0.326 | 0.549 | −0.091 | 1 | | | | | | |
| | | 0.039 | <0.001 | <0.001 | 0.774 | <0.001 | <0.001 | <0.001 | | | | | | | |
| (9) | Leverage | −0.100 | 0.014 | −0.067 | −0.087 | 0.056 | 0.168 | −0.056 | 0.419 | 1 | | | | | |
| | | <0.001 | 0.562 | 0.004 | <0.001 | 0.017 | <0.001 | 0.016 | <0.001 | | | | | | |
| (10) | ROA | 0.168 | −0.097 | 0.288 | 0.306 | −0.009 | −0.001 | −0.012 | −0.288 | −0.384 | 1 | | | | |
| | | <0.001 | <0.001 | <0.001 | <0.001 | 0.696 | 0.967 | 0.603 | <0.001 | <0.001 | | | | | |
| (11) | ESI | −0.013 | −0.018 | −0.049 | −0.049 | 0.088 | 0.002 | 0.039 | −0.128 | −0.131 | 0.024 | 1 | | | |
| | | 0.582 | 0.434 | 0.037 | 0.036 | <0.001 | 0.918 | 0.092 | <0.001 | <0.001 | 0.308 | | | | |
| (12) | Finance | −0.026 | 0.141 | 0.070 | 0.052 | −0.035 | 0.030 | −0.060 | 0.508 | 0.510 | −0.308 | −0.378 | 1 | | |
| | | 0.275 | <0.001 | 0.003 | 0.025 | 0.134 | 0.207 | 0.010 | <0.001 | <0.001 | <0.001 | <0.001 | | | |
| (13) | Stakeholder | 0.040 | 0.049 | 0.042 | −0.007 | 0.010 | 0.016 | −0.044 | −0.070 | −0.065 | 0.010 | 0.073 | −0.122 | 1 | |
| | | 0.089 | 0.035 | 0.072 | 0.766 | 0.656 | 0.499 | 0.058 | 0.003 | 0.005 | 0.663 | 0.002 | <0.001 | | |
| (14) | Free_float | 0.008 | 0.020 | 0.058 | 0.031 | 0.085 | 0.275 | −0.002 | 0.093 | 0.061 | 0.094 | −0.052 | 0.039 | −0.044 | 1 |
| | | 0.729 | 0.405 | 0.013 | 0.192 | <0.001 | <0.001 | 0.917 | <0.001 | 0.009 | <0.001 | 0.025 | 0.097 | 0.062 | |

[§] For variable definitions, see Table 1; *p*-values based on two-tailed tests are reported on the second line.

**Table 5.** Regression results [§].

| **Panel A: Determinants of SR Assurance** | | | |
|---|---|---|---|
| **Variable** | **Prediction** | **Coefficient** | |
| Size | + | 0.316 | *** |
| | | (0.073) | |
| ROA | + | 0.343 | |
| | | (1.520) | |
| Leverage | +/− | −0.298 | |
| | | (0.607) | |
| ESI | + | 0.307 | * |
| | | (0.199) | |
| Finance | + | −0.968 | *** |
| | | (0.368) | |
| Stakeholder | + | −0.057 | |
| | | (0.653) | |
| CSR_performance | + | 0.049 | *** |
| | | (0.007) | |
| CSR_info | + | −0.005 | |
| | | (0.004) | |
| Free_float | + | −0.002 | |
| | | (0.004) | |
| Constant | ? | −8.689 | *** |
| | | (1.709) | |
| Observations | | 1832 | |
| Pseudo $R^2$ | | 0.193 | |
| Wald $Chi^2$ | | 158.280 | *** |

| **Panel B: Value Relevance of SR Assurance** | | | | | |
|---|---|---|---|---|---|
| | | **(1)** | | **(2)** | |
| **Variable** | **Prediction** | **Coefficient** | | **Coefficient** | |
| BVS | + | 0.850 | ** | 0.490 | ** |
| | | (0.422) | | (0.208) | |
| EPS | + | 13.393 | *** | 10.321 | *** |
| | | (3.649) | | (1.962) | |
| EPS x Negative | − | −24.234 | *** | −15.373 | *** |
| | | (5.993) | | (3.218) | |
| Assurance | + | 6.403 | * | 4.645 | ** |
| | | (4.686) | | (2.751) | |
| CSR_performance | + | −0.218 | | −0.109 | |
| | | (0.158) | | (0.085) | |
| CSR_info | + | −0.258 | | −0.145 | |
| | | (0.191) | | (0.097) | |
| Constant | ? | 12.713 | | 23.152 | ** |
| | | (21.316) | | (10.978) | |
| Industry fixed effects | ? | Included | | Included | |
| Country fixed effects | ? | Included | | Included | |
| Year fixed effects | ? | Included | | Included | |
| Observations | | 1832 | | 1832 | |
| $R^2$ | | 0.456 | | 0.613 | |

[§] See Table 1 for variable definitions; + indicates that a positive association is expected, − that a negative association is expected, ? that there is no specific prediction (see text Section 3.2). Panel A shows the results of a logistic regression analysis of Assurance on its determinants; Panel B, column (1) shows the results of the OLS estimation of a linear regression of P, price per share at year end, on its determinants, column (2) the results of the OLS estimation of a linear regression of price per share three months after year end on its determinants; standard errors between parentheses, standard errors are robust and clustered by firm; *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively, based on a one-tailed test for signed predictions, on a two-tailed test otherwise.

## 5. Discussion and Conclusions

The purpose of this paper was to provide evidence on the determinants and value relevance of SR assurance in the European post NFRD context, which is characterized by a mandatory sustainability-reporting requirement and is predominantly stakeholder-oriented. Using a sample of 1832 firm-year observations over the 2017–2020 period of 660 large, publicly listed companies domiciled in the EU for which sustainability reporting is mandatory, this study documents that firm size, ESG performance and industry affiliation are important drivers of SR assurance in the European post NFRD context. Further, the results suggest that capital markets value the assurance of SRs *per se*, which is consistent with the idea that SR assurance increases the (perceived) credibility of SRs and that the mandatory sustainability reporting does not substitute third-party verification.

The study contributes to the growing SR assurance literature in various ways. First, it shows that size, ESG performance and industry affiliation, which were found to be significant drivers of SR assurance adoption in earlier studies, are also important in a context where sustainability reporting is mandatory and which is predominantly stakeholder-oriented. Second, the study contributes to the literature on the capital market effects of SR assurance in general and to those few studies examining the market value effects of SR assurance in particular, by providing recent evidence on the value relevance of SR assurance in such a context.

Besides its academic relevance, the study also has practical implications. In particular, the indication that SR assurance is valued by capital market participants in the EU may be of interest to the EC, which has included a mandatory SR assurance requirement in the recently proposed CSRD. It can help to legitimize its proposal, to convince the various stakeholders involved in the due process of the relevance and benefits of SR assurance and to persuade the various member states to endorse the proposed mandatory SR assurance requirement. As the results suggest that the market recognizes that the benefits of SR assurance outweigh the costs, it could also convince and motivate companies to (voluntarily) adopt SR assurance before the proposed CSRD is endorsed and mandatory SR assurance becomes effective. The results may also be of interest to regulators and companies outside the EU who are considering whether or not to require mandatory SR assurance. Admittedly, as the sample includes only observations from EU member states, the results can, strictly speaking, not, as such, be generalized to other countries. An interesting avenue for future research could, then, also be to repeat the analysis in other contexts. Another limitation is that the present study only examines the presence of assurance *per se*. It would be interesting to explore whether the type of SR assurance provider and the level and scope of SR assurance have incremental value for European capital market participants.

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## References

1. Velte, P.; Stawinoga, M. Empirical research on corporate social responsibility assurance (CSRA): A literature review. *J. Bus. Econ.* **2017**, *87*, 1017–1066.
2. Deloitte. Thinking Allowed: The Future of Corporate Reporting. 2016. Available online: https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/audit/ch-en-audit-thinking-allowed-future-corporate-reporting.pdf (accessed on 29 June 2022).
3. EY. Is Your Nonfinancial Performance Revealing the True Value of Your Business? 2017. Available online: https://www.ey.com/en_us/assurance/is-your-nonfinancial-performance-revealing-the-true-value-of-your-business (accessed on 29 June 2022).

4. KPMG. The Road Ahead: The KPMG Survey of Corporate Responsibility Reporting 2017. 2017. Available online: https://www.integratedreporting.org/wp-content/uploads/2017/10/kpmg-survey-of-corporate-responsibility-reporting-2017.pdf (accessed on 29 June 2022).
5. Krasodomska, J.; Simnett, R.; Street, D.L. Extended external reporting assurance: Current practices and challenges. *J. Int. Financ. Manag. Account.* **2021**, *32*, 104–142. [CrossRef]
6. Velte, P. Determinants and consequences of corporate social responsibility assurance: A systematic review of archival research. *Soc. Bus. Rev.* **2020**, *16*, 1–25. [CrossRef]
7. EY. How Will Upcoming EU Legislation on Sustainability Reporting Benefit Your Business? 2021. Available online: https://www.ey.com/en_be/climate-change-sustainability-services/how-will-upcoming-eu-legislation-on-sustainability-reporting-benefit-your-business (accessed on 29 June 2022).
8. Venter, E.R.; van Eck, L. Research on extended external reporting assurance: Trends, themes, and opportunities. *J. Int. Financ. Manag. Account.* **2021**, *32*, 63–103. [CrossRef]
9. Cho, C.H.; Michelon, G.; Patten, D.M.; Roberts, R.W. CSR report assurance in the USA: An empirical investigation of determinants and effects. *Sustain. Account. Manag. Policy J.* **2014**, *5*, 130–148.
10. Peters, G.F.; Romi, A.M. The association between sustainability governance characteristics and the assurance of corporate sustainability reports. *Audit. J. Pract. Theory* **2015**, *34*, 163–198. [CrossRef]
11. Clarkson, P.; Li, Y.; Richardson, G.; Tsang, A. Causes and consequences of voluntary assurance of CSR reports: International evidence involving Dow Jones Sustainability Index Inclusion and Firm Valuation. *Account. Audit. Account. J.* **2019**, *32*, 2451–2474. [CrossRef]
12. Radhouane, I.; Nekhili, M.; Nagati, H.; Paché, G. Is voluntary external assurance relevant for the valuation of environmental reporting by firms in environmentally sensitive industries? *Sustain. Account. Manag. Policy J.* **2020**, *11*, 66–98. [CrossRef]
13. Benschop, W. How Do Investors Value Assurance on Corporate Social Responsibility (CSR) Reports? Evidence from European Listed Companies. Master's Thesis, Radboud University, Nijmegen, The Netherlands, 2017.
14. Casey, R.J.; Grenier, J.H. Understanding and contributing to the enigma of corporate social responsibility (CSR) assurance in the United States. *Audit. J. Pract. Theory* **2015**, *34*, 97–130. [CrossRef]
15. Simnett, R.; Vanstraelen, A.; Chua, W.F. Assurance on sustainability reports: An international comparison. *Account. Rev.* **2009**, *84*, 937–967. [CrossRef]
16. Kolk, A.; Perego, P. Determinants of the adoption of sustainability assurance statements: An international investigation. *Bus. Strategy Environ.* **2010**, *19*, 182–198. [CrossRef]
17. EY. The Future of Sustainability Reporting Standards: The Policy Evolution and Actions Companies Can Take Today. 2021. Available online: ey-the-future-of-sustainability-reporting-standards-june-2021.pdf (accessed on 29 June 2022).
18. Gulenko, M. Mandatory CSR reporting—literature review and future developments in Germany. *Sustain. Manag. Forum* **2018**, *26*, 3–17. [CrossRef]
19. European Commission. Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014. 2014. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0095 (accessed on 29 June 2022).
20. European Commission. Corporate Sustainability Reporting. 2021. Available online: https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en (accessed on 29 June 2022).
21. European Commission. Non-financial Reporting Directive. 2021. Available online: https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/654213/EPRS_BRI(2021)654213_EN.pdf (accessed on 29 June 2022).
22. Accountancy Europe. Towards Reliable Non-Financial Information across Europe: Factsheet. 2020. Available online: https://www.accountancyeurope.eu/wp-content/uploads/Accountancy-Europe-NFI-assurance-practice_facthseet.pdf (accessed on 21 December 2021).
23. European Commission. Sustainable Finance Package. Available online: https://ec.europa.eu/info/publications/210421-sustainable-finance-communication_en#csrd (accessed on 21 December 2021).
24. KPMG. The KPMG Survey on Non-financial Reporting 2020. 2021. Available online: https://home.kpmg/be/en/home/insights/2021/05/sus-the-kpmg-survey-on-non-financial-reporting-2020.html (accessed on 29 June 2022).
25. PwC. Sustainability Reporting Enters a New Era: Corporate Sustainability Reporting Directive. 2021. Available online: https://www.pwc.be/en/news-publications/2021/corporate-sustainability-reporting-directive.html (accessed on 29 June 2022).
26. European Commission. Proposal for a Directive of the European Parliament and of the Council: Amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as Regards Corporate Sustainability Reporting. 2021. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189 (accessed on 29 June 2022).
27. European Commission. Proposal for a Directive of the European Parliament and of the Council: Commission Staff working document. 2021. Available online: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021SC0151 (accessed on 29 June 2022).
28. Gamerschlag, R.; Möller, K.; Verbeeten, F. Determinants of voluntary CSR disclosure: Empirical evidence from Germany. *Rev. Manag. Sci.* **2011**, *5*, 233–262. [CrossRef]
29. Clarkson, P.M.; Li, Y.; Richardson, G.D.; Vasvari, F.P. Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Account. Organ. Soc.* **2008**, *33*, 303–327. [CrossRef]

30. Gillet-Monjarret, C.; Rivière-Giordano, G. Sustainability assurance: A literature review. *Comptab. Controle Audit* **2017**, *23*, 11–62.
31. Carey, P.; Khan, A.; Mihret, D.G.; Muttakin, M.B. Voluntary sustainability assurance, capital constraint and cost of debt: International evidence. *Int. J. Audit.* **2021**, *25*, 351–372. [CrossRef]
32. Garzón-Jiménez, R.; Zorio-Grima, A. Effects of Carbon Emissions, Environmental Disclosures and CSR Assurance on Cost of Equity in Emerging Markets. *Sustainability* **2021**, *13*, 696. [CrossRef]
33. García-Sanchez, I.M.; Hussain, N.; Martínez-Ferrero, J.; Ruiz-Barbadillo, E. Impact of disclosure and assurance quality of corporate sustainability reports on access to finance. *Corp. Soc. Responsib. Environ. Manag.* **2019**, *26*, 832–848. [CrossRef]
34. Dhaliwal, D.S.; Li, O.Z.; Tsang, A.; Yang, Y.G. Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *Account. Rev.* **2011**, *86*, 59–100. [CrossRef]
35. Martínez-Ferrero, J.; García-Sánchez, I.M. Sustainability assurance and cost of capital: Does assurance impact on credibility of corporate social responsibility information? *Bus. Ethicss Eur. Rev.* **2017**, *26*, 223–239. [CrossRef]
36. Kuo, L.; Kuo, P.W.; Chen, C.C. Mandatory CSR Disclosure, CSR Assurance, and the Cost of Debt Capital: Evidence from Taiwan. *Sustainability* **2021**, *13*, 1768. [CrossRef]
37. Farooq, M.B.; De Villiers, C. The market for sustainability assurance services: A comprehensive literature review and future avenues for research. *Pac. Account. Rev.* **2017**, *29*, 79–106. [CrossRef]
38. Fazzini, M.; Dal Maso, L. The value relevance of "assured" environmental disclosure. The Italian experience. *Sustain. Account. Manag. Policy J.* **2016**, *7*, 225–245.
39. Ioannou, I.; Serafeim, G. The consequences of mandatory corporate sustainability reporting. *SSRN Work. Pap.* **2017**, *49*. Available online: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1799589 (accessed on 9 September 2020).
40. European Union. Countries. 2021. Available online: https://europa.eu/european-union/about-eu/countries_en (accessed on 29 June 2022).
41. Refinitiv Environmental, Social and Governance (ESG) Scores from Refinitiv. Available online: https://www.refinitiv.com/content/dam/marketing/en_us/documents/methodology/refinitiv-esg-scores-methodology.pdf (accessed on 14 April 2022).
42. Seguí-Mas, E.; Polo-Garrido, F.; Bollas-Araya, H.M. Sustainability Assurance in Socially-Sensitive Sectors: A Worldwide Analysis of the Financial Services Industry. *Sustainability* **2018**, *10*, 2777. [CrossRef]
43. Branco, M.C.; Delgado, C.; Gomes, S.F.; Eugénio, T.C.P. Factors influencing the assurance of sustainability reports in the context of the economic crisis in Portugal. *Manag. Audit. J.* **2014**, *29*, 237–252. [CrossRef]
44. Watts, R.L.; Zimmerman, J.L. *Positive Accounting Theory*; Prentice-Hall Inc.: Englewood Cliffs, NJ, USA, 1986.
45. Jensen, M.; Meckling, W. Theory of the firm: Managerial Behavior, agency costs and ownership structure. *J. Financ. Econ.* **1976**, 305–360. [CrossRef]
46. Leuz, C. Proprietary versus Nonproprietary Disclosures: Evidence from Germany. In *The Economics and Politics of Accounting*; Leuz, C., Pfaff, D., Hopwood, A., Eds.; Oxford University Press: Oxford, UK, 2004; pp. 164–197.
47. Leuz, C.; Verrecchia, R.E. The Economic Consequences of Increased Disclosure. *J. Account. Res.* **2000**, *38*, 91–124. [CrossRef]
48. Ohlson, J.A. Earnings, book values, and dividends in equity valuation. *Contemp. Account. Res.* **1995**, *11*, 661–687. [CrossRef]
49. Ohlson, J.A. Earnings, book values, and dividends in equity valuation: An empirical perspective. *Contemp. Account. Res.* **2001**, *18*, 107–120. [CrossRef]
50. Aboody, D.; Barth, M.E.; Kasznik, R. SFAS no. 123 Stock-Based Compensation Expense and Equity Market Values. *Account. Rev.* **2004**, *79*, 251–275. [CrossRef]
51. Barth, M.; Clement, M.B.; Foster, G.; Kasznik, R. Brand Values and Capital Market Valuation. *Rev. Account. Stud.* **1998**, *3*, 41–68. [CrossRef]
52. Berthelot, S.; Coulmont, M.; Serret, V. Do investors value sustainability reports? A Canadian study. *Corp. Soc. Responsib. Environ. Manag.* **2012**, *19*, 355–363. [CrossRef]
53. Coulmont, M.; Berthelot, S. The financial benefits of a firm's affiliation with the UN Global Compact. *Bus. Ethics Eur. Rev.* **2015**, *24*, 144–157. [CrossRef]
54. Xu, B.; Magnan, M.L.; Andre, P.E. The stock market valuation of R&D information in biotech firms. *Contemp. Account. Res.* **2007**, *24*, 1291–1318.
55. Ball, R.; Kothari, S.P.; Robin, A. The effect of international institutional factors on properties of accounting earnings. *J. Account. Econ.* **2000**, *29*, 1–51. [CrossRef]
56. University of Ottawa. Alphabetical Index of the Political Entities and Corresponding Legal Systems. 2021. Available online: http://www.juriglobe.ca/eng/sys-juri/index-alpha.php (accessed on 29 June 2022).
57. Perego, P.; Kolk, A. Multinationals' Accountability on Sustainability: The Evolution of Third-party Assurance of Sustainability Reports. *J. Bus. Ethics* **2012**, *110*, 173–190. [CrossRef]
58. European Commission. Study on the Non-Financial Reporting Directive. 2020. Available online: https://op.europa.eu/en/publication-detail/-/publication/1ef8fe0e-98e1-11eb-b85c-01aa75ed71a1/language-en (accessed on 13 April 2022).
59. Collins, D.W.; Maydew, E.L.; Weiss, I.S. Changes in the value-relevance of earnings and book values over the past forty years. *J. Account. Econ.* **1997**, *24*, 39–67. [CrossRef]
60. De Beelde, I.; Tuybens, S. Enhancing the credibility of reporting on corporate social responsibility in Europe. *Bus. Strategy Environ.* **2015**, *24*, 190–216. [CrossRef]