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Corporate social responsibility and payout decisions

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Abstract

Purpose – The purpose of this paper is to investigate whether and how corporate social responsibility (CSR) performance contributes to shape firms' payout policy. In particular, it examines the influence of CSR performance on payout level and payout channel choice (dividend payment or share repurchases). Additionally, it examines the moderating role of CSR performance in the relationship between dividends and share repurchases.
Design/methodology/approach – Using 397 European companies listed in the STOXX Europe 600 over the period from 2009 to 2014, the authors employ regression analysis to explore the link between CSR performance and payout policy.
Findings – The first result shows that firms with high CSR performance engage more in payout policy. Second, when choosing between paying dividends and repurchasing stocks, firms with high CSR performance tend to prefer share repurchases. Finally, CSR performance plays an important role in determining the relationship between dividends and repurchases. Specifically, dividends and share repurchases seem to be more substitutable among socially responsible firms.
Practical implications – Firms that are able to develop successful CSR strategies can generate tangible benefits for their shareholders in the form of high payout levels. An increase in CSR expenditure does not lead to cut or minimize the cash flow paid out to shareholders. In addition, government and regulators have to oblige or at least encourage socially responsible firms to use executive stock option that are dividend protected, in order to reduce distortions in dividend policy.
Originality/value – This is the first attempt to investigate the association between CSR performance and share repurchase activities.

Keywords Dividends, Share repurchases, Corporate social responsibility, STOXX Europe 600

Paper type Research paper

1. Introduction

The research on corporate social responsibility (CSR) has evolved from investigating the association between CSR activities and firm value (McGuire *et al.*, 1988; Clarkson, 1995; Lin *et al.*, 2009; Lee *et al.*, 2013) to several other relevant topics in corporate finance, such as the effect of CSR performance on the capital structure (Girerd-Potin *et al.*, 2011), agency conflicts (Waddock and Graves, 1997; Harjoto and Jo, 2011; Eccles *et al.*, 2012), information asymmetry (Cho *et al.*, 2013; Cui *et al.*, 2016; Lopatta *et al.*, 2016), financial constraints (Cheng *et al.*, 2014) and investment efficiency (Benlemlih and Bitar, 2016). In order to further extend these studies, we explore the link between CSR performance and payout policy.

Payout policy represents the ways in which companies return capital to their shareholders. It takes the form of either share repurchases or dividends. Over the period 1972-2000, Grullon and Michaely (2002) reveal that share repurchases have become not only an important form of payout but also the preferred form of payout for US corporations. They observe also that the majority of firms initiate cash payments through share buybacks. Even firms that started paying dividends show a higher propensity to repurchase stocks without cutting their dividends. Later, Von Eije and Megginson (2008) and Denis and Osobov (2008) investigate the evolution of payout policy in European countries. As in the USA, they assert that there is an increasing reliance on share repurchases at the expense of cash dividends. The natural question that imposes itself is what are the reasons for this change in corporate payout policy? Fama and French (2001)

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suggest that the recent trend in share repurchases can be explained by the rise of corporate governance and the development of executive and employee stock options plans. Given that socially responsible firms are shown to be associated with good corporate governance (Harjoto and Jo, 2011) and large holdings of stock options (Jian and Lee, 2015), we expect that payout policy may altered by the adoption of CSR strategies.

To better understand the extent to which CSR involvement may explain this change in corporate payout policy, we address the following related questions: are socially responsible firms more likely to engage in payout policy? Does CSR performance affect managers' decisions to use either dividend payments or share repurchase programs to pay out excess cash? Does socially responsible firms view dividend payments and share repurchases as substitute or complementary payout methods? Overall, our research is likely to provide a more complete picture of the payout behavior of socially responsible firms than what can be obtained from research focused exclusively on dividend payout (see Rakotomavo, 2012).

The main purpose of this study is to document the link between payout policy and a firm's engagement in CSR activities. In particular, we aim to examine the influence of CSR performance on firms' choice of payout channel (dividend payment or share repurchases) and payout level. Furthermore, existing studies (Grullon and Michaely, 2002; Skinner, 2008; Jain *et al.*, 2009; Andriosopoulos and Hoque, 2013) do not provide a unique prediction on what the relation must be between share repurchases and dividends. Hence, we aim to examine whether CSR performance may play a moderating role in this relationship.

A vast literature has investigated CSR activities of US companies. Nevertheless, relatively little research has yet been published studying CSR activities of non-US companies. In this paper, we construct a panel data set for non-financial listed companies in Europe STOXX 600, covering the period 2009-2014. During this era, the Europe provides a rich environment for examining payout policies. It consists of highly developed nations that is becoming increasingly unified politically and economically, but whose financial markets and taxations regimes remain largely segmented.

Our first result shows that firms with high CSR performance are more likely to increase their level of payout. Even by analyzing the two-payout channels separately, we find that the CSR performance positively affects the level of dividend payout as well as share repurchases in a statistically significant way. Second, when choosing between paying dividends and repurchasing stocks, firms with high CSR performance tend to prefer share repurchases. Finally, CSR performance plays an important role in determining the relationship between dividends and repurchases. Specifically, dividends and share repurchases seem to be more substitutable among socially responsible firms.

We contribute to the literature in several ways. First, there is a strand of research which focuses on the influence of CSR performance on various corporate policies as well as financial decisions (Girerd-Potin *et al.*, 2011; Cheng *et al.*, 2014) and investment decisions (Attig *et al.*, 2014; Benlemlih and Bitar, 2016). We enrich this research on CSR by providing empirical evidence about the role of CSR strategies in shaping firm's payout policy (payout level and payout channel choice). Second, to our knowledge, this is the first attempt to investigate the association between CSR performance and share repurchase activities. Unlike prior studies (Rakotomavo, 2012) that focus only on dividend payout, we include both dividend payout and repurchase payout in our work. Finally, the debate on the relationship between dividends and share repurchases is far from being resolved. Our study sheds further light on this unresolved puzzle: we prove that higher CSR performance lead to a substitution from paying dividends toward making share repurchase programs.

The remainder of the paper is organized as follows. Section 2 contains the literature review and hypothesis development. Section 3 describes in detail the research design with the sample, the models and measures of variables. Section 4 presents the empirical results and discussions. Section 5 concludes the paper.

2. Previous literature and hypotheses development

2.1 CSR performance and payout level

Prior literature supports different explanations of the impact of CSR engagement on payout policy, namely, agency theory (Jensen and Meckling, 1976; Jensen 1986), life-cycle theory (Mueller, 1972; Fama and French, 2001) and stakeholders' theory (Freeman, 1984).

First, according to the agency theory (Jensen and Meckling, 1976), managers tend to divert the firm's resources in ways that benefit themselves, but which are not in the best interests of shareholders. In the CSR context, managers have incentive to overinvest in socially responsible activities to improve their own private benefits, since it enhances their reputation as being good citizens. Barnea and Rubin (2010) highlight that insiders (managers and large blockholders) gain utility from being associated with high socially rated firms. For this reason, insiders may induce firms to increase CSR expenditures to a level that is higher than that which maximizes shareholders' wealth. Brown *et al.* (2006) point out that corporate philanthropy enables managers and directors to improve their image as socially responsible and provides them with other benefits (access to celebrities, tickets to events, gifts, etc.). In this case, corporate charity may represent an agency costs: insiders would have to bear the cost associated with the non-value maximizing CSR activities (Barnea and Rubin, 2010). Jensen (1986) indicates that payout policy may effectively contribute to solving such agency problem by limiting the amount of free cash flow available, which can be used by self-interested managers. Thus, payout policy may have a great influence on decisions and play a monitoring role as identified by Easterbrook (1984). The author concludes that dividend payout can be used as a mechanism to reduce the agency costs of management and to adjust the level of risk taken by managers. More generally, De Cesari and Ozkan (2015) emphasize, in their study of executive incentives, the prominent role of payout in mitigating agency conflicts and cash flow problems. Consequently, we expect that socially responsible firms may resort to increase the level of total payout in order to control managers' behavior and avoid expropriation.

Second, according to the life-cycle theory (Mueller, 1972; Fama and French, 2001), the payout policy progresses over the different life-cycle stages of the company. Firms, in the early life-stage, are shown to be associated with high financial constraints and more growth opportunities, which in turn reduce their ability to generate sufficient internally funds to pay out. In contrast, when firms reach the mature stage, their investment opportunities become smaller, resulting in a decline in growth and risk. This decrease gives rise to excess cash that can be distributed to shareholders (Grullon *et al.*, 2002). Banyi and Kahle (2014) provide recent supportive evidence on the life-cycle effect. They demonstrate that the likelihood of making any shareholder payouts (cash dividends or share repurchases) increase as firms mature. Thereby, mature firms tend to pay high dividends or repurchase stocks in order to avoid free cash flow problems. From a CSR view, the mature stage motivates managers to make socially responsible investments. Attig *et al.* (2013) assume that older firms are more likely to invest strategically in CSR activities since they are more likely to have the necessary resources and the managerial experience. As a conclusion, we expect that socially responsible firms, which are generally in the mature stage, are more prone to increase the level of payout.

Third, according to the stakeholders theory (Freeman, 1984), the responsibility of managers is not engaged exclusively in respect of shareholders and maximizing their wealth. The company must manage the interests of different stakeholders in a responsible manner, regardless of borders between them. Thus, in this perspective, adopting a socially responsible behavior is addressing the need to maximize business goals through its profitability to the benefit of not only shareholders but also other partners (Allouche and Laroche, 2005). More precisely, Gallo (2004) classifies CSR into external responsibility and internal responsibility. One of the internal responsibilities is the fairness of wealth

distribution between those who have contributed to its creation. Therefore, socially responsible firms address payout policy not only from the perspective of wealth creation but also from the perspective of the ethics of wealth distribution (He *et al.*, 2012).

Based on these theoretical and empirical arguments, we suggest that firms with high CSR performance are more likely to increase their level of payout. Therefore, we formulate our first hypothesis as follows:

H1. CSR performance increases payout level.

2.2 CSR performance and payout channel choice

Grullon and Michaely (2002) observe that the majority of US firms initiate cash payments through share buybacks. Even firms that started paying dividends show a higher propensity to repurchase stocks without cutting their dividends. Later, Von Eije and Megginson (2008) investigate the evolution of payout policy in the European Union. As in the USA, they illustrate that the proportion of European firms paying cash dividends declines, while total real dividends paid increase and share repurchases surge. Therefore, what are the causes of this change in corporate payout policy? To address this question, we draw on the insight from Fama and French (2001), who suggest that the recent trend in share repurchases can be explained by the rise of corporate governance and the development of executive and employee stock option plans.

We extend this line of research by investigating an additional factor, CSR, which may affect payout channel choice. According to Fama and French (2001), we consider two reasons for why CSR may influence managers' decisions to use either cash dividends or share repurchases. First, CSR performance is associated with large holdings of stock options, leading to a strong preference for share repurchases. Second, CSR performance is associated with good corporate governance, leading to abandon the monitoring role of cash dividends.

Our discussion focuses on two stream of research. The first stream of research examines the relationship between CSR performance, stock options and payout channel choice. As first predicted by Lambert *et al.* (1989), the adoption of stock option plans reduces the level of dividend payments, relative to expected levels. Fenn and Liang (1997) behold that, unlike dividends, share repurchases enable company to distribute the excess cash without diluting the per-share value of the stock. When manager holds stock options, he will have interest to preserve the stock price. Hence, a company that compensates its managers with a high number of stock options may find it beneficial to announce a share repurchase program rather than pay dividends. This is also confirmed by Fenn and Liang (2001), Cuny *et al.* (2009), Sharma (2011) and Burns *et al.* (2015), who find a negative association between stock options and dividends, and a positive association between stock options and share repurchases. Additionally, based on a set of firms from the UK, Germany, France, Italy, the Netherlands, and Spain, De Cesari and Ozkan (2015) report that the proportion of share buybacks in total payout increases as executive stock option holdings and stock options delta increase. Therefore, the existence of large number of stock options seems to reflect the preference for share repurchases. In the CSR context, Mahoney and Thorn (2006) explore the relationship between executives' compensation structure and firm's social and environmental actions, using a representative sample of Canadian firms. Specifically, they obtain a positive association between stock options and CSR. Firms reward manager for his effort in improving CSR practices, as high CSR levels contribute to enhance shareholders' value. Recently, Jian and Lee (2015) mention that CEO composition, including stock options, is positively associated with normal CSR, suggesting that managers receive higher compensation levels for value-increasing CSR investments. Consequently, the fact that socially responsible firms compensate their executives with a large number of stock options may potentially influence firms' preferences for share repurchases rather than dividend payments.

The second stream of research examines the relationship between CSR performance, corporate governance and payout channel choice. John *et al.* (2015) discuss the relation between the weakness in traditional corporate governance mechanisms and payout structure. They show that weakly governed firms exhibit higher propensity for dividend payments, since cash dividends are more effective than share repurchases at remedying agency problems. Although share repurchases offer more financial flexibility (Jagannathan *et al.*, 2000; Hoberg and Prabhala, 2009), it leave more discretion to the manager (Stephens and Weisbach, 1998; Chan *et al.*, 2010). Similarly, De Cesari (2012) studies the payout policy of Italian firms. He asserts that, the fraction of dividends in total payout is positively related to the wedge between the controlling shareholder's control rights and cash flow rights. One of the implications of this relation is that, when disgorging cash, controlled firms tend to prefer dividends over share repurchases in order to protect minority shareholders from expropriation. Conversely, Caton *et al.* (2016) argue that, in order to drive better performance, strongly governed firms are more likely to choose share repurchases over cash dividends. This can be explained by the fact that these firms have sufficient levels of monitoring and they do not need to pre-commit to cash dividends. In this case, share repurchase programs are more value increasing for strongly governed firms. Thus, firms' payout channel choice depends on their particular governance environment. In the CSR context, Harjoto and Jo (2011) maintain that the CSR involvement is positively related to more effective governance characteristics, including board independence, institutional ownership and analyst following. Companies use governance mechanisms, along with CSR commitment, to align managerial and shareholders' interests. Accordingly, we expect that when paying out cash, socially responsible firms, which are associated with better corporate governance, tend to prefer share repurchases to dividends.

Taken together, the discussion above suggests that, when choosing between share repurchase and cash dividends, firms with high CSR performance tend to prefer repurchases. Stated formally, we hypothesize that:

H2. CSR performance is associated with a preference for share repurchases.

2.3 CSR and substitution hypothesis

The existing literature provides antagonistic and inconclusive evidence on the relationship between dividends and share repurchases. For example, Grullon and Michaely (2002) and Skinner (2008) support the idea that share repurchases and dividend payments are substitutes. In contrast, based on NYSE firms, DeAngelo *et al.* (2000) explore the link between the decline in special dividends and the surge in share repurchases. They do not find evidence that special dividends are displaced by share repurchases, and so no evidence for a substitution effect. This result is consistent with Dittmar (2000), who analyze the motives to repurchase stocks. The author notes that companies repurchase stocks to distribute excess cash, take advantage of potential undervaluation and alter the leverage ratio. Nevertheless, share repurchases are not a replacement for dividend payments. Moreover, Jagannathan *et al.* (2000) shed light on the manner in which share repurchases and dividends are used by US firms. They show that firms tend to use repurchases to pay out temporary, non-operating cash flow, while dividends are used to pay out permanent, operating cash flow. Therefore, share repurchases are complements rather than substitutes to dividends. In the context of the IPO market, Jain *et al.* (2009) indicate that firms demonstrate a strong preference for repurchases over dividends. However, they point out that dividends and share repurchases are not substitutes, and that they represent two distinct forms of payout policy adopted by different types of firms under different circumstances. Last but not least, Andriosopoulos and Hoque (2013) find that differences in country characteristics are important in defining the nature of the relation between share

repurchases and dividends. For instance, in France, share repurchases substitute dividends whereas, in the UK and Germany, share repurchases and dividends seem to be complements rather than substitutes.

In summary, despite the controversial empirical evidence, the question of the extent to which share repurchases and dividends are interchangeable is a central issue. That is why, our research tends to examine whether the relation between dividends and share repurchases is affected by the adoption of CSR strategies.

Identifying the characteristics of socially responsible firms will allow us to better understand whether these firms view dividends and share repurchases as substitute payout methods. First, firms with high CSR performance are generally more large and profitable, as highlighted by Borghesi *et al.* (2014) and Rakotomavo (2012). As for Grullon and Michaely (2002), they document that large firms finance their share repurchase programs at the expense of dividends. Employing Lintner (1956) model, they notice a negative correlation between share repurchases activities and dividend forecast errors, meaning that large firms are substituting share repurchases for dividends. Therefore, we expect that socially responsible firms are more prone to substitute share repurchases for dividends. Second, as discussed above, firms with high CSR performance compensate their executives with large number of stock options (Mahoney and Thorn, 2006; Jian and Lee, 2015), leading to high propensity to pay cash through share repurchases (De Cesari and Ozkan, 2015). Third, firms with high CSR performance are shown to be associated with good corporate governance (Harjoto and Jo, 2011), which induce firm to abandon the monitoring role of cash dividends and to increase share repurchase announcements (John *et al.*, 2015; Caton *et al.*, 2016).

Based on this discussion, we postulate that dividends and share repurchases seem to be more substitutable in socially responsible firms. Stated formally, we hypothesize that:

H3. CSR performance moderates the relationship between dividends and share repurchases in that the substitution effect is stronger for high CSR performance.

3. Research design

3.1 Data and sample selection

The sample in this study consists of European companies listed in STOX Europe 600 index between 2009 and 2014. The sample includes 15 supersectors and 17 countries. Firms in the financial sector, such as banks and insurance companies, are discarded from the study. We drop also firms with missing data. The final panel covers 397 firms, which corresponds to 2,382 firm-year observations.

Table I summarizes the sample composition. Panel A presents the distribution of firms across sectors. Three sectors, industrials, consumer goods and consumer services represent a large portion of the total number of firms, although the remaining sectors (such as basic materials and healthcare) are also populated. Panel B presents the distribution of firms across countries. Approximately 60 percent of the sample originates from UK, France, Germany and Switzerland.

For ours empirical analysis, we extract accounting and financial data from the DATASTREAM database. Data concerning CSR performance and share repurchase activities derive from Thomson Reuters-ASSET 4. ASEET 4, a Thomson Reuters business, provides objective, relevant, and systematic environmental, social and governance (ESG) information to professional investors, interested in integrating social responsibility features into their investment decisions.

As Cheng *et al.* (2014), we construct an aggregated CSR index, by using the annual environmental, social and corporate governance scores obtained from Thomson Reuters-ASSET 4. The environmental score measures a company's impact on living and non-living natural systems, including the air, land and water, as well as

Panel A: sample distribution across sectors

ICB code	Industry	*n*	%
0001	Oil and Gas	22	5.54
1000	Basic materials	41	10.33
2000	Industrials	114	28.72
3000	Consumer Goods	63	15.87
4000	Health Care	32	8.06
5000	Consumer Services	64	16.12
6000	Telecommunications	18	4.53
7000	Utilities	23	5.79
9000	Technology	20	5.04
	Total	397	100

Panel B: sample distribution across countries

Country	*n*	%	Country	*n*	%
Austria	3	0.76	Luxembourg	2	0.50
Belgium	9	2.27	Netherlands	19	4.79
Denmark	13	3.27	Norway	10	2.52
Finland	14	3.53	Portugal	3	0.76
France	62	15.62	Spain	16	4.03
Germany	44	11.08	Sweden	25	6.30
Greece	2	0.50	Switzerland	30	7.56
Ireland	5	1.26	UK	124	31.23
Italy	16	4.03			

Table I.
Sample composition

completes ecosystems. The social score measures a company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices. The corporate governance score measures a company's systems and processes, which ensure that its board members and executives act in the best interests of its long-term shareholders. In the absence of theoretical guidance about how to weight each measure, we follow the convention established by Sharfman (1996), Waddock and Graves (1997). We assign equal importance to each of the three pillars. Thus, CSR performance is the equally weighted average of the environmental, the social and the governance score. In order to alleviate the potential effects of extreme observations, we winsorize the data at the 1st and 99th percentile levels.

3.2 Model specification

In this section, we develop a methodology to examine whether and how CSR performance contributes to shape firms' payout policy. In particular, we focus on three fundamental questions: payout level, payout channel choice and substitution hypothesis. Our point of departure in the multivariate analysis is the following Model (1) for estimating the relationship between CSR performance and the level of payout:

$$TP_{i,t} = \alpha_0 + \alpha_1 CSR_{i,t} + \alpha_2 ROA_{i,t} + \alpha_3 MTB_{i,t} + \alpha_4 LEV_{i,t} + \alpha_5 CASH_{i,t} + \alpha_6 SIZE_{i,t} + \sum_{j=7}^{12} \alpha_j YEAR_{i,t} + \sum_{K=13}^{21} \alpha_K INDUSTRY_{i,t} + \sum_{L=22}^{38} \alpha_L COUNTRY_{i,t} + \varepsilon_{i,t} \quad (1)$$

where TP represents total payout (dividends and share repurchases); CSR is corporate social responsibility performance. Since our first hypothesis predicts that firms with high CSR performance are more likely to increase their level of payout, we expect $\alpha 1$ to be positive and significant. Following previous studies (Renneboog and Trojanowski, 2011; De Cesari, 2012; De Cesari and Ozkan, 2015), we introduce several control variables in our model. As a proxy

for profitability, we use return on assets (*ROA*). To measure growth opportunity, we employ market to book (*MTB*). We also include leverage (*LEV*), cash holdings (*CASH*) and firm size (*SIZE*). Finally, we add dummy variables to control for year (*YEAR*), industry (*INDUSTRY*) and country (*COUNTRY*) fixed effects. All variables are defined in Table AI.

To test our second hypothesis, we use the dependent variable, *PREP*, which reflect the fraction of total payout that is paid out through share repurchases. Specifically, we develop the following model to better understand whether CSR performance may influence managers' preference for share repurchases rather than dividend payments:

$$PREP_{i,t} = \alpha_0 + \alpha_1 CSR_{i,t} + \alpha_2 ROA_{i,t} + \alpha_3 MTB_{i,t} + \alpha_4 LEV_{i,t} + \alpha_5 CASH_{i,t} + \alpha_6 SIZE_{i,t} + \sum_{j=7}^{12} \alpha_j YEAR_{i,t} + \sum_{K=13}^{21} \alpha_K INDUSTRY_{i,t} + \sum_{L=22}^{38} \alpha_L COUNTRY_{i,t} + \varepsilon_{i,t} \quad (2)$$

See Table AI for variable definitions.

Finally, to test our third hypothesis, we employ the dividend forecast error, *ERROR*, as our dependent variable. The dividend forecast error is the deviation from the expected level of dividend payment. We estimate the variable *ERROR* following the model developed by Grullon and Michaely (2002). In their model, the authors build on the analysis of Lintner (1956), who posit that dividend policy is a function of targeted payout policy and the speed of adjustment of current dividends. For each firm, we calculate the dividend forecast error as:

$$ERROR_{i,t} = \left[\Delta DIV_{i,t} - \left(\beta_{1,i} + \beta_{2,i} EARN_{i,t} + \beta_{3,i} DIV_{i,t-1}\right)\right] / VM_{i,t-1}$$

where $\Delta DIV_{i,t}$ is the change in dividends of firm i in year t; $EARN_{i,t}$ the earnings of firm i in year t; $\Delta DIV_{i,t-1}$ the dividend level of firm i in year $t-1$; $VM_{i,t-1}$ the market value of equity of firm i in year $t-1$.

In line with Grullon and Michaely (2002), the model we propose to examine the relationship between dividend payments and share repurchases (*REP*) is the following:

$$ERROR_{i,t} = \alpha_0 + \alpha_2 REP_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 MTB_{i,t} + \alpha_6 LEV_{i,t} + \alpha_7 CASH_{i,t} + \alpha_8 SIZE_{i,t} + \sum_{j=9}^{14} \alpha_j YEAR_{i,t} + \sum_{K=15}^{23} \alpha_K INDUSTRY_{i,t} + \sum_{L=24}^{40} \alpha_L COUNTRY_{i,t} + \varepsilon_{i,t} \quad (3)$$

See Table AI for variable definitions.

A positive correlation between *REP* and *ERROR* signifies that share repurchases and dividend payments are complementary payout methods. Conversely, a negative correlation between *REP* and *ERROR* signifies that share repurchases and dividend payments are substitute payout methods. To investigate the impact of CSR performance on the relationship between dividend payments and share repurchases, we extend the previous analysis and include an interaction effect between *REP* and *CSR*.

Specifically, our regression is:

$$ERROR_{i,t} = \alpha_0 + \alpha_1 CSR_{i,t} + \alpha_2 REP_{i,t} + \alpha_3\, CSR_{i,t} \times REP_{i,t} + \alpha_4 ROA_{i,t} + \alpha_5 MTB_{i,t} + \alpha_6 LEV_{i,t} + \alpha_7 CASH_{i,t} + \alpha_8 SIZE_{i,t} + \sum_{j=9}^{14} \alpha_j YEAR_{i,t} + \sum_{K=15}^{23} \alpha_K INDUSTRY_{i,t} + \sum_{L=24}^{40} \alpha_L COUNTRY_{i,t} + \varepsilon_{i,t} \quad (4)$$

See Table AI for variable definitions.

The regression coefficient α_2 is expected to be negative, suggesting that share repurchases are used as a substitute for dividends. According to the third hypothesis, the substitution effect is more pronounced among firms with high CSR performance. In this case, the regression coefficient α_3 should be positive.

4. Results

4.1 Descriptive statistics

Table II provides descriptive statistics for payout, CSR and other firm-specific variables. Panel A presents descriptive statistics for the entire sample, including the mean, minimum, first quartile, median, third quartile, maximum and standard deviation. Total payout shows a mean value of 4.15. Separately, the average value of dividend payout is 3.51, while the average value of repurchase payout is only 0.59. The figures are consistent with prior research (De Cesari and Ozkan, 2015), implying that dividend payments are larger and more common than share repurchases activities. The mean value of *PREP* is 11.85. This value indicates that 11.58 percent of distributed cash is paid out through share repurchases. The mean value of *ERROR* is −0.0086. Furthermore, the CSR has a mean value of 72.73. The standard deviation of CSR is 18,299, implying that significant variation exists across firms regarding the CSR involvement. Specifically, the distribution ranges from 6.85 for the least socially responsible firm to 96.08 for the most socially responsible firm. With regard to the control variables, the firms in our sample have an average a return on assets of 7.27, a market to book of 2.73, a leverage of 0.24 and cash holdings of 0.07.

Panel B presents the average values of the regression variables for each of the European countries represented in our sample. The country factor plays a role for many variables. In particular, CSR index is clearly different from one country to the next. Finland shows the highest index with an average score of 80.534, followed by Italy (79,491).

4.2 Regression results

Table III reports estimation results concerning the impact of CSR performance on payout level, as well as payout channel choice. In Model (1), we observe that the coefficient on CSR performance is positive and significant ($\alpha = 0.0117$, $p < 1$ percent), suggesting that higher levels of CSR performance lead to higher levels of total payout. Our result confirms the prediction that we have drawn above: managers tend to increase the amount of payout as they invest more in CSR activities. There are several explanations of this significant relation. First, given that CSR involvement can be viewed as a source of conflicts between different stakeholders (Barnea and Rubin, 2010), socially responsible firms resort to increase the level of total payout in order to control managers' behavior and avoid expropriation (Easterbrook, 1984; Jensen, 1986). Second, socially responsible firms, which are generally in the mature stage (Attig *et al.*,2013), are more prone to distribute their earnings (Banyi and Kahle, 2014). Finally, socially responsible firms address payout policy not only from the perspective of wealth creation but also from the perspective of the ethics of wealth distribution (He *et al.*, 2012). Therefore, our first hypothesis is strongly supported.

As for control variables, *ROA*, *LEV* and *SIZE* are positively and significantly related to total payout (see also De Cesari and Ozkan, 2015). What these findings suggest is that shareholders are more likely to receive a payout from firms that are larger, more profitable and more levered. Consistent with Renneboog and Trojanowski (2011), we observe a negative association between *MTB* and total payout. High growth opportunities discourage companies from distributing capital to shareholders. However, we do not observe any significant effect of cash holdings on the level of total payout.

Separately, Models (1a) and (1b) show the impact of CSR performance on payout channels. A crucial finding is that the CSR performance positively affects the level of dividend payout as well as share repurchases in a statistically significant way.

Panel A: Summary statistics of the sample

Variable	Mean	Min.	Q_1	Median	Q_3	Max.	SD
DIV	3.5126	0.0000	1.8169	3.0814	4.7187	13.7746	2.6187
REP	0.5995	0.0000	0.0000	0.0000	0.3246	9.0341	1.5130
TP	4.1583	0.0000	2.1255	3.4240	5.4115	18.0868	3.2465
PREP	11.8540	0.0000	0.0000	0.0000	10.2628	100.000	24.0004
ERROR	−0.0086	−0.1053	−0.0156	−0.0052	0.0016	0.0708	0.0235
CSR	72.7353	6.8567	65.6500	78.3500	86.0833	96.0833	18.2989
ROA	7.2734	−0.4700	3.8700	6.3050	9.6400	19.9400	5.1068
MTB	2.7331	0.6700	1.3600	2.1500	3.3900	8.0050	1.9127
LEV	0.2490	0.0000	0.1414	0.2378	0.3512	0.6296	0.1530
CASH	0.0770	0.0000	0.0278	0.0547	0.0987	0.6865	0.0756
SIZE	15.5846	11.9291	14.7409	15.4599	16.3300	19.0259	1.1937

Panel B: average value of variables across countries

Variable	*DIV*	*REP*	*TP*	*PREP*	*ERROR*	*CSR*	*ROA*	*MTB*	*LEV*	*CASH*	*SIZE*
Austria	4.4325	0.2017	4.6342	5.1176	−0.0072	61.4138	4.5494	2.0406	0.2446	0.1201	15.4420
Belgium	4.2950	0.1647	4.5396	7.4119	−0.0021	77.9032	6.8735	2.1145	0.2550	0.0460	16.1204
Denmark	2.0518	1.0550	3.1630	29.3908	−0.0121	65.6598	9.0985	4.0313	0.2331	0.0669	15.2475
Finland	4.7945	0.2929	5.1054	5.8128	−0.0084	80.5340	6.5743	2.0001	0.2501	0.0745	15.0745
France	3.0234	0.2911	3.3376	8.1853	−0.0053	75.7315	5.1410	2.0294	0.2549	0.0633	15.8681
Germany	3.4651	0.2554	3.7793	5.5545	−0.0091	63.6411	6.0255	2.3567	0.2747	0.0766	15.8962
Greece	4.8090	0.0436	4.8526	7.2464	−0.0279	56.2647	11.1892	3.1113	0.2822	0.0348	14.9332
Ireland	4.4401	0.6323	5.0724	17.2480	−0.0056	62.7429	9.2943	4.6570	0.1596	0.1395	15.3475
Italy	4.7327	0.0922	4.8249	0.6744	−0.0041	79.4911	4.5975	1.7351	0.3298	0.0682	15.9934
Luxembourg	3.7116	0.3790	4.0906	6.5914	0.0006	68.0918	4.9208	2.3242	0.3557	0.0332	16.4114
The Netherlands	2.5194	1.0509	3.7159	16.8601	−0.0082	73.7112	6.6664	2.4090	0.2545	0.0692	15.6954
Norway	4.6789	0.5632	5.4423	12.2829	−0.0017	64.0942	7.4885	1.8198	0.2031	0.0745	15.6742
Portugal	4.7054	0.2185	4.9613	6.1475	−0.0017	72.9964	7.1028	3.3483	0.3117	0.0375	15.4712
Spain	3.6839	0.8990	4.6870	16.9895	−0.0089	71.9704	6.9040	2.7286	0.3331	0.0679	15.5674
Sweden	3.9549	0.3732	4.3895	4.2001	−0.0095	74.6758	8.1845	2.8106	0.2716	0.0597	15.5277
Switzerland	3.0933	0.8184	3.9169	17.7483	−0.0070	66.7044	9.2159	3.1544	0.1991	0.1230	15.7460
United Kingdom	3.5040	0.8776	4.4167	15.4278	−0.0116	75.8035	8.4773	3.2698	0.2271	0.0823	15.2969

Notes: Panel A presents descriptive statistics for the entire sample, including the mean, minimum, first quartile, median, third quartile, maximum and standard deviation. *DIV* is dividend payout. *REP* is repurchase payout. TP is total payout. PREP is preference for repurchases. *ERROR* is dividend forecast error. *CSR* is the annual corporate social responsibility performance. *ROA* is return on assets. *MTB* is market-to-book. *LEV* is leverage. *CASH* is cash holdings. *SIZE* is firm size. All variables are defined in Table AI; Panel B presents the average values of the regression variables for each of the European countries represented in our sample

Table II.
Descriptive statistics

	TP Model 1	*DIV* Model 1(a)	*REP* Model 1(b)	*PREP* Model 2
Constant	−2.0553** (−2.36)	−1.4905** (−2.18)	−0.5985*** (−3.69)	−7.9149*** (−3.26)
CSR	0.0117*** (4.29)	0.0071*** (3.32)	0.0014*** (2.66)	0.0327** (2.38)
ROA	0.0674*** (7.26)	0.0352*** (5.52)	0.0134*** (4.97)	0.1142** (2.40)
MTB	−0.0514** (−2.04)	−0.0439** (−2.27)	−0.0101 (−1.34)	−0.0697 (−0.50)
LEV	1.7590*** (5.49)	1.4098*** (5.59)	0.1688** (2.39)	1.9652 (1.59)
CASH	−0.1473 (−0.27)	−0.4813 (−1.31)	0.6563*** (3.73)	12.9906*** (4.00)
SIZE	0.3048*** (6.55)	0.2726*** (7.68)	0.0208** (2.07)	0.3542** (2.43)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	2,382	2,382	2,382	2,382
R^2	0.1799	0.2144	0.1085	0.1062

Notes: Models (1), (1a) and (1b): the dependent variables are total payout, dividend payout and repurchase payout, respectively. Model (2): the dependent variable is preference for repurchases. *CSR* is the annual corporate social responsibility performance. *ROA* is return-on-assets. *MTB* is market-to-book. *LEV* is leverage. *CASH* is cash holdings. *SIZE* is firm size. We include year, industry and country fixed effects. All variables are defined in Table AI. All the estimates have been carried out using cross-sectional time-series FGLS regression. *t*-statistic values are in the parentheses. **,***Significant at 5 and 1 percent levels, respectively

Table III.
CSR performance, payout level and payout channel choice

The estimating results provide further support for our first hypothesis: the development of CSR strategies increases managers' incentive for paying dividend and making share repurchase programs. This is in line with Rakotomavo (2012).

The results estimating Model (2), developed to analyze the link between CSR performance and managers' preference toward repurchases, are presented in Table III. We find a strong support for our second hypothesis: the estimated coefficient of CSR is positive and statistically significant ($\alpha = 0.0327$, $p < 5$ percent), implying that the preference for repurchases *PREP* is a positive function of the CSR performance. This finding is consistent with our expectation: firms with high CSR performance are typically characterized by large holdings of stock options (Mahoney and Thorn, 2006; Jian and Lee, 2015) and good corporate governance (Harjoto and Jo, 2011), which in turn affects managers' decisions to use share repurchase programs rather than dividend payments.

With regard to control variables, *SIZE*, *ROA* and *CASH* are positively and significantly related to *PREP*. This indicates that firms tend to prefer share repurchases over dividend payments when they are larger, more profitable and hold higher levels of cash. In contrast, *MTB* and *LEV* do not seem to have a significant impact on *PREP*, suggesting that payout choice is independent from investment opportunities and debt levels.

Table IV presents the results estimating the moderating role of CSR performance in the relationship between dividends and share repurchases. Model (3) shows that the coefficient on *REP* is negative and significant ($\alpha = -0.0005$, $p < 1$ percent), claiming that repurchase payout has a negative effect on *ERROR*. The dividend forecast error becomes more negative as repurchase payout increases. That is, as companies spend more money on repurchases, the actual dividend payment is lower than the expected dividend payment. The result indicates that share repurchase activities are partially financed with potential dividend increases. Thus, the negative correlation between dividend forecast error and repurchase payout implies that firms are substituting share repurchases for dividends. Our evidence is consistent with the substitution hypothesis (Grullon and Michaely, 2002).

Model (4), presented in Table IV, seeks to analyze the interaction between CSR performance (*CSR*) and repurchase payout (*REP*). For this purpose, a new independent variable was included (*CSR* × *REP*). The coefficient estimate of *REP* remains virtually

	Error	
	Model 3	Model 4
Constant	−0.1052*** (−26.66)	−0.1015*** (−25.57)
CSR		5.64E-05*** (3.99)
REP	−0.0005*** (−3.65)	−0.0024*** (−3.09)
CSR × *REP*		2.31E-05** (2.34)
ROA	−0.0003*** (−5.84)	−0.0003*** (−5.67)
MTB	0.0011*** (7.42)	0.0011*** (7.66)
LEV	0.0053*** (3.20)	0.0046*** (2.81)
CASH	0.0003 (0.13)	0.0032 (1.04)
SIZE	0.0061*** (30.90)	0.0056*** (25.15)
Year FE	Yes	Yes
Industry FE	Yes	Yes
Country FE	Yes	Yes
Observations	2,382	2,382
R^2	0.1061	0.1069

Notes: The dependent variable is dividend forecast error. *CSR* is the annual corporate social responsibility performance. *REP* is repurchase payout. *ROA* is return-on-assets. *MTB* is market-to-book. *LEV* is leverage. *CASH* is cash holdings. *SIZE* is firm size. We include year, industry and country fixed effects. All variables are defined in Table AI. All the estimates have been carried out using cross-sectional time-series FGLS regression. *t*-statistic values are in the parentheses. **,***Significant at 5 and 1 percent levels, respectively

Table IV.
CSR performance and substitution hypothesis

unchanged ($\alpha = -0.0024$, $p < 1$ percent), while the new interaction term *CSR* × *REP* has a positive and significant coefficient ($\alpha = 2.31\text{E-}05$, $p < 5$ percent). As predicted, the negative effect of repurchase payout on dividend forecast error become stronger when the level of CSR performance is higher. That is, dividend payments and share repurchases seem to be more substitutable among firms with high CSR performance. In addition, the signs and significance levels of the control variables are similar to those reported in Model (3). Therefore, our hypothesis (*H3*) is supported: CSR performance moderates the relationship between dividends and share repurchases in a way that the higher the CSR performance is, the stronger the substitution effect becomes.

4.3 Robustness checks

In a first sensitivity test, we disaggregate the CSR performance into its components. As we mentioned earlier, CSR performance reflects a balanced view of a company's performance in three areas: the environmental, the social and the corporate governance performance. The environmental pillar reflects how well a company uses best management practices to avoid environmental risks and capitalize on environmental opportunities. It covers three categories including emission reduction, product innovation and resource reduction. The social pillar is a reflection of the company's reputation and the health of its license to operate. It covers seven categories including product responsibility, diversity and opportunity, employment quality, health and safety, training and development, community and human rights. The corporate governance pillar reflects a company's capacity, through its use of best management practices, to direct and control its rights and responsibilities through the creation of incentives, as well as checks and balances. It covers four categories including vision and strategy, board function, board structure and compensation policy.

To better understand which dimensions have a consistent impact on payout decisions, we estimate separate models for each one. Table V reports the estimated results. Models (5) (6) and (7) show that the three components of CSR have a positive and significant coefficient at the 1 percent level. In Model (8), we consider the impact of three components simultaneously. We find that both environmental and social performance have a positive

	Model 5	Model 6	Model 7	Model 8
Constant	−2.0800** (−2.43)	−1.8354** (−2.11)	−2.6250*** (−3.00)	−1.7888** (−2.09)
Environmental	0.0104*** (4.91)			0.0066** (2.23)
Social		0.0096*** (4.51)		0.0060** (1.99)
Governance			0.0102*** (5.63)	−0.0008 (−0.42)
ROA	0.0671*** (7.29)	0.0657*** (7.13)	0.0891*** (9.85)	0.0670*** (7.28)
MTB	−0.0504** (−2.03)	−0.0515** (−2.05)	−0.0383 (−1.52)	−0.0491** (−1.97)
LEV	1.8242*** (5.70)	1.6690*** (5.21)	2.6542*** (8.31)	1.7451*** (5.42)
CASH	−0.1111 (−0.20)	−0.2643 (−0.49)	−0.7380 (−1.32)	−0.1612 (−0.30)
SIZE	0.3012*** (6.71)	0.2970*** (6.39)	0.4374*** (11.07)	0.2759*** (5.95)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	2,382	2,382	2,382	2,382
R^2	0.1824	0.1815	0.1800	0.1856

Notes: The dependent variable is total payout. Models (5), (6) and (7) show the effect of three pillars of CSR individually. Model (8) shows the effect of three pillars simultaneously. Environmental is the annual environmental performance of a corporation. Social is the annual social performance of a corporation. Governance is the annual corporate governance performance. *ROA* is return-on-assets. *MTB* is market-to-book. *LEV* is leverage. *CASH* is cash holdings. *SIZE* is firm size. We include year, industry and country fixed effects. All variables are defined in Table AI. All the estimates have been carried out using cross-sectional time-series FGLS regression. *t*-statistic values are in the parentheses. **,***Significant at 5 and 1 percent levels, respectively

Table V.
CSR pillars and payout level

and significant effect on the level of total payout. However, the corporate governance performance exhibits an insignificant effect. The results show that the positive relation is driven by both the environmental and the social dimension of CSR.

Our sample consists of European companies listed in STOXX Europe 600 index. Three countries seem to dominate the sample. Approximately 50 percent of the sample originates from UK, France and Germany. In another supplementary test, we re-estimate regressions (1)-(4) after excluding observations from these countries. The results are similar to those previously reported, as displayed in Table VI.

5. Conclusion

Does the development of CSR strategies affect payout decisions and if so, how? This is the main question of this study. We use a representative sample of European listed firms for the period 2009-2014. The results reveal that firms with high CSR performance engage more in payout policy. By analyzing the two-payout channels separately, we find that CSR performance positively affects the level of dividend payout as well as share repurchases in a statistically significant way. Our findings are in line with Rakotomavo (2012).

Then, when choosing between paying dividends and repurchasing stocks, firms with high CSR performance tend to prefer share repurchases. Consistent with our expectation, socially responsible firms are shown to be associated with large holdings of stock options (Mahoney and Thorn, 2006; Jian and Lee, 2015) and good corporate governance (Harjoto and Jo, 2011), which incite managers to make share repurchase programs rather than to pay dividends.

Furthermore, we provide evidence that CSR performance moderates the relationship between dividends and share repurchases in a way that the substitution effect is stronger for high CSR performance. In other words, socially responsible firms finance their repurchase programs with capital that otherwise would have been used to pay dividends. Our finding contributes to the debate on whether dividends and repurchases are interchangeable by showing that they appear to be more substitutable among firms with high CSR performance.

	TP Model 1	*PREP* Model 2	*ERROR* Model 3	*ERROR* Model 4
Constant	−5.5273*** (−4.35)	−18.0710*** (−5.40)	−0.1097*** (−22.05)	−0.0899*** (−12.08)
CSR	0.0099** (2.21)	0.0448*** (3.57)		5.54E-05** (2.07)
REP			−0.0004** (−2.59)	−0.0051*** (−2.89)
CSR × *REP*				5.77E-05*** (2.64)
ROA	0.0810*** (5.52)	0.0781 (1.50)	−0.0003*** (−3.79)	−0.0003*** (−2.87)
MTB	−0.0620 (−1.25)	−0.1230 (−0.84)	0.0012*** (5.60)	0.0016*** (5.06)
LEV	2.0316*** (3.71)	11.5562*** (7.58)	0.0090*** (4.62)	0.0038 (1.24)
CASH	−0.1430 (−0.17)	8.8637*** (3.01)	0.0039 (1.03)	0.0063 (1.15)
SIZE	0.5271*** (6.46)	0.5375** (2.59)	0.0064*** 20.78	0.0049*** (10.54)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	1002	1002	1002	1002
R^2	0.2116	0.1493	0.0859	0.0882

Notes: Model (1): the dependent variable is total payout. Model (2): the dependent variable is preference for repurchases. Models (3) and (4): the dependent variable is dividend forecast error. *CSR* is the annual corporate social responsibility performance. *ROA* is return-on-assets. *MTB* is market-to-book. *LEV* is leverage. *CASH* is cash holdings. *SIZE* is firm size. We include year, industry and country fixed effects. All variables are defined in Table AI. All the estimates have been carried out using cross-sectional time-series FGLS regression. *t*-statistic values are in the parentheses. **,***Significant at 5 and 1 percent levels, respectively

Table VI.
Results of regression analysis (without three countries)

Some practical managerial implications can be derived from the results of this study. Firms that are able to develop successful CSR strategies can generate tangible benefits for their shareholders in the form of high payout levels. An increase in CSR expenditure does not lead to cut or minimize the cash flow paid out to shareholders. In addition, government and regulators have to oblige or at least encourage socially responsible firms to use executive stock option that are dividend protected, in order to reduce distortions in dividend policy.

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Appendix

Table AI.
Definition of variables

Variable	Symbol	Definition
Dividend payout	*DIV*	The ratio between cash dividends multiplied by 100 and firm's market value at the end of the previous fiscal year
Repurchase payout	*REP*	The ratio between cash paid through repurchases multiplied by 100 and firm's market value at the end of previous year
Total payout	*TP*	The cash paid through dividend payments and repurchases, multiplied by 100 and divided by the firm's market value at the end of the previous fiscal year
Preference for repurchases	*PREP*	The ratio between repurchase payout multiplied by 100 and total payout
Dividend forecast error	*ERROR*	We calculate the dividend forecast error as: $ERROR_{i,t} = [\Delta DIV_{i,t} - (\beta_{1,i} + \beta_{2,i} EARN_{i,t} + \beta_{3,i} DIV_{i,t-1})]/VM_{i,t-1}$ where $\Delta DIV_{i,t}$ is the change in dividends of firm i in year t, $EARN_{i,t}$ is the earnings of firm i in year t, $\Delta DIV_{i,t-1}$ is the dividend level of firm i in year $t-1$, $VM_{i,t-1}$ is the market value of equity of firm I in year t-1
Corporate social responsibility	*CSR*	The equally weighted average of the environmental the social and the governance score
Return-on-assets	*ROA*	The operating income divided by total assets
Market-to-book	*MTB*	The firm's market value compared to its book value of equity
Leverage	*LEV*	The ratio of total debt to the book value of the total assets
Cash holdings	*CASH*	The ratio of cash and equivalents to total assets
Firm size	*SIZE*	The natural logarithm of the market value of equity

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