

THE ENVIRONMENTAL, SOCIAL, AND GOVERNANCE INFORMATION CREATES VALUE FOR THE SHAREHOLDER IN THE PORTUGUESE STOCK EXCHANGE?

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Thematic area: Corporate Social Responsibility

Keywords: Sustainability, ESG, performance, listed companies, market

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Abstract:

The relationship between financial performance and sustainability has been investigated in developed countries applying different methodologies. However, this type of study has not been carried out in the Portuguese listed companies.

This study investigates the impact of the three sustainability pillars, Environmental, Social, and Governance (ESG) information on the price of assets listed on the Portuguese stock exchange over the period 2002-2020. Applying different models, the results show us that the investors do not react to the sustainability information and do not significantly value the three pillars of ESG sustainability, but market positively values environmental practices in listed Portuguese companies.

1. Introduction

The present paper presents an analysis of the impact of Corporate Social Responsibility (CSR), in terms of the Environmental and Social conduct of the firm and Governance practices in firm valuation in the firms listed in the Lisbon Stock Exchange.

Specifically, the notion of CSR is associated with a concept of sustainable development, where the firm sees its own development and value as not opposed to the goals of others around it and the prospects of future generations, but instead aims to positively affect society at large. This means the adoption of such goals as social equality, economic efficiency and environmental performance into the firm's operating practices. These considerations not only come from a realization inside the firm, but also from a greater environmental, social and governance activism from the part of shareholders and other investors. This means that firms, either from a position of embracing these values, or under pressure to be seen as desirable by investors, will be inclined to adopt better CSR practices. As stated by Cornell and Damodaran (2020), Bloomberg reported in February 2019 that in Europe, \$12 trillion were committed to sustainable investing.

To this date, empirical research has been observed a positive relation between better CSR performance and firm value. Mostly the studies focused in this effect in developed countries, such as Lourenço *et al* (2012), Schadewitz and Niskala (2010), Cardamone *et al* (2012), Kaspereit and Lopatta (2016) and de Klerk *et al* (2015). In developed countries not only firms are better able to effectively allocate resources into CSR activities but also, that information is more likely to be conveyed to investors and the market at large. Nevertheless, more recently empirical studies focusing on the relation between CSR practices in developing countries, like Miralles-Quiroz *et al* (2018) and Yoon *et al* (2018) have found similar results.

This paper aims to make a similar analysis to the information impact of CSR best practices in firm valuation in the Lisbon Stock Exchange. The Portuguese financial market, although technically a developed financial market since 1998, it is a small market, with a relatively small number of firms, so it shares features of both developed and developing markets, making an interesting market to study.

In order to measure the CSR and Governance practices of the firms listed in the Lisbon Stock Exchange we use ESG (Environmental, Social and Governance) scores published by Thomson Reuters Eikon and include them in a valuation model, using the firm's financial information. The study uses a sample period between 2002 and 2020.

We summarize the results of this paper as follows: we find that investor's attitude towards available information regarding performance and procedures with respect to

CSR to be evolving over time. Although the effect of ESG scores (global score as well as its three pillars) is not statistically significant in the whole dataset, breaking up this data into several sub periods show that, for the period after 2011, investors reward firms that follow better environmental practices. However, the effects the opposite with respect to better governance practices.

The rest of the paper is organized as follows. In Section 2 we describe the existing literature in order to place this paper in context. In Section 3 we present the methodology used for the empirical research. In Section 4 we present the dataset used in the paper. We detail the source for the ESG scores and describe its content. Also we present the financial data used in the empirical research. Section 5 shows the results obtained and Section 6 concludes.

2. Literature Review

In what follows we present a brief review of the creation of ESG scores and the theoretical literature linking ESG performance and Firm Value

2.1 ESG Scores

The ESG scores were first proposed in the United Nations Principles of Responsible Investment report as a factor determining investment decisions. These scores evaluate a firm's environmental, social and governance practices and combines the performances of these practices.

Initially ESG scores suffered from lack of consistency and lacked clear criteria for evaluating performance, as it based on self reports and internal surveys. According to Li and Polychronopoulos (2020) there are currently over 70 firms that provide a ESG rating classification. This fact raises the potential that different rating build using different criteria and different methodologies may not be consistent between them.

Among the several creators of ESG ratings, Thomson Reuters Eikon stands out. Specifically, the new ratings have been designed to transparently and objectively measure a company's ESG performance in the three environmental, social, and corporate governance areas. These ratings are based on the collection and standardization, by specialized analysts, of gross non-financial data derived from publicly available information, such as sustainability reports, financial reports and company websites. This was the source of ESG scores used for this study.

2.2 ESG performance and Firm Value

The relation between CSR and firm value has been subject of extensive research, and two perspectives can be defined: On the one hand, the value-enhancing theory. According to this, a manager's concern for long term sustainability will drive long term shareholder value and returns. Gerard (2019) called this approach "the doing well by doing good". This process can be achieved in two ways. Firstly, as mentioned by Hillman

and Klein (2001) by establishing good relationships with important stakeholders, the firm obtains reputational gains which will be reflected in either greater profitability and greater resilience when facing adverse events. Secondly, as Waddock and Graves (1997) explain, the effective implementation of CSR practices signals high management quality, which should be rewarded by the firm's stakeholders.

On the other hand, the shareholder expense theory, states that a firm in order to achieve better CSR practices, may need to engage in a significant level of expenditures which will affect the short term profitability. While these expenses have the effect of improving the firm's reputation, as Aupperle et al (1985) states, it may not be enough to enhance the long term profitability, and therefore firm value. The resulting relationship between CSR and firm value may end up being U-shaped, as Barnett and Salomon (2006) find. This means that improving CSR practices are only useful if the costs of implementing them are less than expected future benefits, and as Cornell and Damodaran (2020) conclude, not all firms will find that promoting CSR will deliver higher value.

Finally, with respect to improved governance arrangements within the firm and the link to greater firm value, the evidence is stronger, as better governance arrangements reduces agency problems and improve the alignment of the firm's stakeholders. Examples of the positive link between corporate governance and firm value include Gompers et al (2003) and Bebchuk et al (2009).

3. Methodology

The model selected to examine the effect of ESG scores on firm performance is Ohlson's (1995) valuation model. This model states that the market value of equity is a function of financial information (including book value and accounting results). Specifically, this paper uses the modification proposed by Barth and Clinch (2009), which scales the variables used in Ohlson (1995) using the number of shares, therefore mitigation scale effects. This will be the benchmark valuation model:

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + \varepsilon_{i,t} \quad (1)$$

In specification (1) the dependent variable $P_{i,t}$ corresponds to the price per share of firm i at the end of year t . The two independent variables $BVPS_{i,t}$ and $EPS_{i,t}$ correspond respectively to the Book Value per share and the Earnings per share of firm i at the end of year t .

Ohlson (1995) also states that the model can be expanded to include other non-financial variables, which nonetheless include value-relevant information, therefore generating a valuation model which the variable $X_{i,t}$ corresponds to a relevant variable or set of variables of interest that will capture the impact of ESG scores in the market value of equity

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + a_3X_{i,t} + \varepsilon_{i,t} \quad (2)$$

This extension of the Barth and Clinch (2009) model has been widely used in the CSR literature, namely by Miralles-Quiroz *et al* (2017), Miralles-Quiroz *et al* (2018), Lourenço *et al* (2012), Schadewitz and Niskala (2010), Cardamone *et al* (2012), Yoon *et al* (2018) and de Klerk *et al* (2015), just to mention a few.

In model (2) we use a firm's ESG score in order to measure the CSR performance and propose five different specifications:

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + a_3ESG_{i,t-1} + \varepsilon_{i,t} \quad (3)$$

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + a_3ENV_{i,t-1} + \varepsilon_{i,t} \quad (4)$$

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + a_3SOC_{i,t-1} + \varepsilon_{i,t} \quad (5)$$

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + a_3GOV_{i,t-1} + \varepsilon_{i,t} \quad (6)$$

$$P_{i,t} = a_0 + a_1BVPS_{i,t} + a_2EPS_{i,t} + a_3ENV_{i,t-1} + a_3SOC_{i,t-1} + a_3GOV_{i,t-1} + \varepsilon_{i,t} \quad (7)$$

Looking at the specifications proposed in this paper, we use four different CSR performance variables to analyze the impact of CSR in equity valuation: the global ESG score, as model (3) and the specific scores for each of the ESG pillars (Environmental, Social and Governance). The impact of each pillar is analyzed not just individually, as models (4), (5) and (6), but also in a specification in which all three pillars are included simultaneously, in model (7). The interest of this last specification is, although the ESG global score is an arithmetic average of the scores of each pillar, to better understand which pillar is more relevant for investors and how the score in one pillar affects the impact of another pillar. Also, differently from most previous studies, we use a one year lagged value for each score in the specifications. The reason for this choice is that we are trying to understand how investors react when publicly information about CSR practices is revealed. A positive or negative impact of CSR practices would naturally impact the independent variables of model (1), and we are looking to understand if investors reward or punish firms with better known scores of CSR practices, for given levels of information that can be extracted from financial statements. If investors reward firms with better CSR practices, we expect the coefficients that accompany the ESG scores to be significant and positive.

4. Database

The database used in this paper consists of two types of information: the Corporate Social Responsibility information and the financial information of the companies listed in the Lisbon Stock Exchange.

4.1 Corporate Social Responsibility Information

Several rating agencies measure ESG performance, and in this study the ESG ratings measured by Thomson Reuters Eikon. These ratings have been designed to transparently and objectively measure a company's ESG performance in three areas. The ratings are built based on the collection and standardization, by specialized analysts, of gross non-financial data derived from publicly available information, such as sustainability reports, financial reports, and company websites.

Briefly summarizing the meaning and definitions for each of pillars¹, The *E* in ESG, *environmental criteria*, includes the energy your company takes in and the waste it discharges, the resources it needs, and the consequences for living beings as a result. Not least, *E* encompasses carbon emissions and climate change. Every company uses energy and resources; every company affects, and is affected by, the environment. It is built on the scores of 3 dimensions for a total of 61 measures: Resource Use: reflects a company's performance and capacity to reduce the use of materials, energy or water, and to find more eco-efficient solutions by improving supply chain management. Emissions Reduction: measures a company's commitment and effectiveness towards reducing environmental emissions in the production and operational processes. Innovation: reflects a company's capacity to reduce the environmental costs and burdens for its customers, thereby creating new market opportunities through new environmental technologies and processes or eco-designed products.

The *S*, *social criteria*, addresses the relationships your company has and the reputation it fosters with people and institutions in the communities where you do business. *S* includes labor relations and diversity and inclusion. Every company operates within a broader, diverse society. It is built on the scores of 4 dimensions for a total of 63 measures: Workforce: measures a company's effectiveness towards job satisfaction, a healthy and safe workplace, maintaining diversity and equal opportunities and development opportunities for its workforce. Human Rights: measures a company's effectiveness towards respecting the fundamental human rights conventions. Community: measures the company's commitment towards being a good citizen, protecting public health and respecting business ethics. Product Responsibility: reflects a company's capacity to produce quality goods and services integrating the customer's health and safety, integrity and data privacy.

The *G*, *governance*, is the internal system of practices, controls, and procedures your company adopts in order to govern itself, make effective decisions, comply with the law, and meet the needs of external stakeholders. Every company, which is itself a legal creation, requires governance. It is built on the scores of 3 dimensions for a total of 54 measures: Management: measures a company's commitment and effectiveness towards following best practice corporate governance principles. Shareholders: measures a company's effectiveness towards equal treatment of shareholders and the

¹ A detailed explanation on how the scores are built can be accessed online at <https://financial.thomsonreuters.com/content/dam/openweb/documents/pdf/financial/esg-scores-methodology.pdf>

use of anti-takeover devices. CSR Strategy: reflects a company's practices to communicate that it integrates the economic (financial), social and environmental dimensions into its day-to-day decision-making processes.

The Global ESG score is built as a weighted average of 34%, 35.5% and 30.5% for Environmental, Social and Governance pillar respectively.

The score for each company is between 0 and 100 points, using a methodology of in which percentile the company ranks among all companies analyzed. This allows to quickly and easily identifying the ESG strengths (50–100 points) or ESG weaknesses (0–49 points) of each company.

In this paper we used the ESG scores of the companies listed in the Lisbon Stock Exchange during the years of 2002 to 2020. In total there are 19 firms and a total of 187 company/year observations.

Table 1 summarizes the information regarding each firm, presenting the business sector, the average ESG score, the average scores for the environmental, social and governance pillars and the years each presented scores. Regarding the global ESG score, 13 firms have an above 50 average score. The lowest average score is 31.48 by Banco BPI and the highest average score is 72.32 by CTT. The environmental performance is above 50 for 13 firms, in which the lowest performance firm is Banco BPI with a score of 9.91 and the highest performance firm is GALP Energia. Regarding the social performance scores, there are again 13 firms with above average scores, with the lowest performing firm is again Banco BPI with a score of 29.25 and the highest performing firm is CTT with a score of 84.39. Finally, with respect to the Governance performance, there is a lower number of firms with above average performance, with only 10 firms with an average score above 50. The lowest performing firm is ALTRI, with a score of 14.66 and the highest performing firm is again CTT with a score of 75.96.

Table 1. Average Environmental, social and governance performance by firms

Firm	Sector	ESG Score	Env. Score	Soc. Score	Gov. Score	Years
ALTRI	Industrial Materials	43.95	61.57	40.64	14.66	2018-2019
Banco BPI	Banks	31.48	9.91	29.25	43.17	2002-2017
Banco BCP	Banks	57.22	54.04	61.22	56.15	2002-2019
Brisa	Industrial Transportation	54.87	58.81	64.8	35.74	2002-2011
Cimpor	Construction and Materials	35.85	30.25	45.65	32.48	2005-2016
Cort. Amorim	General Industrials	46.03	59.33	44.21	23.06	2016-2019
CTT	Industrial Transportation	72.32	56.22	84.39	75.96	2018-2019
EDP	Electricity	71.59	72.70	81.53	64.00	2005-2019
EDP – Renováveis	Electricity	65.03	68.13	69.50	53.97	2009-2019
GALP Energia	Oil, Gas and Coal	56.36	73.61	62.60	27.78	2007-2019
Jerónimo Martins	Personal Care, Drug and Grocery Stores	65.23	65.79	77.42	51.82	2005-2019
Mota Engil	Construction and Materials	35.15	25.71	57.83	17.14	2018
Navigator	Industrial Materials	59.42	56.96	61.41	61.55	2017-2019
NOS	Telecommunication Providers	37.59	26.68	37.02	51.30	2005-2019
Pharol	Telecommunication Providers	50.82	43.93	61.45	43.95	2005-2020
REN	Electricity	51.79	39.33	63.94	57.19	2018-2019
Semapa	Industrial Materials	50.22	54.37	56.41	34.48	2018-2019
SONAE Indústria	Construction and Materials	42.80	31.15	44.36	62.97	2006-2019
SONAE SGPS	Personal Care, Drug and Grocery Stores	58.20	59.34	54.79	68.45	2002-2018

4.2 Financial Information

The financial information necessary to implement the base model (share price, book value per share at the end of the year and annual earnings per share for the firms listed in Lisbon Stock Exchange between 2002 and 2020) was obtained from the Thomson Reuters Eikon database.

Table 2 presents the descriptive statistics (average, maximum, third quartile, median, first quartile, minimum and standard deviation) of the financial variables, the global ESG scores and the individual pillar scores as well. As we can see that the average share price of the companies in the sample is 10.47 with a standard deviation of 32.67; the average book value per share is 5.84 with a standard deviation of 18.20; the average earnings per share is -0.37 and a standard deviation of 4.28. With respect to the ESG performance measures, the average scores, respectively the global, environmental, social and governance is 52.19, 49.32, 57.07 and 49.56 and the standards deviations are 19.15, 28.07, 23.00 and 21.39.

Table 2. Descriptive Statistics

	Price	BVPS	EPS	ESG Score	Env. Score	Soc. Score	Gov. Score
Average	10.47	5.84	-0.37	52.19	49.32	57.07	49.56
Max	324.50	147.36	19.47	85.13	93.53	93.85	93.06
3rd Quartile	8.54	3.16	0.39	67.65	73.68	76.13	67.14
Median	4.43	2.13	0.22	54.91	55.17	61.35	49.96
1st Quartile	2.05	1.22	0.09	38.96	26.60	38.14	32.93
Min	0.07	-0.67	-26.85	8.05	0.00	5.88	5.76
Standard Deviation	32.67	18.20	4.28	19.15	28.07	23.00	21.39

Table 3 presents the matrix of correlations between the variables. We observe that the correlation between the global ESG score and the individual pillars scores are very strongly correlated, which is not surprising given the fact the global ESG score is a weighted average of the individual pillar scores. However there is a pattern in the correlation between the scores for each pillar; whereas the correlation between the Environmental and Social scores is very strong, the correlation for these scores to the Governance score is considerably lower. This comes in line with Gerard (2019), in which he distinguishes between the ES and the G, calling the former actual CSR scores and Governance being in a different dimension. Cornell and Damodaran (2020) also question the inclusion of governance in a score for CSR.

Table 3. Correlation Matrix

	Price	BVPS	EPS	ESG Score	Env. Score	Soc. Score	Gov. Score
Price	1.0000						
BVPS	0.9469***	1.0000					
EPS	0.0148	-0.2145***	1.0000				
ESG Score	-0.1103	0.1161	0.1055	1.0000			
Env. Score	-0.1604**	-0.1776**	0.1004	0.8519***	1.0000		
Soc. Score	-0.0364	-0.0469	0.1352	0.8822***	0.7666***	1.0000	
Gov. Score	0.0665	-0.1161	-0.0550	0.6005***	0.2863***	0.3915***	1.0000

The symbols ***, ** and * represent that the p-values are smaller to 1%, 5% and 10% respectively

5. Empirical Results

As explained before we are implementing five models expanding on the modified Barth and Clinch (2009) valuation model: one model using the global ESG performance score, three models using each of the different performance pillars scores and one final in which we included all three individual performance pillar scores. The results of the regressions are presented in Table 4.

Variable	Base Model	Model 1	Model 2	Model 3	Model 4	Model 5
BVPS	1.7874***	1.7623***	1.7626***	1.7644***	1.7691***	1.7683***
EPS	1.7450***	1.7113***	1.7040***	1.7042***	1.6847***	1.6781***
ESG₋₁		-0.0262				
ENV₋₁			-0.0076			-0.0044
SOC₋₁				-0.0088		0.0129
GOV₋₁					-0.0425	-0.0462
Intercept	0.5469	1.9869	0.9856	1.1041	2.6784	2.3505
N	206	187	187	187	187	187
R²	0.946	0.926	0.925	0.925	0.926	0.926
AdjR²	0.946	0.924	0.924	0.924	0.925	0.924
F	1793.49***	759.80***	756.88***	756.83***	768.24***	456.25***

The numbers refer to the estimated regression coefficients. The symbols ***, ** and * represent that the p-values are smaller to 1%, 5% and 10% respectively

As we can see in neither of the models the performance scores are significantly statistically related to the price of shares of firms listed in the Lisbon Stock Exchange. In fact, not even a positive statistical relation is found as a result of the regressions performed. Looking at the values of the coefficient of determination of the base model, we realize that there was very little room for any additional independent variable to add explanatory power to the price shares of the firms in our dataset. This result goes against what has been found in other studies, which have found positive and statistically significant relation between sustainability information and share price, like Miralle-Quirós *et al* (2017), Taliento *et al* (2019) and Yoon *et al* (2018).

In order to address these results we decided to break the entire period in the dataset into three sub periods: before 2008; after 2008 and after 2011. The break in 2008 refers to the Lehman Brother's crisis and the break in 2011 corresponds to the signing of the Economic Adjustment Program for Portugal, usually referred to as the "Bailout Program". This program was signed by the Portuguese Government, the European Central Bank and the International Monetary Fund in order to deal with the Portuguese financial crisis. This choice has 2 reasons for it. On the one hand, these are significant events that affected the financial markets in Portugal and on the second hand, given that the entire period considered (between 2002 and 2020) is a rather long period, it is conceivable that the attitude of investors with respect to CSR performance had changed over time. Therefore, by breaking the dataset and analyzing more recent time periods, one may be able to extract interesting results from the models.

Therefore, Table 5 refers to the regressions performed for the period before 2008; Table 6 refers to the regressions performed for the period after 2008 and Table 7 for the regressions performed for the time period after 2011.

Variable	Base Model	Model 1	Model 2	Model 3	Model 4	Model 5
BVPS	1.7357***	1.6287**	1.5972**	1.6466**	1.6171**	1.5937**
EPS	3.4745***	4.2867	4.5311	1.7042	4.3773	4.5591
ESG_1		0.0059				
ENV_1			0.0125			0.0128
SOC_1				0.0076		-0.0005
GOV_1					0.0003	-0.0006
Intercept	1.0419*	0.6739	0.5864	0.6269	0.8577	0.6206
N	42	31	31	31	31	31
R ²	0.998	0.998	0.998	0.998	0.998	0.998
AdjR ²	0.998	0.998	0.998	0.998	0.998	0.998
F	11788.80***	4671.22***	4713.06***	4677.74***	4665.37***	2618.50***

The numbers refer to the estimated regression coefficients. The symbols ***, ** and * represent that the p-values are smaller to 1%, 5% and 10% respectively

Variable	Base Model	Model 1	Model 2	Model 3	Model 4	Model 5
BVPS	1.1730***	1.1692***	1.1679***	1.1672***	1.1711***	1.1677***
EPS	0.0776	0.0637	0.0197	0.0468	0.0370	-0.0673
ESG_1		0.0025				
ENV_1			0.0250			0.0424
SOC_1				0.0155		0.0122
GOV_1					-0.0595*	-0.0817**
Intercept	1.9792***	1.8361	0.5700	1.0225	4.9562***	2.9902
N	164	156	156	156	156	156
R ²	0.859	0.859	0.861	0.859	0.865	0.870
AdjR ²	0.857	0.856	0.858	0.857	0.862	0.866
F	491.33***	308.91***	312.67***	309.32***	324.63***	200.75***

The numbers refer to the estimated regression coefficients. The symbols ***, ** and * represent that the p-values are smaller to 1%, 5% and 10% respectively

Variable	Base Model	Model 1	Model 2	Model 3	Model 4	Model 5
BVPS	0.8113***	0.7825***	0.7720***	0.7742***	0.7802***	0.7478***
EPS	0.0607	-0.0080	-0.0771	-0.0255	-0.0044	-0.1840
ESG_1		0.0302				
ENV_1			0.0514*			0.0778**
SOC_1				0.0365		0.0018
GOV_1					-0.0503**	-0.0833***
Intercept	3.0099***	1.3371	0.0802	0.7895	5.5948***	2.6948*
N	129	122	122	122	122	122
R ²	0.586	0.588	0.614	0.595	0.606	0.671
AdjR ²	0.580	0.577	0.604	0.584	0.596	0.657
F	89.32***	56.08***	62.47***	57.69***	60.53***	47.37***

The numbers refer to the estimated regression coefficients. The symbols ***, ** and * represent that the p-values are smaller to 1%, 5% and 10% respectively

As we can see in Tables 5, 6 and 7, the regression results are different in each of the sub periods considered in some important ways. Starting with the results in Table 5, that corresponds to the period of time before 2008. The results are similar to the results observed in Table 3, which considered the entire dataset. We can observe the coefficient of determination is virtually 100% for the base model, which leaves no room for other factors to be statistically relevant in explaining share prices. In the period after 2008, for which the regression results are presented in Table 6, the coefficient of determination for the base model, although still very large, is much smaller than in the previous period. The inclusion of the ESG performance scores do not generate a substantial increase in the explanatory power of the valuation model, but we find that Governance performance scores have a significantly negative statistical relation with share prices for the firms listed in the Lisbon Stock Exchange. Lastly, in Table 7, we present the regression results for the period after 2011. In this regression the base model suggests that the explanatory power of the base model is much lower, suggesting again that other variables can possess some explanatory power. In fact, in running the different specifications we observe that not only the negatively significant relation between share prices and governance performance is preserved but now there is a positive and significant relation between environmental performance and share prices.

The results obtained, taken as a whole suggest a couple of interesting facts; First it suggests that the attitudes of investors on CSR and Governance have evolved over time, and if before 2008 they appear to be indifferent to those pieces of information about management actions and procedures, and seem to fully base their valuation on the financial information provided by firms, after 2011, investors seem to be more responsive to other relevant sources of information. They appear to reward firms that demonstrate better CSR procedures, but on the other hand they seem to punish firms that present better scores in the governance dimension.

6. Conclusions

The relation between CSR practices and firm value is a question that has gained the attention of many researchers, in part driven by the fact that more attention is being drawn by investors to the sustainable investments. As it was referred, several studies, both in developed markets and developing markets have shown a positive relation between share prices and information that measures the firm's performance in CSR and Governance practices.

This paper adds to this literature by analyzing the impact of ESG scores in the share prices of firms listed in the Lisbon Stock Exchange. Our findings were that during the period analyzed, the attitudes of investors have evolved, with respect to the CSR practices of Portuguese firms. The results can be summarized in the following table:

Variable	Full Sample	T < 2008	T ≥ 2008	T ≥ 2011	2008 ≥ T > 2011
BVPS	1.7683***	1.5937***	1.1677***	0.7478***	0.2769***
EPS	1.6781***	4.5591	-0.0673	-0.1840	-4.2082***
ENV₋₁	-0.0044	0.0128	0.0424	0.0778**	0.0290
SOC₋₁	0.0129	-0.0005	0.0122	0.0018	0.0306
GOV₋₁	-0.0462	-0.0006	-0.0817**	-0.0833***	-0.1533**
Intercept	2.3505	0.6206	2.9902	2.6948*	9.9611*
N	187	31	156	122	34
R²	0.926	0.998	0.870	0.671	0.963
AdjR²	0.924	0.998	0.866	0.657	0.956
F	456.25***	2618.50***	200.75***	47.37***	145.26***

The numbers refer to the estimated regression coefficients. The symbols ***, ** and * represent that the p-values are smaller to 1%, 5% and 10% respectively

Future research is needed to further investigate the results, in particular the negative impact better governance scores has on stock prices. A reason could be the limitations, criteria and the construction methodology of the ESG scores and the way the ESG performance is adequately conveyed to investors.

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