Asian Economic and Financial Review
ISSN(e): 2222-6737
ISSN(p): 2305-2147
DOI: 10.18488/journal.aefr.2018.84.565.570
Vol. 8, No. 4, 565-570

URL: www.aessweb.com

CORPORATE RESPONSIBILITY AND ROA: EVIDENCE FROM THE ITALIAN STOCK EXCHANGE

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Article History
Received: 19 January 2018
Revised: 7 April 2018
Accepted: 11 April 2018
Published: 16 April 2018

Keywords
IPO
Corporate social responsibility
Performance
Capital market
ROA
SME.

JEL Classification:
G14, G15, G11.

ABSTRACT

The purpose of this paper is to test the importance of the Corporate Social Responsibility factor on the ROA in a sample of newly listed companies on the Italian Stock Exchange. The study analyzes 84 IPOs listed at the Borsa Italiana in the period between 2009 and 2015. The authors want to test if there is an advantage in terms of better return on assets when companies consider the drafting of a sustainability report, the presence of environmental responsibility, the management of supplier relationships, the information transparency and fairness, versus those companies which are not seen as responsible in these areas. The authors want to test the relationship between ROA and ESG Corporate Responsibility factors using a unpaired t-tests. The statistical analysis shows that not all factors contribute to the improvement of performance in the newly listed companies, but it seems to have a greater ROA only the companies that take on responsibilities from an environmental perspective.

Contribution/ Originality: This research contributes to the literature on CSR factor, in fact as it has been shown that not all factors contribute to the improvement of performance. The authors find that environmentally friendly companies seem to have a greater ROA.

1. INTRODUCTION

In this paper the authors investigate the IPO process on a quantitative level, with particular attention paid to the phenomenon of Corporate Responsibility related to ROA. The authors want to test if there is a difference in ROA related to the drafting of a sustainability report, the presence of environmental responsibility, supplier relationship management, information transparency and fairness. The financial approach to Corporate Responsibility has shown increasing dynamism and innovation in recent times, with more firms being interested in sustainable business practices and in recognizing the importance of extra-financial issues when making their investment decisions. Although there is no correct definition, the concept of CSR refers to a corporate culture that integrates sustainability, social and governance issues at every level of the organization and within its relationships with all stakeholders in a long-term vision.

This idea explains how a business model built on Environmental, Social and Governance (ESG) Corporate Responsibility can contribute to value creation through a model that builds its competitive advantage, not only on factors that are readily detectable and measurable in monetary terms, but also on extra-financial factors that give rise to intangible assets. Today, there are 29 companies listed on the Italian Stock Exchange that are defined as green, and they belong to one of the following productive sectors: a) agribusiness, b) eco-building, c) eco-mobility, d) environmental services, e) green chemistry, f) lighting solutions, g) smart energy, h) waste management, i) water, air and noise treatment, j) life sciences and biotech. Even among the SMEs listed in the AIM of Italy, the most representative sector is composed of green firms: 16 are listed as having either a green core business or utilities, reaching a total of 144 billion euro, approximately one third of AIM's[1] total revenue. The remainder of this paper is organized as follows: section II describes the literature review, where the authors analyse the previous research about IPO, its contribution to an economic system and its role for the development of a company; section III describes the methodology used, section IV examines the data analysis, and section V shows the conclusions and indications for future research.

2. LITERATURE REVIEW

An important contribution to the literature was given by Nollet *et al.* (2016) that examine the relationship between Social Performance and Financial Performance of firms using Return on Assets, Return on Capital and the Excess Stock Returns. The period under investigation in between 2007 and 2011. Their linear model proposes a significant negative relationship between Corporate Social Performance and Return on Capital. Bollazzi *et al.* (2017) shown that the ROE of the companies responsible from an environmental perspective is not significantly different from the ROE of the companies not responsible from the same point of view. Instead the companies which prepare a sustainability report seem to have a greater underpricing the first day of listing, such that it seems that the market recognizes and rewards the ESG Corporate Responsibility. Mallin *et al.* (2014) analyze the relationship between corporate social responsibility and financial performance in Islamic banks in a sample of 90 Islamic banks across 13 countries. Their study shown a positive relation between CSR disclosure and financial performance. Lins *et al.* (2017) confirm this theory, showing that during the 2008–2009 financial crisis, firms with high CSR factor, had stock returns that were four to seven percentage points higher than firms with low social capital. In fact this firms firms also experienced higher profitability, growth, and sales per employee relative to low-CSR firms, and they raised more debt. Saeidi *et al.* (2015) analyzing the direct relationship between CSR and firm performance shown that the positive effect of CSR on firm performance is due to the positive effect CSR has on competitive advantage, reputation, and customer satisfaction.

3. METHODOLOGY

The data set is composed of 84 companies listed between 1/1/2009 and 31/12/2015 on the Italian Stock Exchange. In particular, 9 companies are listed in the STAR segment, 13 in MTA Italy and 62 in AIM-MAC. With regard to the broad group of SMEs present in the AIM-MAC market, there is a remarkable percentage of companies that operates in the fields of the green economy and renewable energies. The authors use the t-test to determine if two sets of data are significantly different from each other. In particular the t-test allows to compare the average of two populations that do not correspond, so that a null hypothesis (H_0) can be applied to either reject or confirm the equality of the two averages and, therefore, of the two populations. So the authors divide the sample according to whether the firms that draft sustainability report, the presence of environmental responsibility[2], the

[1] AIM Italia is the market of Borsa Italiana devoted to the Italian small and medium enterprises with high growth potential.

[2] A dummy of 1 is given if the company has a green core business as: a) it produces and/or provides renewable energy, b) it uses green chemistry, c) it produces or markets organic products (in the agricultural field or food) or eco-friendly ones, d) it provides services for environmental protection (e.g. waste management), e) efficiently uses raw materials and energy from renewable sources, f) reduces emissions and waste, g) uses eco-friendly materials or products (e.g. recyclable), either

management of supplier relationships[3], the information transparency and fairness versus[4] those companies which are not responsible in these areas.

Table-1. Sample of analysis

Market	N° IPO	Company with a Sustainability Report
MTA	13	4
STAR	9	1
AIM Italia-Mac.	62	2
Total	84	7

Source: Borsa Italiana

4. DATA ANALYSIS

The aim of this study is to understand the relationship between CSR factors and the ROA in a newly listed companies with IPO. The relationship between the variables will be analyzed with a t-test analysis, using the method of hypotheses verification on two populations.

4.1. Environmental Responsibility and Performance

About 43% of the companies in the data set, 36 out of 84, are considered environmentally responsible; indeed, they either have a green core business or take on responsibility in this area through specific programs. The first hypothesis that the authors tested is:

$Hp_{0.1}$ The ROA of the companies that are responsible from an environmental point of view is not significantly different from the ROA of companies that do not take on environmental responsibilities.

Table-2. Analysis of ROA of the companies responsible from an environmental point of view versus those considered not to be responsible in this context.

	ROA, ENVIRONMENTAL RESP. = 1	ROA, ENVIRONMENTAL RESP. = 0
Number of values	36	48
Median	**7.305**	**6.5**
Mean	**15.1**	**11.35**
Unpaired t test		
P value		0.3303
Significantly different (P < 0.05)?		NO

The table represents the t-test on the population in the period of Jan 2009-Dec 2015. All the shares heve been listed in Borsa Italiana during this time period.

The unpaired t-test carried out in table 2 shows how the two populations are not significantly different. The null hypothesis $Hp_{0.1}$ shown above cannot be refused.

$Hp_{0.2}$. The ROA of Italian AIM companies that are responsible from an environmental perspective is not significantly different from that of companies that are not responsible in this area.

directly or through subsidiaries h) creates products that integrate eco-sustainability characteristics. In contrast, a value of 0 is assigned to companies that do not engage in any of the areas listed above.

[3] A value of 1 has been attributed to the dummy variable in the case of companies with an ethical code and with a) defined procedures to ensure suppliers equal treatment, transparency and objectivity, b) precise quality standards of supplied service/product, in accordance with control systems and risk management, as well as environmental and social responsibility commitments undertaken by the company. A value of 0 was assigned to the dummy variable in the case of companies not meeting these criteria.

[4] Dummy variable is 1 if the newly listed company draws up a sustainability report; otherwise it is 0.

Table-3. Analysis of ROA values of companies listed in AIM Italy that are environmentally responsible versus those considered not to be responsible in this area.

	ROA AT AIM ENVIRONMENTAL RESP. = 1	**ROA LISTED AT AIM, ENVIRONMENTAL RESP. = 0**
Number of values	21	41
Median	**5.49**	**6.96**
Mean	**16.6**	**12.54**
Unpaired t test		
P value		0.4369
Significantly different (P < 0.05)?		NO

The table represents the t-test on the population in the period of Jan 2009-Dec 2015. All the shares have been listed in Borsa Italiana during this time period.

Table 3 replicates the previous analysis by considering the observed values of ROA for the two populations of AIM Italy companies. The environmentally responsible companies show a higher average ROA than those that are considered to be not responsible, as defined in the present study, as well as a higher standard deviation of data collected, even if the inferential statistics do not confirm that the two populations are significantly different in relation to the return on assets values. Therefore, null hypothesis $Hp_{0.2.}$ cannot be refused.

$Hp_{1.3.}$ The ROA of environmentally responsible companies on the MTA and STAR lists is significantly different from that of companies considered not to be environmentally responsible, with a confidence level of 90%.

Table-4. Analysis of ROA values of environmentally responsible companies on STAR and MTA lists versus those considered not to be responsible in this area.

	ROA AT START-MTA ENVIRONMENTAL RESP. = 1	**ROA AT START-MTA ENVIRONMENTAL RESP. = 0**
Number of values	15	7
Median	**10.53**	**4.37**
Mean	**12.99**	**4.406**
Unpaired t test		
P value		0.0532
Significantly different (P < 0.10)?		YES *

The table represents the t-test on the population in the period of Jan 2009-Dec 2015. All the shares have been listed in Borsa Italiana during this time period.

The ROA of environmentally responsible companies on MTA and STAR lists sis 12.99%, compared to 4.4% of the companies considered to be not responsible in this area. So, the value of ROA of the two populations is statistically different considering a significance level of 10% (p-value 0.0532), allowing for rejecting the null hypothesis and to confirm $Hp_{1.3}$.

4.2. Fairness, Information Transparency and Performance

$Hp_{0.4.}$ The ROA of the companies that are responsible in terms of fairness and information transparency is not significantly different from companies that do not require fairness and transparency.

Table-5. Analysis of ROA values of companies responsible in terms of information transparency and fairness versus those considered not to be responsible in this area.

	ROA, INFORMATION TRANSPARNCY. = 1	**ROA, INFORMATION TRANSPARNCY. = 0**
Number of values	41	43
Median	**6.62**	**8.24**
Mean	**13.14**	**12.79**
Unpaired t test with Welch's correction		
P value		0.9263
Significantly different (P < 0.05)?		NO

The table represents the t-test on the population in the period of Jan 2009-Dec 2015. All the shares have been listed in Borsa Italiana during this time period.

The analysis shows that the companies that are responsible in terms of fairness and information transparency obtain a ROA of 13.14% versus the 12.79% of the companies considered not to be responsible in this field. In spite of the fact that the two populations are not sufficiently different from each other, the null hypothesis $Hp_{0.4}$ cannot be rejected.

4.3. Management of Supplier Relationship and Performance

$Hp_{0.5}$. The ROA of the companies that are responsible in terms of assessing their suppliers is not significantly different from that of companies that are not responsible in this area.

Table-6. Analysis of ROA values of the companies responsible in the evaluation of suppliers CSR versus those that are not responsible in this area.

	ROA, CSR SUPPLIERS. = 1	ROA, CSR SUPPLIERS. = 0
Number of values	25	59
Median	7.39	6.86
Mean	14.84	12.16
Unpaired t test		
P value		0.5197
Significantly different (P < 0.05)?		NO

The table represents the t-test on the population in the period of Jan 2009-Dec 2015. All the shares have been listed in Borsa Italiana during this time period.

The average ROA of the two populations is not significantly different: the unpaired t-test showed a p-value equal to 0.5197, which does not allow for rejecting null hypothesis $Hp_{0.5}$.

4.4. Sustainability Report

The study shows that the use of a sustainability report is not widespread among the Italian SMEs. In fact, from the data set of companies that went public in the period under observation, only 7 had drawn one up (Table 7), and of these, only four are listed in the FTSE MIB index and one in STAR segment.

$Hp_{0.6}$. The ROA of the companies that draw up a sustainability report is not significantly different from that of the companies do not prepare one.

Table-7. The seven sampled companies that prepare a sustainability report.

COMPANY	MARKET	FIELD	ADMISSION PRICE	RETURN ON FIRST DAY	ROA
Poste Italiane	MTA-FTSE MIB	Postal services	6.75	-0.74%	0.43%
Assiteca	AIM Italia – MAC	Insurance	1.85	2.05%	5.03%
Aeroporto di Bologna	STAR	Airport	4.50	32.22%	5.85%
Innovatec	AIM Italia – MAC	Energy	3.50	2.69%	-0.15%
Moncler	MTA- FTSE MIB	Fashion	10.20	46.76%	30.34%
Salvatore Ferragamo	MTA- FTSE MIB	Fashion	9.00	10.56%	13.80%
Yoox Net-A-Porter Group	MTA- FTSE MIB	E-commerce	4.30	8.37%	7.39%

Source: Borsa Italiana

Table-8. Analysis of ROA values of the companies that draw up a sustainability report.

	ROA companies with sustainability report = 1	ROA companies with sustainability report = 0
Number of values	7	77
Minimum	-0.15	-8.81
25% Percentile	0.43	2.425
Median	**5.85**	**7.15**
75% Percentile	13.8	15.04
Maximum	30.34	80.65
Mean	**8.956**	**13.32**
Std. Deviation	10.52	17.82
Std. Error of Mean	3.976	2.03
Lower 95% CI	-0.7725	9.278
Upper 95% CI	18.68	17.37
Unpaired t test		
P value		0.5265
Significantly different (P < 0.05)?		**No**

The table represents the t-test on the population in the period of Jan 2009-Dec 2015. All the shares have been listed in Borsa Italiana during this time period.

The average value - higher for the group of companies that does not publish this document - is heavily influenced by the strong presence of SMEs in this group of companies, which is characterized by high growth rates. The same can be said for the two populations in reference to ROA (Table 8). Unpaired t test analysis does not allow for rejection of the null hypothesis.

5. CONCLUSIONS

In this paper, the authors examine the importance of the Corporate Social Responsibility factors on the ROA in a sample of newly listed companies on the Italian Stock Exchange. This research contributes to the literature on CSR factor, in fact as it has been shown that not all factors contribute to the improvement of performance. They find that environmentally friendly companies in the *MTA and STAR market* seem to have a greater ROA, with the average for these companies being 12.99%, versus 4.4% of those companies considered not to be responsible in this area. The effect of the ESG Corporate Responsibility factor can contribute to value creation, not only regarding factors that are readily detectable and measurable in monetary terms, but also regarding extra-financial factors that give rise to intangible assets. In this analysis the average value of ROA is higher for the group of companies that do not draw up the sustainability report, which could be influenced by the strong presence of SMEs in the data set. The analysis suggests that an important factor for the ROA of companies is environmental responsibility, despite the fact that the unpaired t-test shows how the two populations are not significantly different. The research has a variety of implications for investors who wish to invest in newly listed companies and for equity research. This is an interesting area for future exploration.

Funding: This study received no specific financial support.
Competing Interests: The authors declare that they have no competing interests.
Contributors/Acknowledgement: Both authors contributed equally to the conception and design of the study.

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