

A Work Project presented as part of the requirements for the Award of a Master's degree in Management from the Nova School of Business and Economics.

ANALYSIS OF RELATIONSHIP BETWEEN TARGET ESG SCORE AND COMPANY'S PROFITABILITY. EVIDENCE FROM FTSE MIB INDEX.

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ABSTRACT

This study examines how environmental, social, and governance (ESG) performance is related to a firm's financial performance. The relationship between sustainable corporate practices and financial performance has received growing attention in research. Nevertheless, a consensus is still not found. This study investigates the empirical relationship between Bloomberg Environmental Social Governance (ESG) Disclosure Score and profitability of FTSE Mib firms within five years of data from 2015 and 2019. Corporate financial performance (CFP) has been measured with ROA, ROE, and Net Margin profitability indicators.

Keywords: ESG, financial performance, corporate sustainability, FTSE Mib

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CHAPTER 1

INTRODUCTION

Corporate sustainability has now become a paradigm of business management used as an alternative to the traditional profit maximization model. While corporate sustainability recognizes that business growth and profitability matter, it also requires that the company pursue societal goals (Wilson, 2003). For decades, the view that corporations should take responsibility for society and merely benefiting shareholders has attracted attention. Since the 1960s, the importance of Corporate Social Responsibility, henceforth CSR, has increased significantly (Carrol and Shabana, 2010).

After the economic crisis of 2008, concern about corporate responsibility to society made its way into the public consciousness. Since then, several measures have been taken to ensure that companies take responsibility for factors other than their profitability, leading to a shift from a short-term shareholder perspective to a mainstream perspective of responsible management that includes the interests of all stakeholders (Velte, 2017). The scandal surrounding the German car giant Volkswagen is a famous example that perfectly describes the critical consequences for a company if it does not follow a sustainable and responsible management strategy. In 2015, the car company created software to cheat emissions tests on cars. When the news broke, the famous automaker suffered significant economic losses and a plunge in its stock price, which destroyed its public image and consumer confidence. Such scandals have focused corporate attention on CSR practices and engagement in successful stakeholder management strategies that improve environmental, social, and governance performance (ESGP) (Velte, 2017). These are all factors that companies consider to make their businesses profitable and sustainable for society and various stakeholders. It should also be noted that the term CSR is also used as a

synonym for the acronym ESG. Companies implement different strategies based on the three pillars of the ESG concept.

Environment: this pillar concerns the impact of the company's operations on the environment and its negative externalities. This criterion may concern the management of pollution, use of natural resources, energy consumption, CO2 emissions, strategy to combat global warming, etc.

Social: this pillar covers all issues related to the relationship of companies with society as a whole. This concerns internal (employees, customers, etc.) and external (government, suppliers, Etc.) stakeholders. The values of the company, the working conditions of employees, the company's commitment to the local community, the promotion of health and safety in the company, etc., are all relevant examples.

Governance: historically, investors have always been more interested in corporate governance issues than environmental and social issues (Eccles et al., 2011). This issue may concern board independence, the duality of the chairman and CEO, board diversity (diversity in terms of gender, age, ethnicity, experience), the degree of transparency of managers, their relationship with shareholders.

ESG issues have become a trending topic in the financial industry and are attracting the interest of researchers and investors. ESG refers to the three key factors used in investment markets to evaluate a company's performance based on non-financial attributes (Jha and Rangarajan, 2020; Atan et al., 2018). Nowadays, many consumers buy greener products even though they are more expensive than "traditional" products. Similarly, more and more investors want to invest in financially profitable and sustainable companies. As a result, ESG factors have now become an essential criterion for investment decisions. Many traditional fund managers have already adopted ESG investment strategies (Duuren et al., 2015). The growth of ESG funds in Europe can serve as a barometer for global expectations. According to Morningstar, the region's ESG

mutual funds and ETFs reached the US\$1.1 trillion mark in 2020, accounting for nearly 10% of total European fund assets. Their growth can be described as exponential. Bloomberg estimates that ESG assets are on track to exceed \$53 trillion by 2025 (Bloomberg, 2021).

To ensure visibility of implemented ESG strategies, companies publish "ESG reports." ESG reporting is essential for companies as the valuation of their ESG strategies and "sustainability" depends entirely on communicating this information to investors and other financial analysts.

As the demand for CSR increases and the company's main objective is to maximize shareholder value, the question arises whether tracking sustainability practices would also contribute to the company's financial performance (CFP).

LITERATURE REVIEW

From a research perspective, many empirical studies have analyzed the link between ESGP and CFP. Moreover, academic evidence has classified the relationship between ESGP and CFP into positive, negative, or neutral (Tanggamani, Amran, and Ramayah, 2018). Stakeholder theory is one theoretical explanation of why there should be a positive relationship between CSR and CFP. A stakeholder is defined as "any group or individual that is affected by or can influence the achievement of an organization's goals" (Freeman and McVea, 2005). The core idea of stakeholder theory looks at the relationship between firms and other entities in their internal and external environments (Atrushi and Waldemarsson 2016). Freeman et al. (2005) state that firms that effectively manage their stakeholder relationships survive longer and perform better than firms that do not (Atrushi and Waldemarsson 2016). Stakeholders' theory "predicts that a firm that attempts to lower its implicit costs by socially irresponsible actions will, as a result, incur higher explicit costs, resulting in competitive disadvantage" (Waddock and Graves, 1997). Waddock and Graves (1997) emphasize that a positive relationship between social performance and financial performance implies that the benefits of a firm's investment in CSR

are more remarkable than its costs. They explain this positive relationship with a practical example. From a policy perspective for instance, an appreciative HR approach may have low costs but from a morale perspective can bring substantial gains in productivity holding a competitive advantage compared to less responsible firms. Furthermore, there are evident examples from a strategical management point of view. Companies emphasizing the importance of their “core values” to which their employees and other stakeholders can relate would enhance their “meaning-making” and purpose. Such corporate responsible purpose is an explicit strategic message to the public to show what the firm stands for and its link with corporate strategy, which would eventually attract customers or employees’ interest in the company. Consequently, such interest will bring firms a competitive advantage that can lead to several positive strategic outcomes, and it may have positive impact on financial performance as well (Waddock and Graves, 1997).

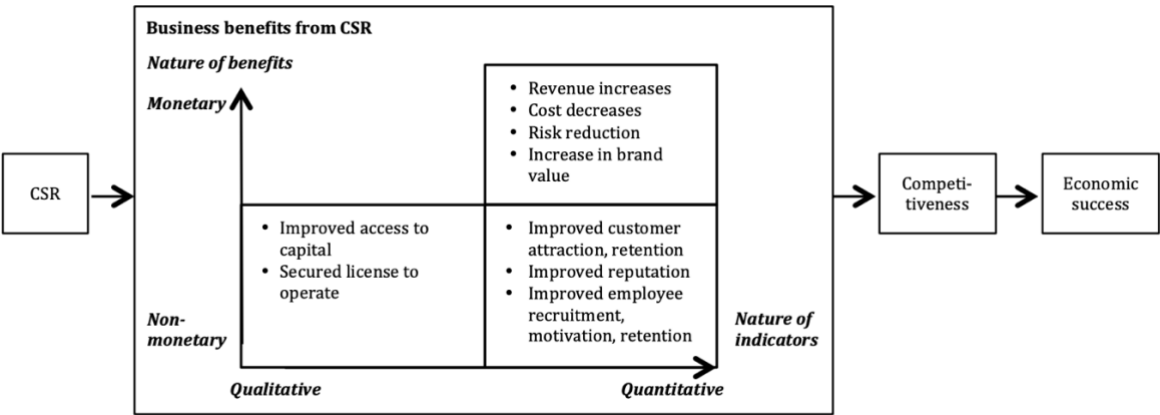


Figure 1: CSR Impact Model (Weber, 2008)

Weber’s (2008) CSR Impact Model gives an overview of qualitative and quantitative reasons for CSR to stand as a competitive advantage, consequently leading to financial success (Bratenius and Melin, 2015). Therefore, other studies by Mallin et al. (2014) and McWilliams and Siegel (2000) confirm that firms' engagement in social and ethical investment enhances their reputation in a way that positively affects financial performance. Investors have begun to

realize that investing according to ESG principles can create long-term value. As stakeholders believe that ESG strategies can lead to positive financial performance, professional investors form portfolio strategies considering sustainability principles. Choi et al. (2010) discuss that companies that focus on CSR are an attractive investment target because investors value social consciousness. Bowman and Haire (1975) discuss a key argument: socially responsible investors may see CSR necessary to run a superior company.

Milton Friedman presented one of the most famous critiques of a positive CSR-CFP relationship (1970). In his early work, Friedman (1970) put forward the trade-off hypothesis, which states that a company that starts to engage in CSR activities will perform worse financially because CSR will only incur costs. The negative relationship is in direct conflict with stakeholder theory. Stakeholder theory recognizes several different parties affected by the firm, but they do not necessarily benefit from maximizing shareholder wealth. Profit maximization could potentially harm stakeholders. This conflict of interest between shareholders and stakeholders is at the heart of the debate about investing in CSR (Atrushi and Waldemarsson, 2016). But most importantly the heart of the debate move to the direction of how a stakeholders responsible management strategy can still lead to sustainable firm profitability. However, although there may be doubts about the existing relationship, the recent study by López et al. (2007) observed a negative relationship between CSR and CFP. Proponents of the negative relationship between CSR and CFP discuss a competitive disadvantage for companies that address the social needs of their stakeholders because these firms incur costs that should be avoided and borne by others like individuals or government (Mallin et al., 2014). According to Waddock and Graves (1997), an example of this kind of action could be a decision to invest in pollution control equipment when competitors do not. The costs that companies incur due to their responsible actions can put them at an economic

disadvantage relative to their less responsible peers, at least in the short term. (Waddock and Graves, 1997).

In contrast to previous research, several studies argue that the relationship between CSR and CFP is too challenging to measure (Atrushi and Waldemarsson 2016). McWilliams and Siegel (2001) believe that there are no robust methodological procedures to determine the relationship between the two variables correctly. Waddock and Graves (1997) extend the argument by speculating that too many intervening variables exist between CSR and CFP, making it impossible to determine the actual impact of ESG investment on CFP. Measuring CSR is difficult because data on a single social attribute provide limited dimensions of how well a firm performs social activities (Waddock and Graves, 1997; Orlitzky et al., 2003). Also, according to López et al. (2008), market-based data can be misleading and may be seen as more dependent on external factors outside the firm's control. The one potentially influential factor is industry performance. Specific industries grow faster than others for macroeconomic reasons. Therefore, not controlling for the industry could lead to biased results (Atrushi and Waldemarsson 2016).

One of the most comprehensive and recent studies regarding the relationship between CSR and CFP was a meta-analysis study by Orlitzky et al. (2003), which integrates 30 years of research. The study showed an overall positive relationship between CSR and CFP across industries and study context. The authors claim that many of the negative findings in individual studies are circumstantial. However, the generalization of a positive relationship between the two variables holds more broadly than previously thought. The study concludes that CSR has a higher correlation with the accounting-based measure for CFP than with the market-based measure. (Orlitzky et al., 2003).

CHAPTER 2

Considering the importance of ESG integration in companies' operations, this study suggests the following research question:

“What is the relationship between ESG score and company profitability in the group of companies listed in the FTSE Mib index? Does the relationship remain constant if the measure of profitability changes?”

In this study, descriptive statistics was applied to summarise a large amount of quantitative information extracted from the Bloomberg Database to provide a simple outline of the sample and its measures using mean and standard deviation (Ho and Yu, 2015). This study also applied correlational analysis. It is used to determine the interrelationship between at least two or more items, their strength of association, and the relationship's direction (Koo and Li, 2016). Since this research aims to find the correlation between ESG score and CFP, correlation analysis is considered a suitable research design. In addition to correlation analysis, this study also performed multiple regression analysis to determine whether various factors lead to an association between the variables (Saunders et al., 2009). Below, the hypothesis advanced.

Hypothesis: A relationship exists between ESGP and CFP.

Given the different theories presented, it seems interesting to examine the relationship between ESG performance and the financial performance of companies. In this study, several relationships are tested. We use ESG target scores and financial accounting data from the same Bloomberg database. ROA, ROE, and Net Margin measure companies' profitability. Our

sample includes observations of listed companies in the FTSE Mib index. The observation period runs from 2015 to 2019.

METHODOLOGY

SAMPLES

As already stated, this study analyses the ESG impact in the Italian market. In this regard, the FTSE Mib index has been taken as a proxy for the Italian market performance. The FTSE Mib Index constituent shares are selected from the broad Italian equity universe to ensure the index best represents the Italian equity markets for investors. There are 40 Italian companies listed on FTSE Mib; however, due to the time range selected for the analysis, some data was missing in specific years and for certain companies. The final sample thus includes 35 companies for a total of 175 observations. Table 1 shows how the Italian corporate market is distributed.

Industry	No. of Firms	Proportion
Automobiles & Parts	2	6%
Banks	6	17%
Construction & materials	1	3%
Consumer Products & Services	1	3%
Energy	4	11%
Financial services	4	11%
Food, Beverages & Tobacco	1	3%
Health Care	3	8%
Industrial Goods & Services	5	14%
Insurance	3	9%
Technology	1	3%
Telecommunications	1	3%
Utilities	3	9%
Total	35	100%

Table 1: Industry distribution of sample from FTSE Mib

VARIABLES

CFP as Dependent Variable

The CFP is used as the dependent variable to test the relationship between ESG score and profitability. The company's efficiency goal in maximizing profits is usually determined by certain efficiency ratios or profitability ratios (Saeidi et al., 2015). ROA, ROE, and Net Margin are the most widely used accounting-based measurements favoured by researchers in previous studies (Waddock & Graves, 1997). ROA is calculated as the ratio of net income to total assets. ROE shows how efficiently businesses handle the shareholders' capital investment and is defined as the amount of net income returned as a percentage of shareholders' equity. Net margin is also an indicator of a company's profitability, calculated as the ratio of net profit to total revenue (Saeidi et al., 2015). ROA, ROE, and Net Margin thus evaluate how effectively a company uses its resources to produce earnings. Hence, this study takes ROA, ROE, and Net Margin as financial performance indicators to stand for dependent variables in the research models.

ESG score as Independent Variable

When defining the independent variable, we looked for a measure that could best describe the companies' effort in corporate responsibility. How to quantify CSR? This study opted for the ESG disclosure score by Bloomberg ESG Data Service. Bloomberg rates the company's disclosure of quantitative and policy-related ESG data on the three components of ESG; environment, society, and governance, realizing a comprehensive ESG target score. Each score is the result of a quantitative analysis that rely on specific KPIs across 120 key sustainability issues including, but not limited to air quality, water & energy management, materials & waste, health & safety, compensation, diversity, board

independence & structure (Bloomberg, 2021). The ESG target score calculated by Bloomberg ranges from 0 to 100 and ranks companies based on disclosure data and penalizes companies for missing data (Huber et al. 2017).

Control Variables

Previous research has identified the most common control variables that can affect CSR – CFP relationship. These include firm size, age, risk, revenues, and industry (Waddock and Graves, 1997; Saeidi et al. 2015). This research will incorporate firm size, leverage, sales revenue as control variables in the regression analysis. The firm size is measured by total assets and total revenues. It is a relevant control variable to include because smaller firms may not have the same financial opportunities to show socially responsible behaviours (Waddock & Graves, 1997). Financial leverage is measured by the ratio of total debt to total equity. The different use of leverage can have impact on the expected ROE. (Nasdaq, 2021). Revenues can help executives make essential decisions about budgets and financial goals while providing investors and shareholders with information about the company's profitability and growth. Table 2 summarises the variables applied in this research.

Independent Variable	Bloomberg ESG target score
Dependent Variable	Return on Asset (ROA) Return on Equity (ROE) Net Margin
Control Variables	Firm Size (book value of total assets) Leverage (debt to equity ratio) Revenues

Table 2: Summary of Variables

REGRESSION MODEL

This study adopted the multiple regression model to investigate the relationship between ESG target score and company profitability. The equation for the multiple linear regression model is depicted as:

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_k X_k + \varepsilon_i$$

Y is the dependent variable, which represents the indicators of profitability or CFP. X is the independent variable, which is the ESG disclosure score. Whereas β_0 is constant, and β_1 to β_4 are the coefficients for the independent variables. ε_i delineates the error term.

This research measured the ESG disclosure score as the independent variable. Then, we measured ROA, ROE, Net Margin as the dependent variables performing CFP, and Firm Size, Leverage, and Revenues as control variables.

The following models are meant to test the relationship between ESG disclosure score and the company's profitability performance using Excel Data Analysis.

Model 1: $ROA = \beta_0 + \beta_1 ESG + \beta_2 Size + \beta_3 Lev + \beta_4 Revenue$

Model 2: $ROE = \beta_0 + \beta_1 ESG + \beta_2 Size + \beta_3 Lev + \beta_4 Revenue$

Model 3: $Net\ Margin = \beta_0 + \beta_1 ESG + \beta_2 Size + \beta_3 Lev + \beta_4 Revenue$

PRESENTATION OF RESULTS AND DISCUSSION

DESCRIPTIVE STATISTICS

Table 3 summarizes the dataset based on 175 observations from the Italian market during the period 2015-2019. The table shows the mean, the standard deviation, and the minimum and maximum values of the variables.

Variable	Obs	Mean	Std. Dev.	Min	Max
ESG	175	47.86	16.34	5.26	75.06
ROA	175	3.33	5.07	-13.64	22.12
ROE	175	12.17	12.25	-50.05	54.89
Net Margin	175	11.32	14.38	-60.51	87.31
Firm Size	175	105428.69	197993.98	707.90	860433.40
Leverage	175	173.92	181.26	0.42	815.47
Revenues	175	18651.27	31915.97	499.20	135928.00

Table 3: Descriptive analysis of variables

The data has been further analysed by dividing the sample into two groups to have a better understanding of the sample and its behaviour among the variables. In Table 4, data were grouped for values of ESG score higher than its median being equal to 51,32. Data values lower than the median were analysed as a different group, as it is shown in Table 5.

Variable	Obs	Mean	Std. Dev.	Min	Max
ESG	88	60,16	0,63	51,32	75,06
ROA	88	2,61	4,93	-13,64	22,12
ROE	88	9,53	11,81	-50,05	34,12
Net Margin	88	10,59	14,57	-20,92	87,31
Firm Size	88	135926,10	226789,99	1380,00	855647,00
Leverage	88	183,28	178,07	7,94	802,84
Revenues	88	24908,31	32083,06	1037,90	109734,00

Table 4: Descriptive analysis for ESG > median

Variable	Obs	Mean	Std. Dev.	Min	Max
ESG	87	35,42	13,93	5,26	50,88
ROA	87	4,07	5,12	-2,10	18,12
ROE	87	14,84	12,18	-27,69	54,89
Net Margin	87	12,06	14,23	-60,51	45,17
Firm Size	87	105428,69	197993,98	707,90	860433,40
Leverage	87	164,45	184,99	0,42	815,47
Revenues	87	12322,30	30644,29	499,20	135928,00

Table 5: Descriptive analysis for ESG > median

It is interesting to examine already at this stage that for higher values of ESG, lower values of profitability ratios occur. When the mean value for ESG is approximately 60, the values for ROA, ROE and Net Margin equal 2,61%, 9,53% and 10,59% respectively. However, in the second group of data for ESG lower than its median and with the new mean being approximately 35, the values for ROA ROE, and Net Margin are relatively higher as shown in Table 5. Such information suggests that for higher values of ESG we have lower values of financial performance and vice versa.

CORRELATION ANALYSIS

Table 6 provide the correlation matrix for the key variables involved in the regression models in this study. Based on the theory, the correlation coefficient fluctuates between +1 and -1. The value of 1 indicates a total positive linear correlation, 0 indicates no linear correlation, and -1 indicates a negative linear correlation (Atrushi and Waldemarsson, 2016). Thus, what is shown by the correlation analysis is that the ESG factor has a negative linear relationship with each of the profitability variables.

	<i>ESG</i>	<i>ROA</i>	<i>ROE</i>	<i>Net Margin</i>	<i>Firm Size</i>	<i>Leverage</i>	<i>Revenues</i>
<i>ESG</i>	1						
<i>ROA</i>	-0.1888193	1					
<i>ROE</i>	-0.3057393	0.6369733	1				
<i>Net Margin</i>	-0.1362129	0.3706236	0.6404408	1			
<i>Firm Size</i>	0.2364915	-0.2801719	-0.2217518	-0.109584	1		
<i>Leverage</i>	0.1217943	-0.3607421	-0.18307	-0.0198399	0.4849061	1	
<i>Revenues</i>	0.1331662	-0.2257873	-0.1513575	-0.3144812	0.3035892	-0.0681516	1

Table 6: Correlation analysis of variables

REGRESSION ANALYSIS

Before conducting the regression model, an F-test and Hausman test was performed to assess whether there is statistical significance for the models to exist. Furthermore, the t-statistic has been calculated, which is directly associated with the p-value. If the p-value associated with this t-statistic is less than the alpha level, we conclude that the coefficient is significant. Therefore, the significance level of the study was settled to an alpha level of 5%. This is applied to all three models.

Model 1

$$ROA = \beta_0 + \beta_1 ESG + \beta_2 Size + \beta_3 Lev + \beta_4 Revenue$$

Is there a relationship between ESG score and ROA for companies listed in the FTSE Mib index?

H₀: There is no relationship between ESG score and ROA

H_a: There is a relationship between ESG score and ROA

<i>Dependent Variable: ROA</i>	<i>Coeff.</i>	<i>Std. Err.</i>	<i>t</i>	<i>P-value</i>
Intercept	7.4518225	1.1181233	6.6645802	3.548E-10
ESG	-0.0347213	0.0218659	-1.587923	0.1141619
Firms Size	-2.379E-07	2.197E-06	-0.1082697	0.9139094
Leverage	-0.0100158	0.0022618	-4.428226	1.695E-05
Revenues	-3.689E-05	1.182E-05	-3.1222536	0.0021098

<i>F</i>	10.995942
<i>Prob > F</i>	5.92E-08
<i>R-Square</i>	0.2055472

Table 7: Model 1 regression analysis with ROA as Dependent Variable

As shown in Table 7, Prob > F = 0.0000; therefore, the model is statistically significant. However, R-square equals 0.2055, which means that the independent variable ESG explains only 20% of ROA. Also, looking at the coefficient value for ESG, we see a -0.0347, which confirms the negative relationship with ROA seen in the correlation analysis. Furthermore, the table shows that ROA has a negative relationship with all three control variables. However, only control variables Leverage and Revenues have a p-value smaller than the 95% significance level. The p-value for ESG is equal to 0.1142, thus bigger than 0.05 alpha. This means that we fail to reject the null hypothesis.

Model 2

$$ROE = \beta_0 + \beta_1 ESG + \beta_2 Size + \beta_3 Lev + \beta_4 Revenue$$

Is there a relationship between ESG score and ROE for companies listed in the FTSE Mib index?

H₀: There is no relationship between ESG score and ROE

H_a: There is a relationship between ESG score and ROE

<i>Dependent Variable: ROE</i>	<i>Coeff.</i>	<i>Std. Err.</i>	<i>t</i>	<i>P-value</i>
Intercept	24.19112361	2.824697796	8.56414574	6.31172E-15
ESG	-0.195368435	0.055239463	-3.5367548	0.00052222
Firms Size	-4.16409E-06	5.55029E-06	-0.7502484	0.454142231
Leverage	-0.008506673	0.005713988	-1.4887454	0.138407154
Revenues	-4.02357E-05	2.9852E-05	-1.34784	0.179503206

<i>F</i>	6.5469139
<i>Prob > F</i>	6.35E-05
<i>R-Square</i>	0.1334827

Table 8: Model 2 regression analysis with ROE as Dependent Variable

In Model 2, the relationship between ESG and ROE has been tested. Prob > F = 0.0000, it is feasible to state that the model has statistical significance, although R-Square is 13%. Again, the dependent variable for profitability is poorly explained by the model. In this model, the p-value for ESG is equal to 0.0005 and therefore lower than the alpha level. This result gives Model 2 a critical outcome. Due to the p-value being lower than the significance level, we reject the null hypothesis that there is no relation between ROE and ESGP, and it is possible to assume that the coefficient is statistically significant. Specifically, the ESG coefficient is -0.1954 and describes a negative relationship between the variables. Regarding the control variables, there is no statistical significance.

Model 3

$$\text{Net Margin} = \beta_0 + \beta_1 \text{ESG} + \beta_2 \text{Size} + \beta_3 \text{Lev} + \beta_4 \text{Revenue}$$

Is there a relationship between ESG score and Net Margin For companies listed in the FTSE Mib index?

H₀: There is no relationship between ESG score and Net Margin

H_a: There is a relationship between ESG score and Net Margin

<i>Dependent Variable: Net Margin</i>	<i>Coeff.</i>	<i>Std. Err.</i>	<i>t</i>	<i>P-value</i>	<i>F</i>	5.2183853
Intercept	18.38145286	3.360729198	5.46948349	1.59029E-07	<i>Prob > F</i>	0.0005463
ESG	-0.084575532	0.065722031	-1.2868673	0.199890065	<i>R-Square</i>	0.109358
Firms Size	2.15384E-06	6.60354E-06	0.32616473	0.744700891		
Leverage	-0.0034818	0.006798308	-0.5121569	0.609205914		
Revenues	-0.000141316	3.55169E-05	-3.9788279	0.000102363		

Table 9: Model 3 regression analysis with Net Margin as Dependent Variable

In Model 3, the relationship between ESG score and Net Margin has been tested. Prob > F equals 0.0005. The model has a statistical significance despite R-Square being approximately 0.11 that reflects the explanation ability of this model is not well performed, being only 11% of ROA explained by the independent variable ESG. The ESG p-value is > 0.05; therefore, there is no statistical significance between Net Margin and ESG at a 95% confidence level. The same applies to all the other control variables except for Revenues, although the negative coefficient for Revenues. This leads us to conclude that there is no relationship between ESG and Net Margin, and we, therefore, fail to reject the null hypothesis.

RESULTS AND DISCUSSION

The results of the three regression models show different results. Only Model 2 rejects the null hypothesis. This outcome leads us to conclude that ROE coefficient is statistically significant, and a relationship exists between ESG score and ROE. From one side, this result is in line with previous research which identified ROE as one of the most common profitability factors having a direct relationship with CSR measures. In practical terms this outcome explain that resources allocation may be linked to improvements on corporate responsibility level (Waddock and Graves, 1997). Nevertheless, Model 2 regression produces a negative coefficient -0.1954 for ESG, which cannot demonstrate the existence of a positive linear relationship between ESGP and ROE.

Model 1	
<i>H₀</i> : There is no relationship between ESG score and ROA	Fail to Reject
<i>H_a</i> : There is a relationship between ESG score and ROA	Reject

Model 2	
<i>H₀</i> : There is no relationship between ESG score and ROE	Reject
<i>H_a</i> : There is a relationship between ESG score and ROE	Fail to Reject

Model 3	
<i>H₀</i> : There is no relationship between ESG score and Net Margin	Fail to Reject
<i>H_a</i> : There is a relationship between ESG score and Net Margin	Reject

Table 10: Models Summary

Therefore, the investigation of this study suggests that there is no relationship between ESG score and CFP except when testing ESG scores with ROE. However, the result of this model shows a negative relationship between the two variables. Considering these results, we cannot claim that better ESGP increases the profitability of the company. Therefore, the main research question is not achieved. Furthermore, as discussed in the literature review, although the research on CSR and CFP is increasing in recent years, it does not include an analysis of the companies listed in the FTSE Mib Index. In addition, many early studies examined the relationship between CSR and CFP in different industries and did not consider the characteristics of each industry or stakeholder group.

CONCLUSION

The sample of this research includes data from 35 Italian companies from 2015 to 2019. The most challenging part of this research involved the selection for the correct measurement of CFP and for the control variables. The study chose Bloomberg's ESG disclosure score to

measure ESG performance and ROA, ROE, and Net Margin profitability ratios from Bloomberg Stock Analysis database.

As discussed in the literature review, although the research on CSR and CFP has increased in recent years, it does not include an analysis of the companies listed in the FTSE Mib Index. Many studies examined the relationship between CSR and CFP in different industries, but the factors involved are numerous and complex to quantify and standardize objectively. Consequently, the study suggests that further research should focus on a specific industry to obtain an unambiguous result and investigate other financial performance variables. Indeed, this study is subject to certain limitations. The Italian index might not represent a reliable source for companies' samples due to the challenging business environment and corporate culture, which positions Italy below the EU average for ease of doing business (Wolter Kluwer, 2020). Moreover, the sample size is small as it includes only 35 companies and market-based measures of financial performance are not considered in this paper. In conclusion, the study ignores control variables such as firm age, firm growth, capital intensity, risk, R&D intensity, industry type, which could significantly impact this relationship. Therefore, the study results should be interpreted considering these limitations, and future researchers should try to overcome them while conducting further research in this area.

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