THE VALUE RELEVANCE OF FIRMS' ANTI-BRIBERY AND CORRUPTION EFFORTS THE ITALIAN EVIDENCE

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Abstract

In this paper, we utilized a sample of Italian companies to explore the influence of firms' Anti-Bribery and Corruption efforts on firm value. On a sample of 47 Italian listed companies followed by Asset4 (Thomson Reuters business collecting corporate social responsibility data) during period 2002 to 2013, we investigate the relevance of information related to firms' Anti-Bribery and Corruption efforts in explaining stock price through the accounting-based valuation model developed by Ohlson (1995). Results corroborate empirical evidence of a positive correlation between efforts made by firms in avoiding bribery and corruption during operations (i.e., whether a company describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices at all its operations) and stock price.

Note from the Authors: Although this paper is the result of an analysis discussed and shared by the authors in all of its parts, in order to highlight the contribution, this is referred as follows: Paragraphs 1 and 2 are attributed to Marco Fazzini, Paragraphs 3 and 4 are attributed to Lorenzo Dal Maso, while Paragraph 5 is a common part shared between the two authors

Keywords: Asset, Market, Value Relevance, Bribery, Corruption, Employee Training

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1 Introduction

In recent years, corporate financial disclosure has become one of the topics in accounting theory which is most often and most widely investigated. Corporate disclosure, defined as "any deliberate release of financial and non-financial information, whether numerical or qualitative, required or voluntary, through formal or informal channels" (Gibbins et al., 1990, p. 122), is considered to be an important activity, as it facilitates communication between management and capital providers and is thought to mitigate information asymmetry problems and agency conflicts (Akerlof, 1970; Rothschild and Stiglitz, 1976).

Recently, there has been a growing interest in corporate non-financial disclosure; that is, Corporate Social Responsibility (CSR) reporting, which represents additional disclosures provided mainly on a voluntary base (see Dhaliwal et al., 2014 for an overview of different countries' rules on CSR reporting). CSR reporting has attracted a large amount of academic interest with a special concern on the role that such disclosures play in firm valuation (Moser and Martin, 2012). During recent years, firms have demonstrated strong commitment in providing information regarding firms' environmental and social impact on society thus resulting in a higher level of social disclosures (see Ioannou and Serafeim, 2012). In other words, an increasing number of companies have started to disclose non-financial information related to their commitment to environmental preservation, human rights protection, as well as employees and social welfare because it is well-recognized that investors and intermediaries (i.e., buy and sell-side analysts) in capital markets increasingly integrate environmental, social and governance (ESG) data in their valuation models, creating demand for sustainability reporting (Eccles et al., 2011). As a result, firms establish a positive corporate image throughout society, and this creates reputation capital which can reduce the threat of regulation (Maxwell et al., 2000). However, there is social information that has been less investigated on a micro level which is strictly related to Bribery and Corruption.

With this term, even if it is not easy to define, we refer to "the act by which 'insiders' profit at the expense of 'outsiders' " (Evans, *The cost of corruption*[1]), or commonly, the abuse of public power for private gain (e.g., Lapalombara, 1994; Habib and Zurawicki, 2002; Aguilera and Vadera, 2008; Alon and Hageman, 2013). However, this does not mean that corruption exists only within public sector but in fact it is a practice that is well-embedded into the private business. That is the reason why during recent years, firms demonstrated a strong commitment in

[1] Accessible at: http://www.tearfund.org/webdocs/Website/Campaigning/Policy%20and%20research/The%20cost%20of%20corruption.pdf

trying to reduce and avoid bribery and corruption in their operations.

However, even if it is well recognized that "Corruption is increasingly viewed as a significant impediment to economic development" (Healy and Serafeim, 2014, p. 2), research on corruption has focused on its country level causes and consequences, leaving many questions unanswered at firm level (Healy and Serafeim, 2014). Especially, while managers are likely to understand the impact that Bribery and Corruption might have on a firm's reputational capital, it is not clear whether investors are able to understand bribery incident can decrease firm competitiveness (Serafeim, 2013). Therefore, starting from this premise, our study aims to investigate the value relevance of firms' Anti-Bribery and Corruption efforts on the Italian scenario. That is, based on the model of Ohlson (1995) which is considered to be the conventional approach used to examine value relevance of disclosure (i.e., non-financial information) in accounting-based market research – we investigate whether the market gives a relevance to information related to a firm's effort in eliminating Bribery and Corruption from its operations.

For the purpose of our research, we select an Italian sample of listed companies followed by Asset4 during period 2002 to 2013. We decided to investigate the market value of such information on the Italian market because according to the Corruption Perception Index (CPI) (2014), an indicator created by Transparency International (TI) which ranks countries and territories based on how corrupt their public sector is perceived to be, Italy ranks 69th over 175 countries, which is one of the latest position if we compare this result on a European Union and Western Europe base[2]. For this reason, Italy ratified the Council of Europe (COE) Criminal Law and Civil Law Conventions on Corruption in June 2013. That is, as a result of serious corruption-related concerns reflected by perception surveys and by the number of high-level corruption cases investigated, a new set of anti-corruption reforms was launched by the Italian Government in 2012 (European Commission, 2014). For the above motivations, we consider Italy to be a good experimental environment in which to investigate our research question (i.e., is firm's effort in avoiding bribery and corruption from its operations correlated with stock market prices? If so, in which manner?).

Results in table 6 show that firms which describe, claim to have or mention processes in place to avoid Bribery and Corruption practices in all of their operations have a stock market price higher with respect to those which do not provide any information (significance level $p<0.01$). This result is robust even if we use a different dependent variable (DV) or different period of analysis. Therefore, our results provide empirical evidence that in the Italian scenario, firms' Anti-Bribery and Corruption efforts are positively correlated with stock market prices.

To explore the issues outlined above, the remainder of the paper is organized as follows: section 2 provides a brief review of relevant literature, section 3 describes the nature of our data and the methods we employed, while results of our analyses are reported in section 4. Finally, we offer major findings, policy implications, and some concluding remarks in section 5

2 Literature review

The idea underpinning our paper is that if a company describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices in all its operations this should be considered as a sort of firm's accountability and sustainability behavior. That is, firms disclose information on a voluntary base in order to obtain a benefit from a market perspective.

The empirical body of literature on disclosure features analyzes a range of issues, including the determinants of voluntary disclosure and compliance with regulations, the economic and market consequences of disclosure, and analyst coverage (Hassan and Marston, 2010). Many researchers have argued that the possession and provision of high-quality information may reduce the volatility of stock returns and the cost of equity, as well as increase firm value (Lambert et al., 2007; Lang et al., 2003). In contrast to these positive outcomes, information disclosure has also been shown to have some negative effects. Specifically, information disclosed to competitors can increase costs of compliance, as well as costs associated with lost competitiveness (Hassan et al., 2009). Moreover, disclosure may enhance competitors' market positions and, as a result, damage a firm's competitiveness (Healy and Palepu, 2001). Nevertheless, recent studies proved that firms engaged in CSR reporting generally take advantage of a lower cost of equity capital (Dhaliwal et al., 2011; Dhaliwal et al., 2014), lower earnings management (Kim et al., 2012), higher analyst following (Jo and Harjoto, 2014), more favorable analyst recommendations (Ioannou and Serafeim, 2014) and higher analyst forecast accuracy (Dhaliwal et al., 2012) among other positive outcomes.

However, this literature mostly focuses on CSR reporting, thus using overall score as a proxy of firm sustainability (i.e., KLD score) while, to the best of our knowledge, no previous studies apart from Healey and Serafeim (2014) focus attention on a firm's self-reported anticorruption efforts. Nevertheless, our study is different from that of Healy and Serafeim (2014) because we investigate the value relevance of firm's self-reported Anti-Bribery and Corruption efforts (i.e., if the company describes, claims to have or mentions processes in place to avoid Bribery and

[2] Source: http://www.transparency.org/cpi2014/ infographic /regional/european-union-and-western-europe.

Corruption practices in all its operations) while their tests examine whether these forms of disclosure (firm's self-reported Anticorruption efforts) are real efforts to combat corruption or are worthless chatter (Healy and Serafeim, 2014, p. 1). Therefore, our study is the first attempt, to the best of our knowledge, that investigates the value relevance of such non-financial information. Drawing on the previous literature on CSR reporting, and considered that we consider firms' Anti-Bribery and Corruption efforts to be a sort of firms' social proactivity, it is our conjecture that this information should be positively correlated with stock market price.

3 Methodology and variables

3.1 Sample selection

For the purpose of our study, we select all the Italian companies covered by Asset4 during period 2002-2013 which are, respectively, the first and last data on bribery and corruption available on Asset4. As reported in the table below, from the initial sample, we removed those without: (a) accounting and market information and (b) Asset4 corruption information. As a result, we obtained a sample composed of 47 firms and 436 firm-year observations.

Table 1. Sample selection process

	Sample selection procedure
543	The sample selection process considers as a starting point all the firm-year observations for Italian listed companies followed by Asset4, during 2002 and 2013, with fiscal year end in December.
n obs. dropped	**Reason for dropping**
7	Negative BPS
16	Missing Price
84	Missing Asset4 Information
436	Final sample – firm-year observations (47 firms)

3.2 Econometric model

In order to investigate the relevance of accounting and non-accounting information in explaining stock price, we adopt the accounting-based valuation model developed by Ohlson (1995) because it has become the conventional approach used to examine value relevance of disclosure (i.e., non-financial information) in accounting-based market research (Semenova et al., 2010).

In according with the previous literature (e.g., Cormier et al., 1993; Amir and Lev, 1996; Hassel et al., 2005; Cormier and Magnan, 2007; Habib and Azim, 2008; Moneva and Cuellar, 2009; Semenova et al., 2010; Cardamone et al., 2012; Clarkson et al., 2013; Iatridis, 2013), our model considers the market value of equity as a function of (a) book value, (b) accounting earnings and (c) non-accounting information. This non-accounting information is, in our model, related to Anti-Bribery and Corruption effort made by firms. Therefore, our regression models are as follows :

a) $$P_{it} = \beta_0 + \beta_1 BPS_{it} + \beta_2 EPS_{it} + \beta_3 B\&C_{it} + \beta_4 Year_{dummy} + \varepsilon_{it}$$

where, P_{it} is stock market price (Datastream code WC05001) of firm $_i$ at fiscal year-end$_t$; BPS_{it} is book value per shares of firm $_i$ at time $_t$ calculated as Common shareholders' equity (WC03501) divided by Common shares outstanding (WC05301); EPS_{it} is value of earnings per share of firm $_i$ at time $_t$, calculated as Net income (WC01706) divided by Common shares outstanding (WC05301), $B\&C_{it}$ is our variable of interest which is equal to 1 if firm $_i$ at time $_t$ describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices in all its operations, zero otherwise (SOCODP0127) while ε is the error term. Our regression analysis is run with a Fixed Effects estimation method and with standard error clustered by firm.

Then, in order to verify whether or not B&C disclosure influences the value relevance of accounting variables (i.e. EPS and BPS) we followed the approach used by Cormier and Magnan (2007) and Cardamone et al. (2012), by adding the two interaction terms as follows:

b) $$P_{it} = \beta_0 + \beta_1 BPS_{it} + \beta_2 EPS_{it} + \beta_3 B\&C_{it} + \beta_4 B\&C_{it} \times BPS_{it} + \beta_5 B\&C_{it} \times EPS_{it} + \beta_6 Year_{dummy} + \varepsilon_{it}$$

In both model (a) and (b) we expect a positive coefficient of BPS, EPS and B&C while at the same manner we do not posit any a priori expectation with respect to the interaction terms. According with previous studies (even if the non-financial information is different - e.g. Clarkson et al., 2013), a positive

coefficient of B&C (or B&C_T where used as alternative proxy of firms' anti bribery and corruption efforts) would mean that this information represents an incremental information.

Regarding the time of dependent variable (DV), even if it is common in value-relevance research to use stock price after the release of the financial statements, the current study uses stock price at the end of the fiscal year as DV. In fact, according to Habib and Azim (2008, p. 172) "post-year events could add noise to the measurement process". Moreover, since our sample is made up of big Italian companies, which are large enough to be followed by analysts, we expect that that financial statement information became public before the financial statements were released.

Then, in order to strength our results, we substitute our variable B&C with other information available on Asset4 which provides an alternative measure of firms' anticorruption efforts. This is Bribery and Corruption training, $B\&C\_T_{it,}$ which is equal to 1 if firm $_i$ at time $_t$ trains its employees on the prevention of Corruption and Bribery, zero otherwise (Datastream code SOCODP008). We decided to adopt this measure as an alternative proxy of firm's efforts because differently from other information available on Asset4 (e.g., Community Reputation Policy Elements/Bribery and Corruption – SOCODP0017), this evidences that firms are effectively enforced in avoiding corruption in its operations. In other words, having an Anti-Bribery and Corruption policy *per se* does not represent an effort while on the contrary, it could figure out as an opportunistic (i.e., strategic) manager's decision or simply anything other than worthless chatter (Healy and Serafeim, 2014).

4 Results

Table 2 and 3 report the sample distribution across industries, year and B&C information disclosed. Starting from table 2, it shows that the sample is quite stable along the years with the majority of observations that are related to Banks industry (97 observations). As reported, we can see that the percentage of firms that describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices it all its operations, i.e., B&C (1), is low for Bank industry (26.8%), Fixed Line Telecom (8.3%), Internet (14.3%) and Full Line Insurance (38.1%), while it is above or equal to 50% for all the other industries.

Table 2. Observations f distribution across industry/B&C disclosure

Industries (Datastream INDM)	B&C (0)	B&C (1)	Total	%Yes
Alt. Electricity	0	4	4	100.0%
Asset Managers	6	0	6	0.0%
Automobiles	5	7	12	58.3%
Banks	71	26	97	26.8%
Broadcast & Entertain	14	7	21	33.3%
Building Mat.& Fix.	6	10	16	62.5%
Clothing & Accessory	4	8	12	66.7%
Comm. Vehicles, Trucks	0	1	1	100.0%
Con. Electricity	14	24	38	63.2%
Defense	2	10	12	83.3%
Distillers & Vintners	4	0	4	0.0%
Electrical Equipment	0	7	7	100.0%
Exploration & Prod.	0	6	6	100.0%
Fixed Line Telecom.	11	1	12	8.3%
Food Products	2	7	9	77.8%
Footwear	3	0	3	0.0%
Full Line Insurance	13	8	21	38.1%
Gas Distribution	2	10	12	83.3%
Integrated Oil & Gas	5	7	12	58.3%
Internet	6	1	7	14.3%
Life Insurance	5	14	19	73.7%
Multiutilities	2	14	16	87.5%
Oil Equip. & Services	5	5	10	50.0%
Prop. & Casualty Ins.	10	0	10	0.0%
Publishing	8	16	24	66.7%
Restaurants & Bars	6	6	12	50.0%
Specialty Finance	3	7	10	70.0%
Tires	6	6	12	50.0%
Transport Services	5	6	11	54.5%
Total	*218*	*218*	*436*	*50%*

Table 3 reports the sample distribution with respect to year and *B&C* and *B&C_T* (as described in the previous paragraph) disclosure. It is noteworthy, that starting from year 2007 there has been an increase in the number of firms which both disclose information regarding processes in place to avoid Bribery and Corruption practices in all their operations and that train employees on the prevention of Bribery and Corruption. These results might be supported by the fact that with the Italian Legislative Decree n.32 (2.2.2007), following the European Commission (EC) 51/2003/CE directive, introduced new relevant features regarding the drawing up of Italian business reports, such as nonfinancial key performance indicators which are relevant to the particular business, including information relating to environmental and employee matters.

Table 3. Observations of distribution across year/disclosure

Year	B&C (0)	B&C (1)	*Total*	B&C_T (0)	B&C_T (1)	*Total*
2002	17	2	*19*	19	0	*19*
2003	18	3	*21*	21	0	*21*
2004	24	5	*29*	28	1	*29*
2005	32	2	*34*	32	2	*34*
2006	28	6	*34*	31	3	*34*
2007	18	20	*38*	28	10	*38*
2008	14	29	*43*	24	19	*43*
2009	14	28	*42*	20	22	*42*
2010	14	30	*44*	21	23	*44*
2011	14	31	*45*	18	27	*45*
2012	13	31	*44*	16	28	*44*
2013	12	31	*43*	15	28	*43*
Total	*218*	*218*	*436*	*273*	*163*	*436*

Table 4 reports the main descriptive statistics for the entire sample. The mean (median) value of price is 10.54 € (6 €) with a mean (median) value of EPS and BPS, respectively, about 0.43 € (0.28 €) and 8.14 € (3.97 €). Further, on average during period 2002-2013 there is 50% of the sample disclose information regarding B&C while there are only 37.3% of trained employees on the prevention of Bribery and Corruption.

Table 4. Main descriptive statistics

Variable	Obs	Mean	St. Dev.	Min	0.25	Median	0.75	Max
Price^{w}	436	10.5402	13.3642	0.403	2.5515	6.084	13.855	84.052
EPS^{w}	436	0.4333	1.4005	-5.1403	0.0617	0.2826	0.8154	6.1553
BPS^{w}	436	8.1448	11.3253	0.4072	1.6255	3.9706	10.5977	71.9691
B&C	436	0.5	0.5006	0	0	0.5	1	1
B&C_T	436	0.3739	0.4844	0	0	0	1	1

Price is the stock market price (WC05001) of firm $_i$ at fiscal year-end$_t$; BPS_{it} is book value per shares of firm $_i$ at time $_t$ calculated as Common shareholders' equity (WC03501) divided Common shares outstanding (WC05301); EPS_{it} is value of earnings per share of firm $_i$ at time $_t$, calculated as Net income (WC01706) divided by Common shares outstanding (WC05301); $B\&C_{it}$ is equal to 1 if firm $_i$ at time $_t$ describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices in all its operations, zero otherwise (SOCODP0127) while $B\&C\_T_{it}$ is equal to 1 if firm $_i$ at time $_t$ trains its employees on the prevention of Bribery and Corruption, zero otherwise (SOCODP008). ^{w}variables are Winsorized at the 1st and 99th percentiles to avoid the effects of outliers.

Moreover, table 5 reports Spearman's correlation coefficients. As reported, B&C and B&C_T are correlated at 52% between and negatively correlated with Price while positively with EPS and BPS (however statistically not significant). Therefore, results reported in table 6 provides a clearer picture regarding the relevance of firms' Anti-Bribery and Corruption efforts.

Table 5. Pearson correlation analysis

	Price^{w}	EPS^{w}	BPS^{w}	B&C	B&C_T
Price^{w}	1				
EPS^{w}	0.6954*	1			
BPS^{w}	0.7657*	0.4877*	1		
B&C	-0.0674	0.0076	0.0121	1	
B&C_T	-0.1519*	-0.081	-0.0037	0.5262*	1

Price is the stock market price (WC05001) of firm $_i$ at time $_t$; BPS_{it} is book value per shares of firm $_i$ at time $_t$ calculated as Common shareholders' equity (WC03501) divided Common shares outstanding (WC05301); EPS_{it} is value of earnings per share of firm $_i$ at time $_t$, calculated as Net income (WC01706) divided by Common shares outstanding (WC05301); $B\&C_{it}$ is equal to 1 if firm $_i$ at time $_t$ describes, claims to have or mentions processes in place to avoid Bribery and Corruption practices in all its operations, zero otherwise (SOCODP0127) while $B\&C\_T_{it}$ is equal to 1 if firm $_i$ at time $_t$ trains its employees on the prevention of Bribery and Corruption, zero otherwise (SOCODP008). ^{w}variables are Winsorized at the 1st and 99th percentiles to avoid the effects of outliers. * Significant at a 1% level.

At a glance, the R^2 values for all models are around 60%, indicating the good fitting of the model within the data. In particular, model (1), which is the result of application of the simple Ohlson (1995) model, provide evidence that the framework fits with the Italian data. The F-Statistic is significant in all cases, while multicollinearity does not affect our model, since the highest value is less than the threshold of 10 as proposed by Hair et al. (2009). In model (2) we added our variable of interest (B&C) without any interaction with EPS and EBS. As we can see from the positive change of Adj-R^2, this non-financial information is relevant in explaining stock price, and this information is positively correlated with the DV. That is, firms that describe, claim to have or mention processes in place to avoid Bribery and Corruption practices in all their operations have a level of price higher by 2.69 € with respect to those which not ($p<0.1$). Moreover, in model (3) we add the interaction terms of B&C with EPS and BPS in order to test whether this information influence accounting data (e.g., Cardamone et al., 2012). As reported, the B&C term increases in magnitude and statistical significance; that is, if all factors are equal, then the stock price of a company which provides evidence of its effort in reducing bribery and corruption from all its operations is 5.25 € higher with respect to those which do not provide any information (significance level $p<0.01$). Interesting to note the value of the interaction terms: if B&C is positive then those firms experience a lower value of BPS (significance level $p<0.01$) and EPS (no statistical significance). In other words, 1 € of shareholders' equity translates into 0.396 € (0.667 - 0.271) of market value for firms which provide evidence regarding B&C effort, meaning that stock prices are slightly related to firms' book value. Taken together this results allows us to confirm our initial conjecture that firms' evidence of Anti-Bribery and Corruption efforts are relevant and positively related with stock market prices. After, we strength our results by running our regression models (a) and (b) with a different horizon. That is, since as reported in table 4 there has been an increase in disclosure during 2007 we decided to drop all the observations before that date in order to test whether this influences our coefficients; as we can see from model (4) and (5), in table 6 the coefficient of B&C is still positive and statistically significant while there is a lack of significance on interaction terms of B&C and BPS (i.e. there is no differences in the value relevance of accounting variables between firms that disclose and not).

As a last, we tested whether prices are influenced by B&C information by using a different proxy of firm's Anti-Bribery and Corruption effort, which is whether firms train their employees on the prevention of Bribery and Corruption. As can be seen, models 6 output confirms our previous result (i.e., model 3); that is we have, in both the situations, a positive relevance of a firm's effort in preventing Bribery and Corruption and that the interaction term with BPS is negative and statistically significant.

Table 6. Regression selection process

	Predicted	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
BPS^w	+	0.656***	0.649***	0.667***	0.728***	0.742***	0.642**
		(2.77)	(3.09)	(2.98)	(8.99)	(9.74)	(2.62)
EPS^w	+	3.150***	3.123***	3.172**	1.652***	1.928**	3.035**
		(2.90)	(2.88)	(2.65)	(3.44)	(2.53)	(2.67)
B&C	+		2.697*	5.256***	4.263**	4.630**	
			(1.89)	(2.89)	(2.67)	(2.38)	
BPS^w x B&C	+/-			-0.271***		-0.0146	
				(-3.56)		(-0.19)	
EPS^w x B&C	+/-			-0.758		-0.633	
				(-0.86)		(-0.75)	
B&C_T	+						4.860***
							(2.80)
BPS^w x B&C_T	+/-						-0.373***
							(-4.02)
EPS^w x B&C_T	+/-						-0.819
							(-0.91)
Year Dummy		*Yes*	*Yes*	*Yes*	*Yes*	*Yes*	*Yes*
α	?	4.971**	5.062***	4.827**	5.254***	5.017***	5.358**
		(2.53)	(2.82)	(2.61)	(4.84)	(4.88)	(2.56)
N		436	436	436	299	299	436
adj. R^2		0.631	0.638	0.653	0.607	0.607	0.654
VIF-Max		1.75	2.76	4.14	2.71	4.15	3.49
F		85.41	147.8	203.6	206.6	571.8	272.1

The table presents the result of regression models (a) and (b). Each model is calculated via the Fixed Effect method with standard errors clustered by firm (XTREG procedure on STATA). The DV is the stock market price (WC05001) of firm $_i$ at fiscal year-end $_t$. The IDs are: BPS_{it} is book value per shares of firm $_i$ at time $_t$ calculated as Common shareholders' equity (WC03501) divided Common shares outstanding (WC05301); EPS_{it} is value of earnings per share of firm $_i$ at time $_t$, calculated as Net income (WC01706) divided by Common shares outstanding (WC05301); $B\&C_{it}$ is equal to 1 if firm $_i$ at time $_t$ describes, claims to have or mentions processes in place to avoid bribery and corruption practices at all its operations, zero otherwise (SOCODP0127) while $B\&C\_T_{it}$ is equal to 1 if firm $_i$ at time $_t$ trains its employees on the prevention of corruption and bribery, zero otherwise (SOCODP008). Model 1, 2, 3 and 6 cover the entire period of analysis (i.e. 2002/2013) while model 4 and 5 are restricted on 2007/2013. ^{w} variables are winsorised at the 1st and 99th percentiles to avoid the effects of outliers. * Significant at a 10% level (two-tailed); ** Significant at a 5% level (two-tailed); *** Significant at a 1% level. T-statistics are reported in parentheses.

5 Conclusion

Our study aimed at investigating the value relevance of firms' self-reported anticorruption efforts *in the Italian market during period 2002-2013. In particular, our study tested whether market values were impacted by such information disclosed regarding firms' efforts in eliminating Bribery and Corruption from their operations. Our analysis is based on a sample of Italian listed firms because our initial conjecture, corroborated by results reported in table 6, is that firms that evidence an extra effort in avoiding Bribery and Corruption are rewarded if they operate in a country with a low Corruption Perceptions Index (i.e., Italy ranks 69th on 175 countries).*

As table 6 shows, the information regarding firms' anti-bribery and corruption efforts is relevant and positively correlated with stock market price (statistically significant) even when we add the interaction terms with accounting variables (i.e. EPS and BPS). However, the difference in significance of

accounting variables due to the information disclosed is less robust to change in the time period analyzed while, at the same time, the coefficient of B&C maintain its positive and statistical significance even if we start the analysis in 2007. Moreover, in order to strengthen our results, we use an alternative proxy of firms' Anti-Bribery and Corruption efforts (i.e. B&C_T) and a different horizon of analysis and we find, in both situation, similar results; that is firms Bribery and Corruption efforts are positively correlated with stock market price.

Taken together our results provide empirical evidence that in the Italian scenario, firms' Anti-Bribery and Corruption efforts are rewarded and valued positively by the market. Therefore, managers should consider that any efforts made in avoiding Bribery and Corruption from their firm's operations are positively valued by the market. However, our results are sensitive to the horizon analyzed (i.e., 12 years) and the particular context (i.e., Italy). Finally, a limitation of our study is mainly that it investigates the relevance of information related to firms' Anti-Bribery and Corruption efforts without considering (i.e., controlling) for the quality of information disclosed, even if using a dichotomous variable allowed us to control for bias deriving from the lack of common standards. Future research should move in that direction; that is, the next analyses should focus on the role played by the quality of such information disclosed in mitigating information asymmetry with investors and intermediaries from other markets.

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