

# Pay Dividends or Invest in Corporate Social Responsibility: Is there an Inverted-U relationship?

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## Abstract

**We offer new original insights on the ongoing debate about the financial determinants of CSR activities by investigating the relationship between dividend policy and corporate social performance. Based upon the stakeholder theory, we postulate that satisfying shareholder claims may lead, according to distributive justice, to serving the interests of other stakeholders through corporate social policies. However, when dividends paid are too high, the company may no longer have enough financial slack to satisfy the other stakeholders, implying that dividends are paid at the expense of corporate social policies. We thus expect a curvilinear relationship between dividend policy and corporate social performance. Using a worldwide sample of almost 7,000 observations, we find support for a U-inverted relationship, revealing an optimal amount to satisfy both shareholders and stakeholders. Our findings are robust to both social and environmental pillars, various dividend measures as well as ESG scores.**

## 1. Introduction

Responsibility (CSR) activities by studying whether firms' dividend policy has an impact on the level of corporate social performance (hereafter, CSP). This issue, has, to the best of our knowledge, not been investigated so far and we attempt to fill this gap in the literature. Indeed, some previous studies have tried to understand to what extent the implementation of CSR activities may impact dividend policy (Kim and Jeon, 2015; Cheung *et al.*, 2016; Samet and Jarboui, 2017). The literature seems to underline a positive effect of CSP on dividend payout. However, whereas the impact of dividend policy for other stakeholders is of particular interest, the reverse causality has never been studied before. We therefore specifically study to what extent the level of dividends paid to investors as financial stakeholders has an impact on the level of CSP, which can be considered as "the ability to

manage and satisfy the different corporate stakeholders" (Igalens and Gond, 2005). Contrary to previous studies, this allows us to examine for the first time whether the payment of dividends to financial stakeholders is contradictory to satisfying non-financial stakeholders through a high level of CSR activities.

Literature provides mixed results on the explanation of dividend decisions, but all traditional theories converge in that they all postulate that firms have the goal of satisfying shareholder claims. For instance, dividends may be paid to mitigate the problem of shareholder expropriation (Easterbrook, 1984; Jensen, 1986) or to convey information to investors (Bhattacharya, 1979; Miller and Rock, 1985). However, according to the instrumental stakeholder theory (Donaldson and Preston, 1995; Jones, 1995), firms must take all stakeholder claims into account, and not only financial ones, in order to maximize their value. Clarkson (1995) explains that firms have an interest in honoring both financial and non-financial stakeholder claims, because the survival of the firms depends on their propensity to meet stakeholder claims. Firms that pay a high level of dividends in order to satisfy their financial stakeholders may then also try to maintain their reputation as a "desirable partner" (Jones, 1995) and thus retain the participation of non-financial stakeholders by implementing CSR policies, because of the importance of non-financial stakeholders in the wealth creation process.

On the other hand, stakeholders may be afraid that the payment of dividends decrease the firm's ability to satisfy their claims (Shapiro, 1990; Holder *et al.*, 1998), since dividends distributed to shareholders are amounts of money that cannot be used to satisfy stakeholder claims. In line with the slack resources theory, lower slack resources should lead to lower CSP, because managers can easily invest in CSR policies when slack resources are important (Waddock and Graves, 1997; Barnea and Rubin, 2010). Since high dividends should lead to less cash, it may lead to a diminished ability to implement CSR policies. Thus, a high level of dividend payout may also have a negative effect on the level of corporate social performance.

These different preceding theoretical predictions lead us to expect either a positive or a negative impact of the level of dividends paid on the level of CSP. Considering the rationale under these two points of view, we combine them in expecting the relationship between dividend policy and corporate social performance to be curvilinear. Hence, we posit that initially, a higher level of dividends may be followed by higher CSP. Given that relationships with stakeholders are important for success (Clarkson, 1995; Donaldson and Preston, 1995; Jones, 1995), after dividends payments are made, managers may try to maintain their reputation with non-financial stakeholders by implementing CSR policies in order to satisfy these non-financial stakeholders, according to distributive justice (Harrison and Wicks, 2013). Once a certain amount of dividends paid has been reached, however, a high dividend payout leads to a reduced capacity to subsequently invest in CSR activities. Indeed, when dividends paid are too high, firms may not have enough financial slack, then limiting the possibility for satisfying subsequent stakeholder claims. Thus, once a threshold is reached, we hypothesize that the relationship between dividend payout and CSP becomes negative. We therefore postulate that the relationship between the level of dividends paid and corporate social performance is U-inverted shaped.

Based on a worldwide sample of almost 7,000 firm-year observations between 2006 and 2010, results show that until a certain point, higher dividends are linked with higher subsequent CSP, in line with the distributive justice argument. When dividends are particularly high (superior to the 75<sup>th</sup> percentile), then, the relationship between dividends and CSP becomes negative. In addition, we investigate the impact of dividend policy on different pillars of CSP and find that the relationships between dividend policy and both environmental and social pillars are also U-inverted shaped. Overall, our results are robust to the use of different measures of dividends and of CSP, and to different model specifications.

This study contributes to the literature in revealing the existence of an optimal amount of dividend paid in order to reduce the conflict between the satisfaction of financial and non-financial stakeholder claims. When restrained, the level of dividend paid does not appear to be detrimental to non-financial

stakeholders. The positive effect of the level of dividends paid CSP seems to indicate that when the amount of dividend paid is reasonable, firms are able to satisfy both financial and non-financial stakeholders. However, dividends seem to be detrimental to non-financial stakeholders when the level of dividends becomes too high, with dividend yields greater than 5.58%.

The remainder of the article is organized as follows. In the next section, we present the data methodology. Then, the main empirical findings are discussed. The final section concludes.

## 2. Data and Methodology

Following Ioannou and Serafeim (2012), Cheng *et al.*, (2014) or Eccles *et al.*, (2014), we rely on corporate social performance scores from the Thomson-Reuters Asset4 database. We particularly focus on environmental and social scores, and exclude corporate governance and economic pillars from the overall score, to rule out direct conflicts between managers and financial stakeholders from our CSP proxy. Since the rating methodology may raise some concerns (Chatterji *et al.*, 2014), we also use MSCI ESG Data to control for the robustness of the results. MSCI ESG Data, another worldwide leading ESG score provider, has also been used in preceding research such as Guenster *et al.*, (2011) or Aktas *et al.*, (2011).

Financial and control variables are from FactSet Fundamentals. For our control variables, we follow previous studies by Artiach *et al.*, (2010) and Jiraporn and Chintrakarn (2013) and retain the following variables, which have been shown to be related to both CSR and dividend policy (Size, Leverage, and Returns On Assets). Hence, our model is as follows:

$$CSP_{i,t} = \alpha_0 + \alpha_1 Dividends_{i,t-1} + \alpha_2 Dividends_{i,t-1}^2 + \alpha_3 \text{firm effects} + \alpha_4 Leverage_{i,t-1} + \alpha_5 ROA_{i,t-1} + \alpha_6 Year + \alpha_7 Industry \text{ effects} + \alpha_8 Country \text{ effects} + \varepsilon_{i,t} \quad (1)$$

It can be noticed here that quadratic models have already been used in the CSR literature. For instance, Barnett and Salomon (2012) have shown a curvilinear relationship between ROA and CSP. However,

our work differs from this paper. Contrary to these authors, we aim to better understand the determinants of CSP, instead of investigating the impact of CSP of financial performance.

Country	Obs.		
Australia	458	Papua New Guinea	1
Austria	50	Peru	7
Belgium	55	Philippines	4
Bermuda	40	Poland	11
Brazil	20	Portugal	50
Canada	384	Russian Federation	40
Chile	23	Singapore	102
China	85	South Africa	26
Colombia	5	Spain	151
Cyprus	6	Sweden	144
Czech Republic	13	Switzerland	179
Denmark	65	Taiwan	48
Egypt	5	United Kingdom	872
Finland	87	United States	1,344
France	298	All	6,965
Germany	181	<b>Year</b>	<b>Obs.</b>
Gibraltar	3	2006	1,198
Greece	46	2007	1,337
Hong Kong	206	2008	1,308
Hungary	9	2009	1,491
India	74	2010	1,631
Indonesia	15	All	6,965
Ireland	84	<b>GICS</b>	<b>Obs.</b>
Israel	18	10	440
Italy	158	15	743
Japan	1,220	20	1,318
Korea (South)	83	25	1,039
Luxembourg	9	30	508
Malaysia	33	35	406
Mauritius	1	40	1,381
Mexico	47	45	482
Morocco	4	50	260
Netherlands	78	55	388
New Zealand	33	All	6,965
Norway	51		

**Table 1: Sample description.**

Matching ESG data from Thomson Reuters Asset4, MSCI ESG Data and financial data over the 2006-2010 period leads to almost 7,000 worldwide observations. Sample description and descriptive statistics are presented respectively in Tables 1 and 2.

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VARIABLES	N	Mean	p25	p50	p75	Max	Min
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CSP_A4	6,965	0.601	0.344	0.671	0.864	0.962	0.065
CSP_MSCI	6,965	5.270	4.295	5.290	6.270	9.770	0.510
div_yield	6,965	0.025	0.010	0.021	0.036	0.118	0.000
Size	6,965	23.085	22.069	22.922	24.009	28.713	18.274
Leverage	6,965	0.193	0.074	0.169	0.281	0.990	0.000
ROA	6,965	0.056	0.020	0.050	0.080	0.720	-0.670

**Table 2: Descriptive statistics**

### 3. Empirical Results

Our model includes a one-year lag between the dependent and independent variables. We report the results of estimates of equation (1) in columns 1 to 3 of Table 3, where our variable of interest is *div\_yield*, defined as Dividend per share divided by price per share. Our dependent variable is the overall CSP measure in column 1 (CSP\_A4), environmental performance measure (Environment\_A4) in column 2 and social performance measure (Social\_A4) in column 3. Ordinary regressions and robust standard errors, clustered at the firm level have been used. The coefficients of *div\_yield* are positive and highly significant for each model specification. The level of dividends paid seems then to have a positive impact on lead CSP, regardless of the CSP proxies.

This result shows that high dividend paying firms subsequently try to satisfy non-financial stakeholder claims by implementing CSR policies, since considering the involvement of each stakeholder must lead to higher financial performance (Clarkson, 1995). In addition, we see that the coefficients of *div\_yield*<sup>2</sup> are significantly negative, which confirms a U-inverted shaped relationship. Hence, the positive impact of dividends on CSP becomes negative when dividends are high, since firms have fewer financial resources, which limits their ability to satisfy stakeholder claims. These results are robust to alternative measures of dividends (dividends by earnings, dividends by sales and dividends by total assets), not reported here for the sake of brevity but available upon request.

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(1)

(2)

(3)

(4)

(5)

VARIABLES	CSP_A4	Environment_A4	Social_A4	Dummy_CSP_A4	CSP_MSCI
div_yield	3.628*** (7.117)	3.249*** (5.681)	4.007*** (7.612)	33.677*** (6.01)	5.668** (2.10)
div_yield <sup>2</sup>	-32.535*** (-6.417)	-27.824*** (-4.955)	-37.246*** (-7.052)	-295.875*** (-5.19)	-62.919** (-2.33)
Size	0.099*** (26.49)	0.099*** (23.57)	0.099*** (25.24)	1.043*** (17.90)	0.255*** (11.79)
Leverage	-0.108*** (-2.942)	-0.091** (-2.241)	-0.125*** (-3.289)	-0.701* (-1.69)	-0.208 (-1.11)
ROA	0.254*** (3.957)	0.244*** (3.246)	0.263*** (4.139)	2.982*** (3.36)	1.036*** (2.78)
Constant	-1.732*** (-20.73)	-1.750*** (-18.49)	-1.714*** (-19.43)	-24.678*** (-18.56)	-0.116 (-0.24)
Observations	6,965	6,965	6,965	6,898	6,965
Country FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Adj. R <sup>2</sup>	0.397	0.372	0.370	0.286	0.223

**Table 3: Curvilinear relationship between dividend yield and CSP measured by ASSET4**

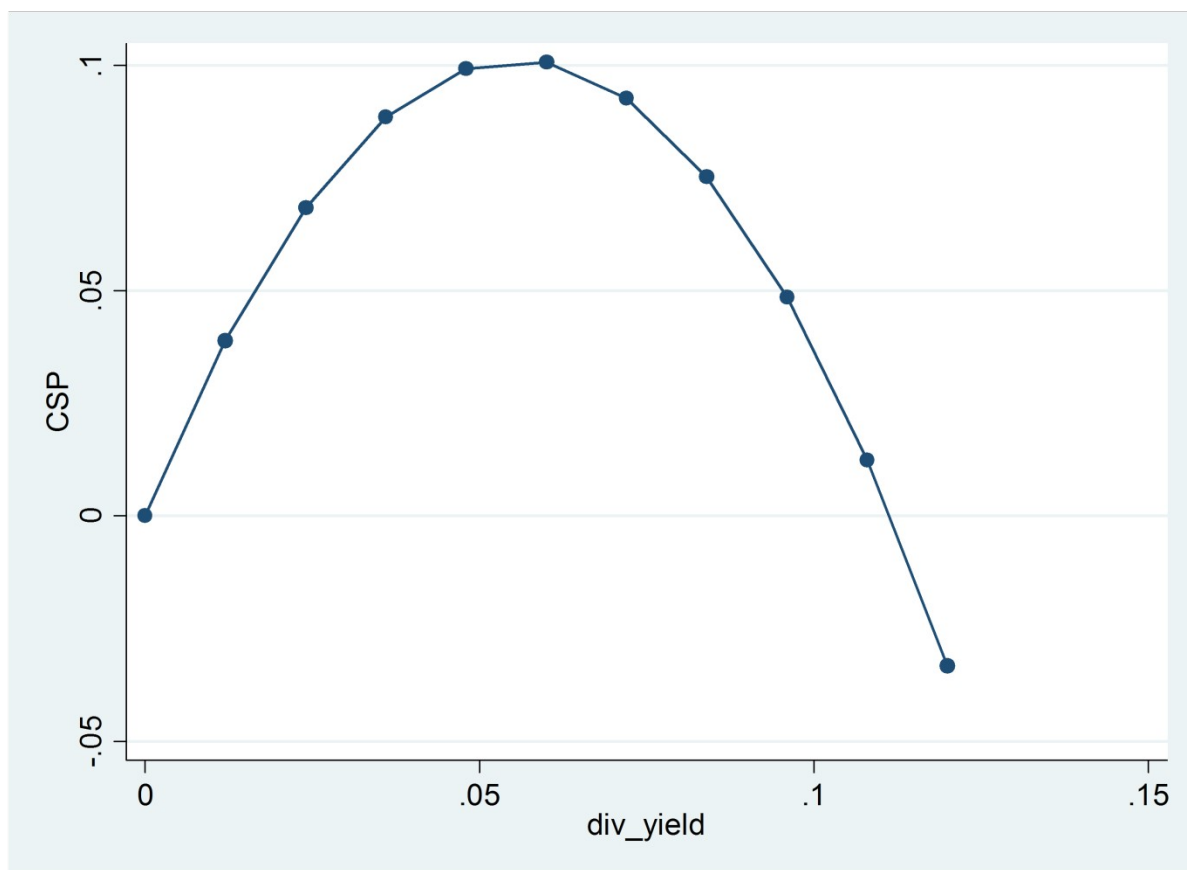
This table shows the results of our ordinary least-squares regressions concerning the relationship between dividend yield and CSP. In columns 1 to 3, CSP is measured by Asset4 ratings: our dependent variable is overall CSP measure in column 1, environmental performance measure in column 2 and social performance measure in column 3. In column 4, our dependent variable is a dummy variable separating firms with high CSR ratings and low CSR ratings. In column 5, the CSP measure is the overall CSP measure proxied by MSCI ESG ratings. All regressions include year, industry and country dummies. Robust t-statistics are in brackets. \* Statistical significance at the 10% level. \*\* Statistical significance at the 5% level. \*\*\* Statistical significance at the 1% level.

Figure 1 presents the U-inverted relationship between div\_yield and CSP\_A4 graphically. The effect of div\_yield on CSP becomes marginally negative when div\_yield is around 5.58%. Based on Table 1, we note that 5.58% is above the 75<sup>th</sup> percentile (3.36%). This reinforces our theoretical argument for testing for a non-linear relationship between the level of dividends paid and CSP: initially, div\_yield has a positive impact on CSP\_A4, but when div\_yield becomes particularly high, the impact is negative. We also find a U-inverted relationship when we use Environment\_A4 and Social\_A4 as dependent variables.

Overall, it appears that a high dividend level seems to be followed by high CSP up to a threshold level, beyond which higher dividends negatively affect the future level of CSP. We therefore document a positive relationship between dividends and subsequent CSP, as long as



the level of dividends paid is reasonable. But when the level of dividends paid reaches a high threshold, the relationship becomes negative, because paying too much dividends reduces slack resources needed to implement CSR policies.



**Figure 1: Relationship between dividend yield and CSP.**

Note: This figure depicts average predicted values generated from Model 1 of Table 3. The line represents the average predicted values generated by the model, all else being equal, highlighting graphically the inverted-U relationship.

In order to check the sensitivity of our results against measures of dependent variables, we have used alternative variables for CSP. In Columns 4 of Table 3, a dummy variable separating firms with high CSR ratings, i.e. above the mean of our sample, and low CSR ratings, has been tested. Our probit model shows that our previous results are not affected. In a similar way, we have re-estimated equation (1) with the CSR rating provided by MSCI ESG

Research, another leading CSR rating agency, as an alternative CSR proxy. Here again, the U-inverted relationship between dividends and CSP remains unchanged.

We also dealt with endogeneity concerns. Indeed, results provided in Table 3 seem to indicate that a high level of dividends is followed in the next period by higher CSP, as long as a certain threshold is not reached. It is however possible to argue that the level of CSP also has an impact on a firm's dividend policy, as it has been demonstrated in some recent papers (Kim and Jeon, 2015; Cheung *et al.*, 2016; Samet and Jarboui, 2017). For instance, according to the agency theory, dividend payment is a means to reduce the risk of shareholder expropriation by managers (Jensen, 1986). Thus, it is possible to posit that high CSP leads to a higher dividend payout, since CSR policies may be linked with the extraction of managers' private benefits (Barnea and Rubin, 2010). Hence, we estimate two-stage least-squares regressions in order to deal with this potential endogeneity issue.

We instrument  $div\_yield$  by  $countrysector$ , which is computed as the average dividend yield for the firm's country and sector. We thus assume that a firm's dividend policy is impacted by sectorial and institutional determinants, as mentioned by Michel and Shaked (1986). Hence, investment opportunities are comparable for firms in the same sector, which may have an impact on the dividend level of firms in this sector. Moreover, the characteristics of some countries, such as their capital market mechanism or tax levels, may also have an influence on dividend policy. Concerning the quadratic terms, which may also be endogenous ( $div\_yield^2$ ), we have used  $countrysector^2$ . Moreover, we have included all control variables and quadratic control variables as instruments. The estimations of the two-stage least-squares regressions are presented in Table 4. We observe that the coefficients on  $div\_yield$  are still positive and highly significant for each specification, whereas coefficients on  $div\_yield^2$  are still negative and highly significant, confirming that our previous results do not suffer from endogeneity.

VARIABLES	(1) CSP_A4	(2) Environment_A4	(3) Social_A4
div_yield	6.271*** (3.36)	7.466*** (3.65)	5.075*** (2.65)
div_yield <sup>2</sup>	-46.568** (-2.16)	-56.078** (-2.37)	-37.059* (-1.71)
size	0.095*** (21.57)	0.093*** (18.81)	0.097*** (21.36)
Leverage	-0.114*** (-3.12)	-0.0970** (-2.40)	-0.132*** (-3.46)
ROA	0.133 (1.63)	0.0761 (0.83)	0.190** (2.27)
Constant	-1.701*** (-18.85)	-1.697*** (-16.66)	-1.705*** (-18.11)
Observations	6,965	6,965	6,965
Country FE	YES	YES	YES
Year FE	YES	YES	YES
Sector FE	YES	YES	YES
Adjusted R-squared	0.387	0.356	0.366

**Table 4: Two-stage least-squares regressions (second step).**

This table depicts results of the second step of our two-stage least-squares regressions. Our instruments are countrysector, (the average dividend yield for the country and the sector of the firm), countrysector<sup>2</sup>, and all control variables and quadratic control variables. We include year, industry and country dummies. T-statistics are in parentheses. \* Statistical significance at the 10% level. \*\* Statistical significance at the 5% level. \*\*\* Statistical significance at the 1% level.

#### 4. Conclusion

This paper investigates the relationship between dividend policy and CSP. On one hand, dividends paid may lead to subsequent CSP in order to satisfy all stakeholders according to the distributive justice argument of stakeholder theory. On the other hand, economic theory predicts that dividends to shareholders paid may be at the expense of other stakeholders and CSP.

Based on a worldwide dataset and on different CSP ratings, we reconcile these two arguments in showing a strong U-inverted shaped relationship between dividends paid and CSP. The level of dividends paid is positively related to subsequent CSP until the level of dividends

paid reaches a maximum. Due to how important it is to maintain good relationships with stakeholders in order to maximize a firm's value (Clarkson, 1995; Jones, 1995), high dividend paying firms seem to foster higher subsequent CSP, because these firms then invest in CSR activities in order to maintain the commitment of non-financial stakeholders. Indeed, a good reputation with these stakeholders is crucial for firms to achieve their financial goals (Clarkson, 1995), and they may interpret a high level of dividends paid as a decreased ability to act in their interests (Shapiro, 1990; Holder *et al.*, 1998). When a certain high level of dividends paid is reached, however, this relationship is inverted, because after this threshold, dividends paid reduce the financial resources needed to implement CSR policies. Hence, the relationship becomes negative.

We find the same results for specific pillars of CSP such as environmental and social performance and they prove to be also robust to different model specifications and to different measures for both variables of interest and endogeneity concerns. Our study contributes to the literature concerning the determinants of CSP by revealing the U-inverted impact of the dividend policy on firms' CSP, and showing that there is an optimal dividend policy, around 5.5 percent of dividend yield, that seems to satisfy, all else equal, both shareholders and stakeholders.

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