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The Relationship between Non-financial Reporting, Environmental Strategies and Financial Performance. Empirical Evidence from Milano Stock Exchange

Simone Pizzi

Department of Economic Sciences, Università del Salento, 73100 Lecce LE, Italy; simone.pizzi@unisalento.it

Received: 15 November 2018; Accepted: 24 November 2018; Published: 27 November 2018



Abstract: The CSR theme has taken on an increasingly central role within financial markets. In fact, the last decade has been characterized by a rapid development of "socially responsible" investment, conventionally known as SRI. In this sense, an increasing number of listed firms have reported their non-financial information to the purpose to favor the interaction with their stakeholders. The relevance of these information tools stems from the need to protect investors against companies operating through greenwashing mechanisms. The aim of this research is to assess the effect of CSR on financial economic performance. As already happened within similar studies concerning economic entities different from Italy, the study assesses how the ability to generate income, and, thus, to distribute value towards the shareholder, are influenced by the orientation of companies in the field of sustainability accounting and the aptitude to check the environmental risk associated with the exercise of business activity.

Keywords: corporate social responsibility; greenwashing

1. Introduction

Following the transposition of the European directive 95/2014 into national legislation, from 2017, those companies that possess certain qualitative and quantitative requirements and operate within the European Union will be subjected to the obligation to draw up specific non-financial information. However, the norm follows what has already happened in other economic contexts, such as South Africa (Doni et al. 2016) and its impacts are limited because the European context was characterized before its introduction by a gradual awareness of the companies to CSR issues (Mio et al. 2015; Venturelli et al.). Indeed, according to the Global Reporting Initiative, in the period between 1999 and 2017 in Italy, a total of 880 sustainability reports were produced with a maximum peak of 109 reports reached in the year 2015 (KPMG 2017). This evidence supports the study of Skouloudis and Evangelinos (2012) that explain how the CSR is a phenomenon influenced by the national culture of the firms.

The CSR theme has taken on an increasingly central role within financial markets. In fact, the last decade has been characterized by a rapid development of "socially responsible" investment, (conventionally known as SRI.). The adaptation of the internal accounting system to companies in this direction has represented for some companies listed in the main equity markets an important strategic instrument to improve their reputation. Empirical studies demonstrate that, despite the lack of regulation on CSR, some companies listed in equity markets have high qualitative levels of non-financial reporting (Coluccia et al. 2016).

The literature also shows similarities with studies carried out on the application of international accounting standards. In fact, the harmonization of non-financial reporting presents a high strategic value within the processes connected to Investor's decisions (Fortanier et al. 2011; Tschopp and

Nastanski 2014). The strategic relevance of CSR has also been recognized by the legal entities in the organization of the financial markets, who have introduced in their own rating system specific indexes with the aim of allowing the comparison of the sustainability degree of the companies (Kamal and El-Masry 2016). Moreover, in order to further differentiate the products placed on the market, specific regulations have been introduced with the aim of certifying the degree of sustainability of the securities issued by the companies (Ching et al. 2016). The relevance of these information instruments stems from the need to protect investors against companies operating through greenwashing mechanisms (Siano et al. 2017).

The aim of this research is to evaluate the effect of CSR on the financial performance achieved by the firms. Specifically, our research will evaluate what are the main aspects to evaluate the ability of a "socially responsible firm" to create value over the time. Specifically, the work assesses how the ability to generate income, and thus the ability to distribute value between the shareholder, is influenced by the orientation of companies in the field of sustainability accounting and the aptitude for check the environmental risk associated with the exercise of the business activity. For our purpose, we evaluated two different aspects connected to the concept of "social responsibility". The first aspect is an accounting-based perspective and examines the attitude of the manager in disclosing their non-financial information. The second aspect is an analyst-based perspective and examines the abilities of the companies to manage their environmental risks. As has already happened within similar studies concerning economic entities different from Italy, the methodology used follows the theoretical approach provided by Ohlson (2001).

2. Literature Review

The literature has paid close attention to the issue of value creation through CSR-related practices. In particular, these studies have laid emphasis on companies listed on regulated markets. Empirical studies show that the adoption by listed companies of CSR-related activities contributes positively to the growth of Shareholder Value (Godfrey et al. 2009). The consolidation of the Shareholder value represents one of the main objectives of these types of companies, which, in need of confidence on the part of investors to cope with capital requirements and to contain the negative effects of adverse events from a financial point of view (Ioannou and Serafeim 2010). This mitigating effect derives from the proactive approach of CSR regarding non-financial issues, which contributes positively to the fiduciary relationship between Enterprise and investors (Carroll and Shabana 2010). Also, the adoption of specific CSR strategies is value relevant for the MNEs that operate in different contexts (Halkos and Skouloudis 2017). Specifically, these strategies increase the legitimacy of the firms by the local community. The link between financial performance and non-financial practices is not defined in a univocal way within the main scientific literature on CSR. Specifically, the literature highlights how the link between CSR and financial performance (CFP) is dependent on external factors, such as the sector of activity, the geographic context and the corporate dimension (Wang et al. 2016). In order to define this link, the literature distinguishes between CSR, understood as the activity of reporting the practices implemented by the company, and sustainability, meant as a degree of negative impact on the environment in which the company operates (Baumgartner 2014; Van Marrewijk 2003). The need to distinguish these practices, albeit conceptually similar to each other, derives from the different managerial implications arising from their implementation (Clarkson et al. 2011).

Studies in support of the positive relationship between CSR and CFP are based on the theory defined *Resource Base View* (Torugsa et al. 2012; Wang and Sarkis 2017). Specifically, this theory finds application in the field of CSR studies according to two different perspectives of analysis (Branco and Rodrigues 2006). According to the "internal" perspective, through the use of specific company resources in these activities, companies can improve their competitive advantage through the sharing of knowledge and the progressive learning process between the parties involved. In fact, the development of new competences within the Organization entails the possibility to redefine the company strategies, according to principles aimed at improving the effectiveness and efficiency of the operations carried

out (Orlitzky et al. 2003). According to the "external" perspective, the competitive advantage arising from the adoption of socially responsible practices is closely linked to the company's reputation. The improvement of corporate reputation is one of the company's strategic levers that are not directly controllable by management. In the light of these considerations, the literature places attention on how CSR behaves, indirectly, better financial performance due to its ability to generate value over time (Siltaoja 2006).

Hypothesis 1 (H1). The experience in non-financial reporting impact in a positive way on the financial performance of the firms.

The topic of the environmental impact management has been the subject over the years of various measures implemented, at various levels, by national and international bodies.

The concept of environmental impact management covers a variety of issues including greenhouse gas management, water management, electrical resource management, waste management and pollution (Yadav et al. 2015). The relevance of the topic stems from the recent climate changes that have involved the entire global ecosystem. The legislative interventions concerning the economic activity implemented by the companies have mainly been the subject of CO₂ reduction. From the perspectives of the firms, their internal organization represents a typical problem to achieve environmental information (Maas et al. 2016) due the difficult to drive the flow of data through the supply chain (Seele 2017). This evidence impact in a several ways on the possibility to disclose this kind of information into the sustainability report made by the companies. Furthermore, previous empirical studies denote how the stock markets are influenced by the presence of bad news about the activities of the firms. For this reason, the management could adopt opportunistic behavior through greenwashing strategies (Huang 2013; Petrenko et al. 2016). This evidence derives from the risk to reduce the "reputational capital" of the firms due the negative perception by the stakeholder (Reimsbach and Hahn 2015).

Hypothesis 2 (H2). The level of environmental risk impact in a negative way on financial performance.

Among the main problems related to the relationship between the reporting activity and the environmental risk is the arbitrariness of the information produced by the management. In this regard, several studies show that the activities have been implemented, and the presumed results tend to be included within the reports (Castaldo et al. 2009; Fonseca 2010) The literature links these issues to the phenomenon of greenwashing by managers, which is the gap between the results obtained and the results presented (Walker and Wan 2012). Within the reports it is therefore possible to identify different degrees of effectiveness of the reports produced due to the different quality of the information presented and by the adoption of specific standards by the analysts (Michelon et al. 2015). In this sense, the certification by third parties of the documents produced proves to be a mean capable of certifying the quality of the information submitted by the reporting entities (Pflugrath et al. 2011). This topic is relevant in particular in controversial sectors. In fact, in these sectors, the CSR reporting its characterized for a general tendency by the manager to disclose only the positive non-financial information with positive impacts on the firm's reputation (Scalet and Kelly 2010). Also, the omissions of specific information represent one typical strategy adopted by managers to achieve legitimization by the stakeholders (Talbot and Boiral 2018).

Hypothesis 3 (H3). The negative effects connected to the environmental risks are higher than the positive effects connected to the experience in non-financial reporting.

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3. Sampling and Methods

The sample consists of 118 companies quoted at the Milan Stock Exchange on the date of 31/12/2016. The analysis was conducted on the exercises 2013, 2014 and 2015. In the selection of the sample, only companies with more than 500 employees operating within non-financial product sectors were considered.

The sample has the following configuration (Table 1):

Sectors	N.	%	
Basic Materials	6	5.08%	
Consumer Goods	15	12.71%	
Consumer Services	19	16.10%	
Health Care	9	7.63%	
Industrials	42	35.59%	
Oil and Gas	15	12.71%	
Telecommunication	12	10.17%	
Total	118	100.00%	

Table 1. Sample description.

Through the use of the AIDA database, the main financial economic indicators have been identified that can describe the companies considered. In addition, the Trucost indicator was extracted from the same database. The Trucost indicator is one of the main environmental risk indicators, and it is defined as the theoretical decrease in turnover resulting from adverse events related to these issues.

The willingness of companies to operate in a socially responsible manner was assessed through the collection of information concerning the number of years between the first publication of sustainability reporting and the period subject of investigation. The descriptive analysis of this figure shows how the Italian market is characterized by companies possessing a different degree of sensitivity than these issues.

4. Empirical Model

The methodology used follows the theoretical approach proposed by Ohlson about company evaluation (Feltham and Ohlson 1995; Ohlson 2001). The model supports the hypothesis that the market value of a company derives from the combination of financial business components and non-financial business components. This approach is widely used within the literature, particularly within the research strand concerning the impact of non-financial information on the performance of listed companies within regulated markets (Reverte 2016; Verbeeten et al. 2016; Charumathi and Ramesh 2017; Dornean and Oanea 2017).

In order to assess the impact of non-financial policies on the profitability of the company, a panel was carried out (Stock and Watson 2015). The analysis consists of 354 observations concerning 118 companies active in the years 2013, 2014, 2015.

The dependent variable considered within the model are the annual variation of the net profit, market value and turnover/dependent index. The choice of this variable derives from previous studies showing that CSR's increased profitability is positively influenced by the transfer of knowledge and competences between the human resources employed in these processes (McWilliams and Siegel 2001). In going to define the independent variables, we proceeded to distinguish the variables of type financial from those of non-financial one. The variables of type financial identified within the model are earnings per share and ROE. The choice to use these variables derives from the different degree of information of these variables as regards different aspects of the business. The two variables represent respectively the profitability on the market of the volume of shares issued by the company, net of the shares of privileged type, and the profitability of the nominal value of the share capital subscribed by the shareholders. Non-financial independent variables are the expertise and environmental risk

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indicator associated with the Trucost database. The choice to use these variables stems from the different nature of these variables, as the first one linked to the CSR activity is carried out by the management, while the second one is closely linked to the environmental impact of the company.

According to Li (2016), the endogeneity problem has always been one obstacle to understanding the true relationship between different aspects of empirical corporate finance. However, several methods were highlighted by the previous literature to mitigate and solve these problems. Specifically, in our research, we used a control variable called SIZE. According to previous studies (Dang et al. 2018), the variable SIZE consists in the natural logarithm of the average number of employees involved by the companies in each year of analysis. The choice to use the natural logarithm is connected to the high level of heterogeneity that characterize the sample in term of employees (Table 2).

Variables	Description	Mean	Median	Min	Max	SQM
ROE	Return on equity	-0.089	6.760	-760.000	59.500	50.400
TRU	Environmental risk provided by Trucost	3.620	2.230	0.370	35.600	5.210
EPS	Earnings per share	1.080	0.228	-17.900	65.000	5.050
EXP	Year from the first non-financial report	2.250	0.000	0.000	24.000	4.440
SIZE	Natural logarithm of employees	8.110	7.910	1.610	13.300	2.350
TURN	Variation from period T-1 to T of the Turnover/Employees ratio	22.700	1.750	-137.000	1250.000	153.000
NET PROFIT	Variation from period T-1 to T of the Net profit. Scale reduction through logarithm.	0.145	0.453	-20.700	19.200	5.760
MKT VALUE	Variation from period T-1 to T of the Market value. Scale reduction through logarithm.	0.645	0.652	-24.200	22.400	6.390

Table 2. Descriptive analysis of the variables.

The three models object of analysis have the following functional form:

$$DV = \alpha + \beta_1 ROE_{i,t} + \beta_2 EPS_{i,t} + \beta_3 TRU_{i,t} + \beta_4 EXP_{i,t} + \beta_5 SIZE_{i,t} + \epsilon$$

5. Results

In order to evaluate the relationship between the variables considered, their linear correlation has been calculated.

The correlation analysis determines how the EPS variable is strongly correlated to the dependent variable TURN. The positive relationship between the two variables derives from the greater aptitude of the companies with a high turnover to distribute dividends among the shareholders. The variable TURN presents conflicting results regarding CSR issues, as it is positively correlated to the variable EXP and negatively related to the variable TRU. The result shows how companies that are more likely to generate income tend to report their non-financial activities among members, while companies with lower invoicing are those exposed to a higher risk of type environmental. The other dependent variables MKT VALUE and NET PROFIT are negatively correlated to EXP and TRU (Table 3).

	ROE	TRU	EPS	EXP	SIZE	NET PROFIT	MKT VALUE	TURN
ROE	1.000	0.069	0.096	0.072	0.121	0.015	0.002	0.084
TRU		1.000	0.007	0.301	0.126	-0.076	-0.079	-0.045
EPS			1.000	0.187	0.279	0.008	-0.027	0.585
EXP				1.000	0.298	-0.157	-0.159	0.094
SIZE					1.000	-0.069	-0.068	0.166
NET						1.000	0.763	0.043
PROFIT						1.000	0.763	0.043
MKT							1.000	0.039
VALUE							1.000	0.037
TURN								1.000

Table 3. Correlation analysis.

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The panel analysis denotes how EXP and TRU impact in different ways on the dependent variables. The first model highlights how the NET PROFIT is not influenced by the EXP and by the TRU. The second model highlight how the TRU impact in a positive way on the MKT VALUE. Finally, the TURN is influenced in a positive way by the EXP and in a negative way by the TRU. According to previous literature about greenwashing, the variable TRU has a negative beta greater than the variable EXP. The result shows how the negative impact of the environmental risk associated with the company can affect more than the benefits associated to the non-financial reporting activity (Table 4).

	NET PROFIT		MKT VALUE		TURN	
	Coeff.	p-Value	Coeff.	p-Value	Coeff.	p-Value
Const	-16.366	0.000	-15.235	0.00	3.20	0.60
ROE	0.120	0.064	-0.001	0.91	-0.008	0.52
TRU	0.212	0.520	1.337	0.00	-2.49	0.00
EPS	-0.250	0.552	-0.008	0.97	3.06	0.00
EXP	0.181	0.620	-0.229	0.60	1.37	0.06
SIZE	1.744	0.000	1.432	0.00	0.16	0.82
R-Squared	0.0	68	0.	78	().77

Table 4. Panel analysis.

6. Conclusions

The SRI theme assumes a central role within the recent evolutions of the financial markets because of the increased sensitivity of investors towards these issues (Qiu et al. 2016). The recent global scandals in the field of greenwashing have highlighted how CSR reporting activity may not follow an actual business orientation to environmental sustainability. The potential divergence between the two aspects linked to sustainability derives from the voluntary nature of this type of reporting which has marked the Italian economic and entrepreneurial system.

The three hypotheses have been verified in the empirical model. This work highlights how reporting and environmental risk contribute differently on the company's ability to generate value for shareholder. As evidenced in the literature concerning financial markets rather than the Italian one, the activity of sustainability reporting is a tool able to predict the improvement of the company's capacity to generate Income over time. Moreover, even in the Italian context, it emerges how the environmental risk associated with the economic activity is negatively linked to the company's capacity to generate income. The result appears to be in line with what is shown in the most recent literature, which shows that the lack of control of the environmental impact of the activity carried out has negative implications on the economic-financial performance.

The managerial implications connected to our research consist in the opportunity for the analyst to provide further information regard the environmental impact of the firms. In fact, according to previous studies, the manager usually prefers to disclose only the positive information (Scalet and Kelly 2010). In this sense, the existence of a sustainability report is not a guarantee of good practices implemented by the firm.

From a theoretical point of view, the transposition into the Italian legal system of Directive 95/2014 represents an important instrument aimed at homogenizing the information produced by the companies subjected to this obligation. The harmonization of the information produced, as well as the subsequent certification of these budgets by external actors, represents an instrument capable of enabling the shareholder to carry out comparison activities between investments having similar potential features. In fact, before the introduction of this rule, the Community financial markets presented different qualitative levels about CSD (Mio and Venturelli 2013). Moreover, the possibility afforded by the legislator to adopt the IIRC model can contribute favorably to a greater transparency in socially responsible activities implemented by the management and the consequent financial implications.

Conflicts of Interest: The authors declare no conflict of interest.

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