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Spanish companies' website communication of environmental, social, and governance information

Abstract

This study's goal is to analyze the website communication of environmental, social, and governance –Environmental Social Governance (ESG)– information by companies on the Madrid Stock Exchange. The empirical descriptive and inferential analysis determines IBEX35 companies' regulatory compliance in disclosure of non-financial information through examination of their website disclosure of ESG information. Economic-financial information from the Iberian Balance Sheet Analysis System (*Sistema de Análisis de Balances Ibéricos* (SABI)) database was also used to investigate whether the firms that communicate this information better are also more economically efficient. The study results reveal that IBEX35 companies' website disclosure provides heterogeneous information that is difficult to access and that they need to improve website transparency by communicating sound, sustainable non-financial reports. Further, a significant correlation was found between the companies that disclose the most ESG information and those that have the highest economic profitability –that is, those that are best adapted to the Spanish legal system and compatible with the challenges established by the UN's Agenda 2030.

Keywords

Social information, businesses, transparency, corporate governance, website information.

1. Introduction

Disclosure of non-financial (Environmental Social Governance (ESG)) information aims to increase organizations' transparency by facilitating information on environmental, social, and good corporate governance indicators that inspire trust in stakeholders, especially investors and consumers. This information must facilitate knowledge and analysis of business management, its results, and the social impact of business activity. Disclosure of non-financial reports therefore forms part of organizations' strategy for improving communication with interest groups (Fonseca, 2010; Miska, Stahl & Mendenhall, 2013), generating trust and increasing their corporate reputation among investors.

In recent years, various initiatives have been developed at international level to encourage the presentation of non-financial reports. Among them are the Global Reporting Initiative (GRI, 2019), the International Integrated Reporting Council's (IIRC) Integrated Reporting (IIRC, 2013) model for transmitting non-financial information oriented to investors,

the OECD's Guidelines for Multinational Enterprises (OCDE, 2015), and the Sustainability Accounting Standards Board's (SASB, 2019) precise instructions for American companies and different types of industry.

In Europe, following approval of European Union Directive 2014/95 and its adaptation to the specific characteristics of each member state, it has been proposed that public interest entities (PIEs) disclose a "non-financial statement" on ESG issues. At the same time, Spain developed a legal framework based on Directive 95/2014/EU, which requires PIEs and large firms to include management information in a "non-financial statement" starting in 2018 with Law 11/2018 of 28 December (2018). This statement is to contain information on the company's situation; the impact of its activity in environmental, social, personnel, and human rights questions; and the fight against corruption and bribery. The information companies disclosed in the 2018 tax year (referring to 2017) was the first compulsory non-financial information reported following the EU's legal requirements.

Several studies have concluded that reports disclosed by Spanish firms score high in sustainability indicators. Sierra-García, García-Benau, and Bolas-Araya, (2018) argue that the highest rates for disclosure of non-financial information are from firms that provide this information in the sustainability memorandum. Other studies (KPMG, 2011; Tarquinio, Raucchi & Benedetti, 2018) argue that Spanish firms are an interesting case for study because they are strongly committed to presenting non-financial information.

Despite the tremendous importance of disclosing non-financial information and the potential of information and communication technologies (ICTs) to make company websites good channels for communication and disclosure transparency and thus sources of trust for interest groups, this study is to the extent of our knowledge one of the first to use websites to examine the impact of the EU Directive and Law 11/2018 on IBEX35 firms in matters of non-financial information and diversity. The study is therefore novel, while also complementing other studies that have analyzed management or sustainability reports.

The goal of this study is twofold. First, it aims to analyze the transposition of Directive 2014/95/EU by exploring the non-financial information content on the websites of the IBEX35 companies and their communication with stakeholders. To achieve this goal, information was collected on each company's "non-financial information" as outlined in the Integrated Scoreboard (IS-FESG) and its XBRL (eXtensible Business Reporting Language) Taxonomy (AECA, 2018). Second, the study confirmed whether companies with greater transparency/disclosure of non-financial information are economically the most efficient. This second approach is novel in that seeks linear correlations among financial and non-financial indicators and measures the strength of the relationship between the two in IBEX35 companies.

In sum, this study analyzes the websites of the 35 companies composing the IBEX35 of the Spanish Stock Exchange through empirical, descriptive, and inferential study to ensure sound results. Its main contribution is to determine the extent to which Spanish companies comply with the requirements of European and Spanish legislation on website disclosure and matters of ESG non-financial information, and the factors that characterize this disclosure.

The findings show that the IBEX35 companies with the most transparency in communicating non-financial (ESG) indicators also have the best economic indicators. The findings also show a wide margin for improvement of website communication of non-financial information on environmental matters, and moderate impact of the regulation of website disclosure. The results indicate that IBEX35 companies must improve the quality of their websites.

The article is structured as follows. After this introduction, which highlights the crucial importance and scope of the topic tackled, the second section performs a review of the literature and theoretical framework. The third section presents the research methodology

used to answer the questions proposed. The fourth section presents the detailed results and analyzes them, and the final section presents the study's main conclusions.

2. Literature review

Academics have been performing studies in accord with ISO 26000 (IOS, 2019) to evaluate companies' socially responsible behavior, responsible consumption of resources, protection of the environment, and appropriate management of human resources (Sitnikov & Bocean, 2013). In this line of research, Janssen, Sen and Bhattacharya (2015) develop the idea that effective management of economic crises for companies involves investing in CSR initiatives that promote disclosure of non-financial information that emerges significantly in periods of crisis. More specifically, the 2008 economic crisis was not merely a change in economic cycle; it also involved a lack of values and ethical principles in organizations' functioning that had to be resolved through disclosure of information on business management (Melé *et al.*, 2011) and attribution of higher value to better corporate reputation (González-Ramos *et al.*, 2014).

Starting in 2018, IBEX35 companies and large firms were, as PIEs, required (Law 11/2018, December 28) to include a "non-financial statement" in their management reports to complement the other financial reports. The initiative advocated including this information in "integrated reporting" (Cheng, Green, Conradie & Romi, 2014) as a fundamental element of business ethics and the common good outlined by ISO 26000 (Nunes, 2017). To date, studies agree that disclosure of non-financial (ESG) information can be a factor of companies' sustainability and competitiveness. Recently, Andrades Peña and Larrán Jorge (2019) have evaluated the scope of the non-financial information disclosed by Spanish firms on their websites, with differing results for public and private firms.

At international level, some studies have attempted to confirm statistically whether a positive relationship exists between indicators of non-financial information, as defined by the Global Reporting Initiative (GRI), and firms' market value (Kaspereit & Lopatta, 2016). To date, however, such analysis has not been performed in Spain or for IBEX35 firms. Other authors have analyzed the non-financial Indicators (NFI) disclosed, compared them, and calculated an index of information disclosure (Ortas, Gallego-Álvarez & Álvarez Etxeberria, 2015; Nurhayati *et al.*, 2016).

The study by Krasodomska and Cho (2017) of 600 large European companies shows a positive relationship between corporate sustainability and corporations' market value. The results of this study also support the idea that doing business according to ethical standards is a commercial strategy that increases value for shareholders.

Other research has analyzed the possible relationship of level of corporate transparency on Internet and dimensions of corporate governance in listed companies to their communication with the different interest groups. More specifically, the study of IBEX35 companies by Briano Turrent and Rodríguez Ariza (2013) concludes that none of the variables of corporate governance shows a significant relationship. More recent studies have concluded, however, that the use of NFI in decision-making is a fundamental managerial tool in companies today (Benková *et al.*, 2020).

In the context where information technology, digitalization, and many so-called "new technologies" have ceased to be new and are being integrated into daily routines, we can expect firms to present integrated reporting of information (ESG) and disclose it transparently on their websites. Little such information has been disclosed in Spain, however (Escamilla Solano *et al.*, 2016), and the information must be expanded to include information on ESG, human rights, and the fight against corruption and bribery, as established in Law 11/2018. Webpages can provide transparency and disclosure of information to interest groups and be an instrument for demonstrating and consolidating companies' corporate reputation.

The study by Adegbite, Guney, Kwabi and Tahir (2019) of 314 firms listed in the UK 2002-2015 found that firms use websites periodically to adjust their level of commitment to society

to comply with their goals for corporate social performance. Other studies also show the utility of communication through websites to reach stakeholders (Carvalho, Vázquez & Gil, 2018; Nevado Gil, Gallardo Vázquez & Sánchez Hernández, 2016; Pache Durán & Nevado Gil, 2020).

All studies thus unanimously agree that PIEs' transparency/disclosure of non-financial information can provide clear competitive advantages over companies that do not disclose this information (Stolowy & Paugam, 2018; Esterhuyse, 2019; Taliento, Favino & Netti, 2019) and give shareholders, investors, and stakeholders in general greater confidence. NFI – requested by law and by various organizations, such as the Organization for Economic Cooperation and Development (OECD), the International Federation of Accountants (IFAC), and the International Finance Corporation (IFC)– has been and is the object of interest for researchers. Recent studies, such as that by Soriya and Rastogi (2021), show the need to continue advancing in this type of study. Research also considers it very important to identify and report business risks accurately, with special attention to risks from technology and cybersecurity. Another issue in need of addressing is the need for diversity in boards of directors (PriceWaterhouseCoopers, 2018).

As various authors indicate, three types of NFI are disclosed on websites–environmental, social, and corporate governance (Sivarajah *et al.*, 2020). These are the three types analyzed in this study. Studies generally conclude that disclosure of non-financial information (ESG) is of great utility for organizations (Raucci & Tarquinio, 2020; La Torre, Sabelfeld, Blomkvist & Dumay, 2020) and that this information is being used to detect warning signals and manage risk (van Duuren *et al.*, 2016). The efficiency of corporate communication is limited, however, by the absence of a common meaning and a generally accepted definition of “non-financial information.” To resolve this problem, the scholarly literature has proposed changes in the terminology of “non-financial information” or a specific compulsory outline for this “non-financial information” (Haller *et al.*, 2017).

Other studies argue that reporting on good corporate governance has positive repercussions for the firm's profitability (GABV, 2014; Arjoon, 2017), with more predictable and more trustworthy results for analysts and investors (Brown & Caylor, 2006). The literature seems to agree unanimously that more transparent firms with more non-financial (ESG) indicators have better economic indicators. More specifically, some studies support a significant relationship between financial indicators and communication of non-financial indicators (Purves, Niblock & Sloan, 2015; Dobrovic, Lambovska, Gallo & Timkova, 2018; Benková *et al.*, 2020), as well as a clear relationship between disclosure of non-financial indicators and greater CSR (Jackson *et al.*, 2020). As Caravaca Sánchez, Sánchez Ballesta and García Meca (2012) indicate, correlations among economic information and corporate governance indicators help to identify which IBEX35 firms use good corporate governance policies as a key element of their efficacy and economic growth.

The literature review highlights the importance of communicating and reporting transparently about ESG information. It also shows that reporting is not merely a legal requirement for European firms, but both enriches the business information beyond mere economic and financial activity and forms part of current business management models.

Because this non-financial information disclosed on websites is more qualitative than quantitative, it has been more difficult to report. New computing and communication systems, as well as new computer programs, have made it possible to incorporate the data into statistical and business management models.

According to the goals proposed and the literature review, we have formulated the following research questions (RQs):

- RQ1. Are Spanish IBEX35 companies disclosing information on ESG issues on their websites according to the guidelines established in Directive 2014/95/EU?
- RQ2. What type of non-financial information content are the firms disclosing on their websites?

RQ3. Do IBEX35 companies with greater transparency/disclosure of non-financial (ESG) indicators also have better economic indicators?

RQ4. Does a significant relationship exist between financial indicators and transparency/disclosure of non-financial indicators?

3. Methodology

To tackle the goals proposed and answer the research questions formulated, exhaustive analysis is performed of the website of each of the 35 Spanish firms in the IBEX35, the leading Spanish stock index. More specifically, the study gathered the “non-financial (ESG) information” outlined by and collected on the Integrated Scoreboard (IS-FESG) and its XBRL Taxonomy (AECA, 2018), detailed in **Appendix 1**. That is, the information on the 27 indicators was extracted from each firm's website, creating a database of approximately a thousand records of ESG information.

From this information, a map of non-financial information indicators communicated on the companies' websites in March 2019 was drawn, providing an answer to the first research question, **RQ1**.

Next, to answer **RQ2**, an index of transparency/disclosure of non-financial indicators was calculated for each of the companies with reference to March 2019. The index was determined using the Index Transparency Assessment (ITA) methodology developed by the organization Transparency International España (2019). The method assigns 100 points to companies that report 100% of the 27 indicators and a score to each IBEX35 company proportional to the respective non-financial indicators disclosed on its website.

Next, to answer **RQ3**, the study analyzed whether the more economically efficient IBEX35 companies that have better financial indicators also disclose more website information on non-financial indicators. This analysis was performed by applying the following filters to the SABI database (Bureau van Dijk & INFORMA D&B, 2017):

- Financial statements were obtained for each company from its annual accounts for the 2019 tax year.
- The following ratios were defined for these companies: *debt* (external financing/total financing); *short-term solvency* (current assets/current liabilities); *financial profitability* (ROE) (result/net wealth); *economic profitability* (ROA) (pre-tax pre-interest earnings/total assets).
- A ranking of companies was prepared for each of the financial indicators, assigning each company the number value of the position it ranked among the 35 companies for each ratio. Therefore, as with the non-financial indicators, two companies with the same value hold the same position. From this ranking, the same number of companies as the number composing the ranking of non-financial indicators was then chosen for the podium in financial indicators.

To answer **RQ4** and determine the statistical associations between the economic/financial indicators and level of communication in non-financial indicators, the Pearson correlation coefficient was calculated for the IBEX35 companies, using statistical tool SPSS version 24. This calculation can measure the linear dependence between the two quantitative random variables (the financial indicators and transparency/disclosure of non-financial indicators).

4. Study results

4.1. Website visibility and communication of non-financial information

The study results for the non-financial information on the websites shows that the IBEX35 companies present disparate, heterogeneous information that is difficult to access. In some cases, the information can only be obtained by reviewing various website links.

As to environmental indicators (energy efficiency and waste management efficiency), the results presented in Table 1 show that the indicators of energy efficiency and emissions are expressed in different measurement units, and neither the amount, the dimension, nor the quantity of consumption is reported. Companies only communicate the percentage decrease relative to the previous year. Without the figure for each year, it is impossible to compare or evaluate the company's evolution over time.

The information communicated on the indicators for waste management efficiency is also heterogeneous and imprecise. Disclosure of information on polluting emissions is reported by only 19 firms, of which 16 express the measure in tons of CO₂ and 3 in millions of tons (Mt) of CO₂.

Table 1: Environmental, social, and corporate governance indicators.

Energy efficiency and emissions	No. Firms	Total
Energy consumption MWh	6	8,411,449
Energy consumption GJ	10	466,924,133
Energy consumption TJ	3	2,371,132
Water consumption m ³	18	28,943,315.32
Water consumption hm ³	3	109.74
Polluting emissions Mt CO ₂	3	30.22
Polluting emissions t CO ₂	16	22,153,132.83
Human Capital	No. firms	Total
Employees	35	1,598,540
Gender diversity of employees	11	Above 30%
Gender diversity of employees	13	Above 50%
Job stability (indefinite contracts)	21	Above 80%
Job stability (full-time contracts)	3	Above 80%
Fair corporate governance	Total	
Board members	453	
Independent board members	50.33%	
CSR board members	4.19%	
Gender diversity on the board	22.45%	

Source: Own elaboration.

The results for the information on social indicators show that all IBEX-35 companies communicate number of employees. Only one company reports data on harassment (indicating that it received 7 complaints of harassment, of which 4 were closed after analyzing the data and the other 3 closed due to lack of evidence).

The results for the website information on gender diversity (Table 1) indicate a percentage of women workers greater than or equal to 30% in 11 companies. Diversity was over 50% in 13 companies.

As to job stability reported on the websites, 24 firms reported on indefinite and full-time contracts. Within this total, 21 firms had indefinite contracts for their personnel and 3 companies had full-time contracts. In both cases, job stability was over 80%. Moreover, these companies' websites showed an increase in employment of women and disadvantaged groups.

As to disclosure of other social indicators, 43% of companies provided full information on their top managers. They did not report on the percentage of gender diversity in top management, and only 29% of the websites reported on net employment.

Most of the companies disclose information on absenteeism, but they do not detail paternity or maternity leaves or give any reference for calculation of leaves.

Communication on indicators of social capital (non-financial capital) is generally scarce. All companies disclose information on their customers, degree of customer satisfaction, and billing data. Only one company refers, however, to the quality of its customers, reporting as

follows: *No operations or projects will be financed for companies that have demonstrated human rights violations.*

The information on corporate governance is found on all firms' websites, with data on the number of members of the board of directors. The results also show that the percentage of independent board members is over 50% on the board of IBEX35 companies. The great majority of boards of directors do not seem, however, to have CSR committees. Only 11.42% report this fact on their company websites, and only 4.19% of the total 453 board members form part of the CSR committee.

As to disclosure of indicators on gender diversity, 25.71% of the 35 companies include women as members of the board of directors. The average proportion of women was 22.45% in 2019, compared to 22% in 2018, as Table 1 shows.

Nearly all websites presented information on the existence of auditing committees, nominations committees, and board meetings. The results for disclosure of information on anti-corruption and anti-fraud policies show that 20% of the IBEX35 companies' websites did not report on these indicators. The firms that did apply anti-corruption measures do, however, dedicate a high percentage of hours to training in this area.

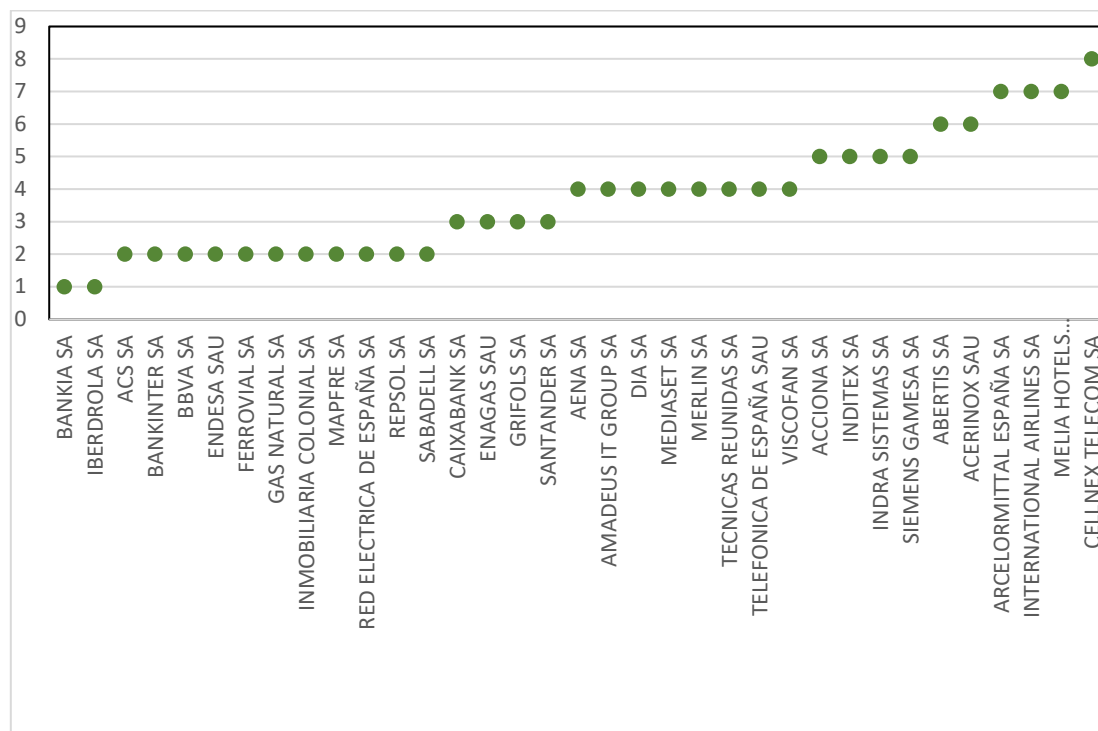
As to website communication on certifications by different international standards, most IBEX35 companies held various certifications.

4.2. Ranking of IBEX35 companies by website visibility and transparency/disclosure of information (ESG)

Figure 1 presents the IBEX35 companies in order from highest to lowest number of non-financial indicators reported on their websites and the percentage these indicators represent of the total of 27 indicators analyzed.

As the figure's display of the results shows, 13 of the 35 companies report on over 80% of the indicators proposed, 16 report on over 70%, and 6 report on 50% of the non-financial indicators.

Figure 1: Ranking of transparency/disclosure of non-financial information.



Source: Own elaboration.

Further, the results in Figure 1 show that only two companies rank in the first level by number of indicators disclosed on their websites, with a score of 85.19 points out of a possible 100. The second level of the ranking for website visibility and disclosure of non-financial information includes 11 companies, with a score of 81.48 points. Four companies reach the third level of information disclosure, with 77.78 points. Thus, 48.57% of IBEX35 companies achieve the first three levels of the ranking for transparency/NFI disclosure. The data also show that no company has achieved the full 100 points possible for NFI disclosure.

4.3. Analogy between best-positioned firms in the ranking by transparency/disclosure of (ESG) information and financial indicators

As indicated in the methodology section, the SABI database (Bureau Van Dijk & INFORMA D&B, 2017) was used to obtain the annual financial statements for the 2019 tax year for each of the 35 companies. The financial indicators calculated for each company were *short-term solvency*, *financial profitability* (ROE), *economic profitability* (ROA), and *debt*.

The IBEX35 companies were then ordered from highest to lowest value and the position each company achieved in the ranking numbered according to solvency, economic profitability, and financial profitability.

Table 2: Index of transparency/disclosure of non-financial information.

NAME	6 indicators	12 indicators	9 indicators	27 indicators	Index of Transp/ disclosure
	Environmental indicators	Social indicators	Corporate governance indicators	Non-financial indicators	
BANKIA SA	5	10	8	23	85.19%
IBERDROLA SA	6	8	9	23	85.19%
ACS SA	6	8	8	22	81.48%
BANKINTER SA	5	9	8	22	81.48%
BBVA SA	4	10	8	22	81.48%
ENDESA SAU	4	10	8	22	81.48%
FERROVIAL SA	4	10	8	22	81.48%
GAS NATURAL SA	5	9	8	22	81.48%
INMOBILIARIA COLONIAL SA	4	10	8	22	81.48%
MAPFRE SA	5	9	8	22	81.48%
RED ELÉCTRICA DE ESPAÑA	5	10	7	22	81.48%
REPSOL SA	5	9	8	22	81.48%
SABADELL SA	3	11	8	22	81.48%
CAIXABANK SA	4	9	8	21	77.78%
ENAGAS SAU	6	8	7	21	77.78%
GRIFOLS SA	5	9	7	21	77.78%
SANTANDER SA	4	10	7	21	77.78%
AENA SA	2	10	8	20	74.07%
AMADEUS IT GROUP SA	4	9	7	20	74.07%
DIA SA	4	9	7	20	74.07%
MEDIASET SA	4	8	8	20	74.07%
MERLÍN SA	5	8	7	20	74.07%
TÉCNICAS REUNIDAS SA	3	10	7	20	74.07%
TELEFONICA DE ESPAÑA SAU	5	8	7	20	74.07%
VISCOFAN SA	4	9	7	20	74.07%
ACCIONA SA	6	4	9	19	70.37%
INDITEX SA	5	6	8	19	70.37%
INDRA SISTEMAS SA	4	7	8	19	70.37%
SIEMENS GAMESA SA	5	7	7	19	70.37%
ABERTIS SA	5	4	9	18	66.67%
ACERINOX SAU	4	6	8	18	66.67%
ARCELORMITTAL ESPAÑA SA	5	4	8	17	62.96%
INTERNATIONAL AIRLINES SA	2	7	8	17	62.96%
MELIÁ HOTELES INERN. SA	3	7	7	17	62.96%
CELLNEX TELECOM SA	2	6	7	15	55.56%
Average	4.34	8.23	7.71	20.29	75.13%
Median	4.00	9.00	8.00	20.00	74.07%
Mode	5.00	10.00	8.00	22.00	81.48%

Source: Own elaboration.

As observed in Table 2, transparency/NFI disclosure was ordered based on highest value (number of points obtained of the number possible). The financial indicators of solvency, economic profitability, and financial profitability were also ordered based on the value obtained.

To select the firms with the highest level of transparency/NFI disclosure, the companies that obtained a website disclosure score greater than or equal to the average of 75 points were taken as a reference. These were the first 17 companies in the ranking, or those that occupied the first three levels of non-financial information disclosure and that represent 48.57% of companies with the best ranking in the total.

The financial indicators (Table 3) were also used to identify the companies positioned as the 17 best companies for each financial indicator. The best companies in solvency took positions 1-15, and the best companies in ROA and ROE indicators positions 1-17.

Table 3 shows that 9 of the 17 companies with the best disclosure of non-financial information also have the highest short-term solvency and the best economic profitability. Of the companies with the best financial profitability, 11 are within the best ranking for transparency/NFI disclosure.

Significantly, only 6 companies of the 17 best firms in transparency/NFI disclosure also have the best respective financial indicators. Similarly, the companies below the third level in website NFI disclosure also show less agreement in number of financial indicators.

Table 3: Relationship of ranking in transparency/disclosure and ranking in financial indicators.

NAME	Transp/ NFI disclosure	Solvency ST	ROA	ROE
B. BANKIA	1	29	33	33
IBERDROLA	1	11	2	2
ACS	2	27	8	11
B. BANKINTER	2	29	23	14
BBVA	2	6	5	7
ENDESA	2	13	4	1
FERROVIAL	2	10	22	24
GAS NATURAL	2	5	7	3
INMOBILIARIA COLONIAL	2	3	28	30
MAPFRE	2	29	35	35
RED ELÉCTRICA DE ESPAÑA	2	26	19	13
REPSOL	2	20	15	16
B. SABADELL	2	4	1	5
B. CAIXABANK	3	29	31	25
ENAGAS	3	19	18	17
GRIFOLS	3	8	10	18
B. SANTANDER	3	7	3	4
AENA	4	25	16	15
AMADEUS IT GROUP	4	28	9	9
DÍA	4	21	17	6
MEDIASET	4	14	12	20
MERLÍN	4	2	29	31
TÉCNICAS REUNIDAS	4	17	21	10
TELEFÓNICA DE ESPAÑA	4	22	13	12
VISCOFAN	4	9	11	21
ACCIONA	5	18	34	34
INDITEX	5	14	6	8
INDRA SISTEMAS	5	15	25	19
SIEMENS GAMESA	5	23	27	23
ABERTIS	6	12	30	32
ACERINOX	6	16	24	26
ARCELORMITTAL ESPAÑA	7	7	14	22
INTERNATIONAL AIRLINES	7	1	20	28
MELIÁ HOTELS INTERNATIONAL	7	24	26	27
CELLNEX TELECOM	8	26	32	29

Source: Own elaboration.

4.4. Statistical associations between financial indicators and transparency/disclosure in non-financial indicators

To answer RQ4, whether a significant relationship exists between financial indicators and website disclosure of non-financial information, a study was performed of the statistical associations through parametric correlations among the variables and prior contrast of normality of distribution.

The results in Table 4 show a significant association between the variable “economic profitability” (ROA) and the value of the indicator for transparency/disclosure, with a Pearson correlation coefficient of 0.399 and a significance level of 1.9%. That is, a change in economic profitability (ROA) generates a change of almost 40% in website transparency/NFI disclosure, with a probable error of less than 2%.

Table 4: Statistical association between financial and non-financial indicators.

		Transp/disclosure NFI
DEBT (%)	Pearson correlation	0.102
	Sig. (bivariate)	0.584
	N	31
SOLVENCY CP	Pearson correlation	-0.153
	Sig. (bivariate)	0.412
	N	31
ROA (%): Economic profitability	Pearson correlation	.399*
	Sig. (bivariate)	0.019
	N	34
ROE (%): Financial Profitability	Pearson correlation	0.272
	Sig. (bivariate)	0.119
	N	34

Source: Own elaboration.

An inverse correlation is observed between the two variables for “solvency.” When one variable increases, the other decreases in a constant proportion, with a significance level of 41%. The variable “debt” shows a non-significant relationship to transparency/NFI disclosure. The same occurs for financial profitability.

5. Discussion and conclusions

Following the entry into force of the Directive as structural support for transparency/ESG disclosure in the EU and of Law 11/2018 of 28 December requiring presentation of non-financial information statements for the tax year 2017, this study’s results show that IBEX35 companies communicate scant ESG information on their websites. Moreover, the information is heterogeneous, disparate, difficult to access, and out of date.

According to the goals proposed, this empirical study shows that visibility and website transparency/disclosure on environmental indicators must improve in homogenization of units of measurement to enable comparison among companies. That is, companies must express the indicators for energy efficiency and emission, and waste management in homogeneous units continually over time to comply with the Sustainable Development Goals and adapt to Agenda 2030. These results are similar to those of prior studies, which indicate that Spanish firms communicate on average information on 60% of the environmental indicators (Tarquinio *et al.*, 2018).

As to the information on social indicators, the results show that the website information on gender diversity of employees and job stability is close to that established in the legislation analyzed, although there are substantial margins for improvement. The indicator with the greatest margin for improvement is information on top management positions and gender

diversity in top management; only 15 companies report top management positions on their websites. Companies must make a great effort to achieve transparency in disclosure of social information on this point. The indicator for information on job creation is especially striking, as only 10 companies provide any data on job creation on their websites. Very little information is available on seniority of employees as well. The lack of sufficient information on these two indicators can be explained by the last economic crisis, whose consequences led to staff restructuring and very few new hires.

All IBEX35 company websites report their number of employees, and 28 firms have over 5000 workers. Others outsource their services and do not provide data on direct employees.

As to the indicators of corporate governance, over 50% of IBEX35 companies' websites report on independent members of their boards of directors, but very few of these members form part of the CSR Committee. This finding is consistent with the small number of women board members, a proportion nearly nine points below that recommended by the Code of Good Governance.

The study results show the importance of ensuring that IBEX35 companies provide good corporate governance as an incentive for communicating the strategy of their business management model and as a response to the legal and social requirements. Specifically, this study has shown that all companies provide information on some principles of corporate governance, such as the presence of auditing committees, because that information inspires trust among various interest groups or stakeholders (Arjoon, 2017).

According to Gutiérrez Ponce, Creixans Tenas and Arimany Serrat (2019, p. 12),

it has been demonstrated that corporate governance involves a set of norms, principles, and procedures that regulate the structure and functioning of a firm's governance entities. It has also been shown that weakness in corporate governance can indicate lack of transparency –practices less than optimal for business behavior by investors, managers, etc. Disclosure of corporate governance indicators generates trust in users. It is a mechanism to control proper management performance and can guarantee that firms as well as their managers, employees, and third parties comply with the legal framework in effect.

All of the foregoing has enabled creation of a map of the ESG information on websites of IBEX35 companies by which to verify the disclosure of this information, its significance, and an answer to RQ1.

The transparency/NFI disclosure index has enabled establishment of the ranking or position of each company relative to the requirements of European and Spanish legislation through analysis of the website communication of non-financial information. The results show that 13 of the companies achieve a transparency/NFI disclosure index of over 80% for the non-financial indicators analyzed. That is, of the total of 27 indicators defined and analyzed in the study, the companies report on at least 22. The companies' websites disclose an average of 48.3% of the environmental indicators, 68.6% of social indicators, and 85.7% of corporate governance indicators.

Four other firms rank within the next level of transparency/disclosure. These firms report on 21 indicators, with an index of over 75%. These figures demonstrate that about 50% of the Madrid IBEX35 companies have transparency/NFI disclosure levels over 75%.

From the results, we can conclude that disclosure on environmental indicators can be improved, a clear answer to RQ2.

Examination of the sector and activity of the 17 firms that achieve the highest levels of NFI transparency reveals that 7 of them are the most important banks in Spain. This circumstance can be explained by the fact that their financial statements were made solvent by bail-outs with public funds following the last economic crisis. These banks must therefore strengthen their image through disclosure of transparent information and rigorous compliance with the European and Spanish legislation. The study results therefore confirm

the importance of the sector in ESG information disclosure to strengthen corporate image and create trust among stakeholders. This result agrees with those obtained Sierra-García *et al.* (2018), who confirm that the sector to which the firms belong is a variable that influences communication of non-financial information.

The results for the analogy between the companies ranked best in ESG information transparency and financial indicators (RQ3) show that 9 of the 17 companies with highest NFI transparency are also the most solvent, another 9 have the best economic profitability, and 11 achieve the best financial profitability. One can thus conclude an association or correlation between transparency/NFI disclosure and economic efficiency, answering RQ3 in the affirmative: *Spanish IBEX35 companies that are disclosing ESG information on their websites also have better economic indicators.*

The study has also demonstrated a positive relationship (RQ4) between transparency/NFI disclosure and economic profitability (ROA) in IBEX35 companies. Companies that disclose the most non-financial information show better profitability in their business assets. The Pearson correlation establishes that a variation in profitability of business assets affects disclosure of this information by 40%; transparency in economic investments favors operating profit, according to current disclosure parameters (Kaspereit & Lopatta, 2016; Arjoon, 2017; La Torre *et al.*, 2020).

This study shows that IBEX35 companies comply with regulation in matters of website disclosure of non-financial information. General and homogeneous guidelines must be established, however, for website communication of non-financial indicators. Such guidelines are essential to facilitate accessibility, visibility, and comparability of these indicators. Guidelines will also increase and encourage information on reputation and information for investors in this digital era. Moreover, Fernández-Souto, Puentes-Rivera and Vázquez-Gestal (2019) find that 25% of the firms do not have a sound communications structure and that the persons in charge of communication are not especially concerned with transparency.

In view of the results and the map of financial indicators, we conclude that IBEX35 companies disclose ESG information in accord with legislative demands, but the environmental information needs to be expanded.

The “Non-financial statement” would provide more order and transparency to companies' general information systems and could be used as a barometer for compliance with Agenda 2030 and its Sustainable Development Goals (Gutiérrez Ponce, Chamizo González & Cano Montero, 2021). Further, this NFI will enable better visualization of the possible risks derived from business management and integration of this non-financial information into a single reporting measure communicated on companies' websites, in line with European and Spanish legislation.

One limitation of the study stems from the rapid change that the website information of these entities undergoes, and from the fact that this study only analyzes website transparency/disclosure of non-financial information from these entities for March 2019.

This study serves as the basis for investigating how website disclosure of NFI progresses in subsequent years. Such progress will enable new research comparing the indicators of the various companies. The study also demonstrates that financial and non-financial information must be integrated to make accurate business decisions and satisfy stakeholders. Proof of this need for integration is the public consultancy promoted by the European Commission for review of Directive 2014/95/EU. The consultancy proposes that the ESG information must be expanded; standardized models created for supply, auditing, and possible digitalization of information for automatic processing; and the system extended to smaller firms. This consultancy will enable modifications of Directive 2014/95/EU in accord with current needs.

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Appendix 1 - 27 Non-financial indicators

https://aeca.es/wp-content/uploads/2019/09/aeca_informe-integrado_enf-2018_2018.pdf

