

DOES IT PAY TO BE DIFFERENT? AN ANALYSIS OF THE RELATIONSHIP BETWEEN CORPORATE SOCIAL AND FINANCIAL PERFORMANCE

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This study explores the relationship between corporate social performance (CSP) and corporate financial performance (CFP) within the context of a specific component of CSP: corporate charitable giving. A model of the determinants of the extent of corporate charitable giving is estimated and used as the basis of a classification that groups firms according to the difference between their actual and their predicted intensity of gift giving. The financial performance attributes of the classification are explored. We found that firms with both unusually high and low CSP have higher financial performance than other firms, with unusually poor social performers doing best in the short run and unusually good social performers doing best over longer time horizons. Copyright © 2008 John Wiley & Sons, Ltd.

INTRODUCTION

Definition of the appropriate scope of corporate social obligation remains controversial. Friedman (1970) asserted that the exclusive responsibility of business is ‘to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game’ (Friedman, 1970: 126). Other authors have emphasised the accountability of firms to a broad constituency of agents in society ‘who can affect or are affected by the achievement of the firms objectives’ (Freeman, 1984: 25). The effective management of these stakeholder relationships can be compatible with profit maximization if the firm is instrumental in determining the scope and extent of its liabilities (Berman *et al.*, 1999; Jones, 1995). Against

this backdrop a large amount of empirical literature has developed that examines the link between corporate social performance (CSP) and corporate financial performance (CFP) (McWilliams and Siegel, 2000; Waddock and Graves, 1997; Hillman and Keim, 2001; Orlitzky, Schmidt, and Rynes, 2003; Margolis and Walsh, 2003; Griffin and Mahon, 1997; McGuire, Sundgren, and Schneewiess, 1988). In spite of the very mixed empirical findings to date (see Orlitzky *et al.*, 2003; Griffin and Mahon, 1997 for comprehensive reviews), and some suggestion of the futility of the quest for a general relationship (Margolis and Walsh, 2003), the relationship between corporate social and financial performance retains a high degree of salience among business practitioners and within the strategic management literature.

The existing empirical literature on the CSP–CFP relationship is characterised by a vast diversity of methods. Most studies focus on the relationship between a broad definition of corporate social performance and either profitability, a market-based measure of performance, or both (Orlitzky

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et al., 2003; Margolis and Walsh, 2003). Despite the proliferation of studies in the area, uncertainty remains regarding both the sign and the direction of causality within the relationship (Ullman, 1985; Griffin and Mahon, 1997; Orlitzky *et al.*, 2003). The failure to reach a consensus on the implications of improved social performance for financial performance arises for a number of reasons. First, the conceptual determinants of CSP, and consequently the theoretical expectations of the CSP-performance relationship, remain relatively underdeveloped (Ullman, 1985; Wood and Jones, 1995; Rowley and Berman, 2000; Margolis and Walsh, 2003). CSP is a multidimensional construct that encompasses a large and varied range of corporate behavior in relation to its resources, processes, and outputs (Carroll, 1979; Waddock and Graves, 1997). Therefore, fundamentally different aspects of CSP may be expected to be differently motivated and may accordingly have diverse implications for financial performance. This emphasizes the importance of focusing on particular elements of CSP in conceptual and empirical work (Griffin and Mahon, 1997; Margolis and Walsh, 2003; Rowley and Berman, 2000). Moreover, recent conceptual and empirical work has argued that the link between social and financial performance has to be seen as being contingent upon a variety of contextual factors including a firm's size, its industry environment, and the proximity between these and the particular social initiatives undertaken (Orlitzky, 2001; Rowley and Berman, 2000; Margolis and Walsh, 2003). Hence, following McWilliams and Siegel (2000) and others, it is crucial to control for contextual factors, particularly industry effects and the presence of significant research and development (R&D) and advertising expenditures when examining the relationship between CSP and financial performance.

Second, the wide variety of findings present in the literature is partially attributable to severe difficulties encountered in measuring CSP (Waddock and Graves, 1997; Griffin and Mahon, 1997). Third, the lack of consensus in the literature reflects the very broad range of measures of financial performance employed in existing studies (see Margolis and Walsh, 2003, 274–277) and the failure of most studies to discern between risk-adjusted and unadjusted financial performance. Fourth, few existing studies explicitly consider the time horizon over which CSP and CFP are related

within their analysis. Most studies employ a cross-sectional research design and look for a contemporaneous link between CSP and CFP, while others introduce lags in, or changes in variables, between years, usually over a one- or two- year period (e.g., Waddock and Graves, 1997; Hillman and Keim, 2001; Griffin and Mahon, 1997; Aupperle, Carroll, and Hatfield, 1985; McGuire *et al.*, 1988).

This study investigates the relationship between corporate social and financial performance within the context of a particular element of CSP: corporate philanthropic donations. Among particular aspects of CSP, corporate philanthropic activities provide a highly transparent insight into corporate strategy in the context of social responsiveness because philanthropic activities are subject to the control of the main board of directors in most companies (Brammer and Millington, 2004; Siegfried, McElroy, and Biernot-Fawkes, 1983), have a high degree of external visibility and thus play a key role in shaping the perceptions of the company in the eyes of external stakeholders (Porter and Kramer, 2002), and are neither intimately linked with operational functions of the company nor subject to legal compliance issues. The link between firm CSP strategy and philanthropy is perhaps unusually close in the U.K. context since, in contrast to many countries, the vast majority of corporate gifts are made directly by companies rather than through intermediaries such as philanthropic foundations (Smyth, 2000).

Our study's contribution arises from four principal innovations in examining the link between CSP and CFP. First, we apply a two-stage empirical approach that builds on a method used widely in social science research. This method draws a distinction between the observed level of a given phenomenon and a level that might be expected on the basis of a range of predictors (e.g., Meier and O'Toole, 2002; Palmer and Whitten, 1999; Jacobson, LaLonde, and Sullivan, 1993; Fama, 1981). In the present context, the first step in the use of this technique permits us to evaluate the degree to which a firm's charitable giving differs from that predicted on the basis of its characteristics, including its size, industry, R&D, and advertising intensity. We use these deviations from 'normal' levels of charitable giving to construct a typology of firm social responsiveness strategy that identifies three groups of companies: those firms with unusually high CSP, those firms with unusually low CSP, and those firms with 'normal' CSP. The second

stage of our analysis then examines the financial performance characteristics of firms grouped according to their social responsiveness strategy. This two-stage method allows us to examine the link between corporate social responsiveness strategy and financial performance while providing an efficient means of discriminating between the predictions of alternative conceptual models of the CSP-CFP relationship and, in contrast to many causal models estimated in the literature to date, placing no implicit or explicit restrictions on the CSP-CFP relationship.

Second, we frame our analysis of the relationship between CSP and CFP in the context of a particular element of CSP: corporate charitable giving. In so doing, we build upon the growing body of research that argues that corporate philanthropic donations are an increasingly strategic and salient component of business social performance (Godfrey, 2005; Porter and Kramer, 2002), respond to calls from the conceptual literatures for a greater degree of specificity in examinations of CSP-CFP (Rowley and Berman, 2000; Margolis and Walsh, 2003), and avoid the lack of conceptual clarity and measurement difficulty associated with composite measures of CSP (Orlitzky *et al.*, 2003; Margolis and Walsh, 2003).¹ Furthermore, corporate philanthropic donations provide a more valid proxy for CSP than other single-dimension measures, such as pollution emissions or product recalls, because, through being able to address a wide range of social issues within a variety of stakeholder relationships (Smith, 1994; Saini, Carroll, and Buchholtz, 2003; Porter and Kramer, 2002), they reflect the breadth of the CSP construct to a greater degree than other proxies.

Third, our study is one of the few that employs a longitudinal research design and examines both corporate philanthropic giving and firm financial performance over a 10-year period. In so doing, our analysis sheds light on the degree to which the financial payoffs associated with particular social responsiveness strategies vary over different time horizons. Finally, in contrast to almost all published studies, our analysis of the link between unusual CSP and financial performance controls for firm risk. In light of recent conceptual contributions that highlight the role of CSP in the

strategic management of corporate risk (e.g., Godfrey, 2005) and the fact that risk-adjusted returns have the greatest salience to investors, this is a significant development.

The following analysis is carried out in five parts. The next section examines the conceptual foundations of links between corporate social and financial performance. Subsequently, the empirical methodology is discussed. This involves the development of a model of the determinants of corporate charitable giving, an evaluation of alternative measures of corporate financial performance, and a discussion of the data, sample, and estimator. The results are then reported before being discussed in a final concluding section.

THE LINK BETWEEN SOCIAL AND FINANCIAL PERFORMANCE

Existing conceptual and empirical contributions have identified a number of mechanisms by which CSP may be systematically related to CFP (Griffin and Mahon, 1997; Orlitzky *et al.*, 2003; Margolis and Walsh, 2003). In this section we discuss two issues concerned with the link between CSP and CFP: the shape of the relationship between CSP and CFP, and the time horizon over which the two are related. We will consider each in turn.

The shape of the CSP-CFP relationship

Figure 1 summarizes the discussion of the link between social and financial performance in the literature to date by identifying four descriptive models. These models vary according to three underlying assumptions: (1) whether there are positive financial payoffs to good social performance; (2) whether any such payoffs derive from the absolute level of a firm's social performance or from its performance relative to peers; and (3) whether any such payoffs are subject to diminishing returns.

Model (i) describes a positive relationship between CFP and CSP reflecting the assumptions that there are financial benefits to a firm's social performance that are not subject to diminishing returns. A number of reasons to expect a positive and monotonic link between corporate social and financial performance have been advanced. Building on neoclassical economic theory, existing contributions have argued that good social performance, and charitable donations in particular,

¹ There are also a number of precedents for using corporate philanthropic donations as a proxy for CSP in the extant literature (Griffin and Mahon, 1997; Margolis and Walsh, 2003).

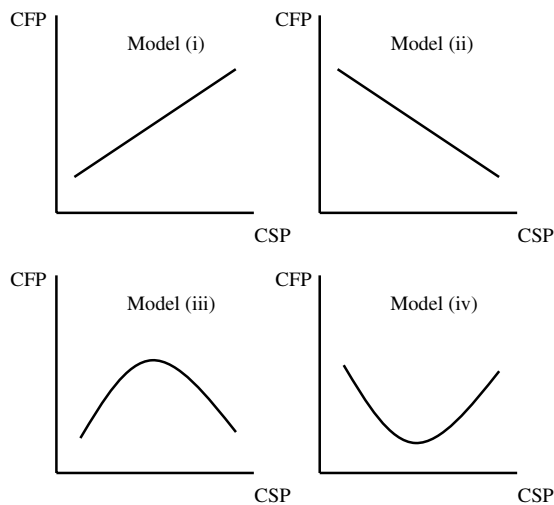


Figure 1. Alternative models of the relationship between corporate financial performance and corporate social performance

can contribute to higher financial performance by either reducing costs or increasing revenues (e.g., Navarro, 1988; McWilliams and Siegel, 2000). Positive social performance may perform some of the functions of advertising by increasing the level of demand for a firm's products and reducing its price sensitivity (Dorfman & Steiner, 1954; Navarro, 1988; Sen and Bhattacharya, 2001; Milgrom and Roberts, 1986). Alternatively, improved social performance could lower costs either by leading to reduced wages, improving labor productivity, increasing the supply of qualified labor (Turban and Greening, 1996; Moskowitz, 1972), or by reducing the levels of waste produced in productive processes (Konar and Cohen, 2001; Porter and van der Linde, 1995).

The link between CSP and CFP has also been analyzed within conceptual frameworks drawn from the strategic management literature including stakeholder and institutional theories. These theories share a conceptualization of organizations being embedded within a wider social system that shapes their behavior (Freeman, 1984; Donaldson and Preston, 1995). It is assumed that firms are able to identify the salient actors in their environment, be they governmental or non-governmental institutions, or stakeholders such as employees, customers, and investors (Donaldson and Preston, 1995; Freeman, 1984). Furthermore, an organization's relationships with institutions and stakeholders are assumed to play a significant

role in both the definition and determination of its success (Donaldson and Preston, 1995; Jones, 1995). Instrumental stakeholder theory, an important strand of stakeholder theory, highlights that effective management of relationships with key stakeholders can contribute to enhanced financial performance through the creation, development, or maintenance of ties that provide important resources to companies (Jones, 1995). For example, an instrumental approach to identifying and managing the impacts of key stakeholders on the company can reduce costs by mitigating the likelihood of negative regulatory, legislative, or fiscal action (Freeman, 1984; Berman *et al.*, 1999; Hillman and Keim, 2001), play a role in attracting, retaining, and motivating employees thereby increasing productivity and enhancing profitability (Moskowitz, 1972), enhance revenues by supporting attempts to differentiate the firm's products or services thereby attracting socially conscious consumers (Hillman and Keim, 2001), or attract financial resources from socially responsive investors (Kapstein, 2001).

In contrast, Model (ii) builds on alternative conceptualizations that have argued in favor of a linear negative association between corporate social and financial performance reflecting the assumption that there are no financial payoffs to good social performance. Some contributions have drawn on neoclassical economics arguing that socially unresponsive firms incur fewer direct costs and, *ceteris paribus*, reap higher profits than socially responsive firms. In that sense, socially responsive companies are at a competitive disadvantage compared to their unresponsive peers (Aupperle *et al.*, 1985). However, the dominant critique of social performance emanates from the principal-agent paradigm (Jensen and Meckling, 1976). The principal-agent model examines situations where an individual or group involved in an economic relationship (the principal[s]) gives authority to another individual or group (the agent[s]) to act on their behalf and where the welfare of the former depends on the actions of the latter (Jensen and Meckling, 1976; Williamson, 1964). In a corporate context, principals are commonly associated with owners or shareholders, and agents with senior managers. Agency problems arise because of the further assumptions that principals can only imperfectly monitor or control agents, and because the preferences of the two over a particular decision may differ. Agency perspectives on corporate

social performance argue that absent strong control from shareholders, managers can opportunistically use corporate resources to pursue goals that enhance their own utility in ways that are unlikely to provide significant returns to companies (Navarro, 1988; Williamson, 1964). Consequently, good social performance comes at the expense of good financial performance because social performance makes use of firm resources in ways that confer significant managerial benefits rather than devoting those resources to alternative investment projects or returning them to shareholders.

Models (iii) and (iv) describe nonlinear relationships between CFP and CSP. Model (iii) assumes that there are positive financial payoffs to good social performance, but that these are subject to diminishing, and eventually decreasing, returns. Consistent with this, a conceptualization from the strategic management literature distinguishes between 'stakeholder management' and 'social issue participation,' which argues that the financial implications of improved social performance are contingent upon the scope or extent of social responsibility that a firm accepts (Hillman and Keim, 2001). Improved social performance that is associated with effective management of stakeholder relationships confers financial benefits, but if the scope and extent of corporate social responsiveness strays beyond stakeholder management to address social concerns that bear little or no relation to a firm's stakeholder relations, then improvements in social performance come to be associated with declining financial performance. This view is also consistent with a principal-agent conceptualization of the relationship between CSP and CFP. A key assumed difference between principals and agents lies in their different preferences for firm-specific risk. Commonly, owners are assumed to be risk neutral with respect to a particular investment because they are able to diversify their overall risk by owning shares in a wide portfolio of firms (Wiseman and Gomez-Meija, 1998), whereas managers are assumed to be risk averse because their income and job security depend on the performance of a particular company (Williamson, 1964). If the financial benefit of social performance is subject to diminishing returns but its capacity to reduce firm-specific risks is not, then differences in the degree of risk aversion of principals and agents may drive managers to overinvest in projects that reduce a firm's financial risks at the expense of the higher, but more

risky, level of financial performance preferred by owners (Williamson, 1964).

Model (iv) describes the situation where CFP is highest at the extremes of CSP. High financial performance is hypothesized to be associated with either very high or very low levels of social responsibility. This conceptualization of the CSP-CFP relationship is consistent with Porter's (1980) routes to competitive advantage that suggest firms that pursue low cost or differentiation strategies are likely to outperform those firms that are 'stuck in the middle' (Porter, 1980:41). Given that improved social responsibility often requires an increase in direct costs, one route to competitive advantage could arise from the avoidance of these costs. Consistent with this view, some evidence suggests that some price-sensitive consumers are often unwilling or unable to pay the higher prices of more socially responsible companies (Bhattacharya and Sen, 2004). An effective alternative strategy is to use social responsiveness strategically to differentiate a firm in the eyes of important stakeholder groups such as employees and customers. Consistent with this view, research in the marketing field demonstrates that good social performance has a significantly greater impact upon consumer decision making if it is accompanied with high-quality products, suggesting that social performance may play an important role in the implementation of differentiation strategies (Bhattacharya and Sen, 2004). Firms that make moderate levels of investment in social performance neither save the resources for alternative investments nor achieve differentiation in the eyes of stakeholders, and, in consequence, exhibit relatively poor financial performance.

The timing of the CSP-CFP link

In addition to controversy over the shape of the relationship between social and financial performance, there is also a debate concerning the time horizon over which links between the two might arise. This depends on the relative timing of the costs and benefits of good social performance. Social performance initiatives often require companies to make significant investments in the short run that cost the firm financial or other resources. Environmental initiatives such as 'end-of-pipe' approaches, waste reduction, design for life, and process innovation (Hart, 1995) are typically fixed

cost investments, having physical asset properties that depreciate over several years (Russo and Fouts, 1997). Employee programs may incur costs ranging from the minor (e.g., by implementing flexitime or job-sharing), to the moderate (e.g., the costs associated with paid parental leave), or even the high (e.g., a Johnson & Johnson childcare facility is reported to have cost US\$5 million in 1991 [Woolsey, 1992]). Community and philanthropic programs involve significant upfront costs in the form of financial and nonfinancial resources.²

At the same time, the size of the stream of possible benefits to social performance varies across types of social performance and time. Some, initiatives such as cause related marketing, and waste reduction programs may bring financial benefits through increased revenues or reduced costs relatively quickly. However, many of the benefits of being socially responsible are contingent upon awareness of firm behavior among stakeholder groups (Greening and Turban, 2000; Bhattacharya and Sen, 2004). Therefore, a firm has to be consistently socially responsive over time to attract many of the benefits of being so. In summary, the net benefits to financial performance accrue only over the long run when the costs of such initiatives are amortized and when stakeholders are sufficiently aware of the firm's social performance for it to shape their decision making in ways that bring benefits to companies.

METHOD

We employ a two-stage methodology to shed light on the nature of the link between corporate social and financial performance that builds on a widely used method in social science research (e.g., Meier and O'Toole, 2002; Palmer and Whitten, 1999; Jacobson *et al.*, 1993; Fama, 1981). In general, the method calculates the differences between the observed level of a phenomenon and that predicted on the basis of a predictive model and then subjects these residuals to analysis in order to shed light on a particular research problem. For example, in the political science literature, Palmer and Whitten (1999) use such a method to measure unexpected inflation and economic growth before analyzing

the impacts of these on electoral outcomes. Similarly, in the context of the management literature, Meier and O'Toole (2002) use the residuals from a model of managerial salary to provide a proxy for managerial quality and then relate this definition of managerial quality to the performance of public sector organizations. Similar methods are also commonly used in the finance literatures to measure unexpected stock returns (e.g., Fama, 1981) and have been employed in economics research concerning the earnings of displaced workers (e.g., Jacobson *et al.*, 1993).

In the present context, we use a model of the influences on the level of a firm's charitable giving to derive, for each observation, the difference between the observed level of corporate philanthropic giving and the level expected given a firm's characteristics including its size, industry, R&D, and advertising intensity. These residuals are used as the basis of a classification of companies that groups companies according to the character of their corporate social performance strategy. This classification of corporate social performance strategy distinguishes between those firms with unusually high CSP, those with 'normal' CSP, and those with unusually low CSP according to a method described below. Subsequently, the financial performance characteristics of the classification are investigated. In order to capture the longitudinal variation in the CSP-CFP relationship, we analyze the financial performance of firms over three time horizons: a one-year period corresponding to 1999 to examine a contemporaneous or short-term link between CSP and CFP, a five-year period corresponding to the years 1995–1999 inclusive to examine the link between CSP and CFP over a medium-term horizon, and a ten-year period corresponding to 1990–1999 inclusive to examine the link between CSP and CFP over the long term. The remainder of this section develops a model of the determinants of corporate charitable giving before discussing the method by which we identify firms with unusual social performance. We then discuss the measurement of financial performance before outlining the data, sample, and estimator employed.

A model of the determinants of charitable giving

In common with earlier contributions (e.g., Navarro, 1988; Adams and Hardwick, 1998), our

² At present, these are estimated to be equivalent to 0.75 percent, and 1.75 percent of pretax profits for large U.K. and U.S. companies, respectively.

basic model of the influences on corporate charitable giving hypothesizes that company contributions are a function of firm size, labor intensity, industry, and the availability of financial resources.³ The basic model is stated as Equation 1 below.

$$\text{Charitable Donations} = f(\text{Size, Industry, Labor Intensity, Resources}) \quad (1)$$

The characteristics of a firm's industry have been hypothesized to be a key influence on its social performance (McWilliams and Siegel, 2000) and the levels of donations made by firms have been found to vary significantly across industries (Adams and Hardwick, 1998). This may be because charitable donations improve consumer perceptions of firms and their products and, to the extent that enhanced consumer perceptions of corporate values confer competitive advantages (Prahalad and Hamel, 1994; McWilliams and Siegel, 2000), charitable donations may be viewed as an element of the competitive armory available to companies. Existing studies suggest that donations fulfill some of the functions of advertising by increasing the level of demand for a firm's products and reducing its price sensitivity (Dorfman and Steiner, 1954; Navarro, 1988).⁴ In addition, firms active in R&D intensive industries such as pharmaceuticals may face particular incentives to engage in charitable giving that boosts the long run supply of highly skilled labor and cost-effectively outsources basic research. In addition, a positive correlation between firm R&D intensity and charitable donations is expected because both are important components of a differentiation strategy (McWilliams and Siegel, 2000). Finally, industries differ according to the stage of the product life cycle. Some industries will be young and companies active in them will have a range of alternative

investment projects that compete with investments in charitable gifts. In contrast, others will be comparatively mature and offer few alternative investment opportunities. This discussion suggests that industry-correlated incentives to give may play an important role in stimulating corporate giving and hence our model includes a full set of industry effects, which are based upon the firm's primary business activity, and both the firm R&D/sales ratio and a dummy variable capturing advertising intensity reflecting the possible role of social performance in a differentiation strategy.

Firm size is included both as a control variable⁵ and as a proxy for firm visibility. The activities of highly visible companies are subject to increased scrutiny from consumers, investors, regulators, and legislators. This scrutiny, if improperly managed, can lead to higher costs either in terms of lost competitive advantages or increased taxation, regulation, or litigation. Firms may voluntarily meet their social obligations in order to preserve their competitive advantage and avoid harmful tax, environmental, or regulatory policies and the incentives to undertake this behavior may be particularly strong among more visible firms. Many studies have used firm size as a proxy for firm visibility and typically a positive relationship between donations and size is found (e.g., Adams and Hardwick, 1998; McElroy and Siegfried, 1985).

Firms may, through their charitable donations, be able to offset some of the pecuniary demands of workers by offering an increased level of nonpecuniary benefits, and facilitate staff recruitment and retention and improve labor productivity (Moskowitz, 1972). Consistent with this view, Navarro (1988) finds a positive relationship between donations and labor intensity. Therefore, our model includes firm labor intensity (as measured by the ratio of total employment costs to sales) to reflect the potential for charitable donations to be motivated by the desire to motivate workers.

The availability of financial resources is expected to play a significant role in determining corporate charitable donations. Highly profitable companies with significant cash holdings are more capable, and possibly more willing, to make charitable donations. Highly indebted firms may be forced to use much of their free cash to meet the demands

³ Other contributions have argued that corporate ownership characteristics may influence a corporation's propensity to donate to charity (e.g., Bartkus, Morris, and Seifert, 2001; Atkinson and Galaskiewicz, 1988). However, the empirical evidence is very mixed. As a consistency check, we estimated an alternative form of the model that included measures of the concentration of ownership in company stock. The effect on the rate of donation was found to be statistically insignificant and the identification of outliers to the regression was robust to the omission of ownership characteristics.

⁴ The link between advertising intensity and giving may be more complicated. If alternative advertising media are close substitutes for corporate donations then higher charitable giving might permit lower rates of advertising via those alternatives.

⁵ Following Adams and Hardwick (1998) firm size is measured by the natural logarithm of firm total assets.

for interest payments from creditors and so have less cash available for donations. Increasing dividend payments to shareholders is an alternative use for financial resources and a firm's ability to increase all forms of financial payments are expected to be positively correlated. Previous studies provide strong evidence that corporate giving is positively related to the level of residual corporate income (e.g., Johnson, 1966), negatively related to the degree of corporate indebtedness (e.g., Adams and Hardwick, 1998; Navarro, 1988), and positively linked with the ability of the firm to increase the dividends it makes to shareholders (Navarro, 1988). Therefore our model includes three measures of firm financial resource availability. Firm leverage (measured by the ratio of total debt to equity), profitability (measured by the ratio of pretax profits to total assets), and cash holdings (measured by the ratio of cash and equivalent balances to sales) are included to reflect the levels of resource availability in the firm from which charitable gifts can be made. Firms with lower debts and higher profitability and cash holdings are expected to make more donations. Firm dividend payouts (total dividends as a proportion of total assets) are a substitute use for available cash resources and are therefore expected to be negatively associated with the rate of charitable giving. To permit systematic variation in the rate of charitable giving over time, we introduce a set of year control variables.

The full empirical model is:

$$y_{it} = \beta_1 \text{Industry}_i + \beta_2 \text{Size}_i t + \beta_3 \text{R\&D/Sales}_{it} \\ + \beta_4 \text{Profitability}_{it} + \beta_5 \text{Advertising}_i \\ + \beta_6 \text{LabourIntensity}_{it} + \beta_7 \text{Leverage}_{it} \\ + \beta_8 \text{Cash/Sales}_{it} + \beta_9 \text{Dividends}_{it} + \text{Year}_t + \varepsilon_{it}$$

and is estimated using maximum likelihood. The dependent variable analyzed is the ratio of charitable donations to sales.

Identifying companies with unusual social performance characteristics

Estimation of the empirical model permits the retrieval of the residuals for each observation (i.e., for each firm/year combination). They indicate how much the rate of firm charitable giving differs from that predicted on the basis of its size, industry, profitability, leverage, cash holdings, and its

advertising, R&D, and labor intensities. Given that the residuals by definition have zero mean, they represent only relative differences in the intensity of charitable donations within the sample. Substantively, the residuals reflect deviations in a firm's actual giving from that predicted by the empirical model and are interpreted as being the deviation from the 'normal' rate of giving associated with its characteristics (including its size, profitability, and industry environment) in that year.⁶ We use these residuals to classify firms as having unusually high or low social performance. In order to control for firm size and other factors in the definition of unusual social performance and thereby to militate against the possibility that heteroskedasticity in the disturbances of the basic regression generate systematic patterns in the residuals, we first calculate the difference between the firm's actual and predicted rate of giving in a given year as a proportion of its rate of giving in that year. We then rank firms according to this ratio from the highest to the lowest for each of the 10 years studied.

Since we analyze the financial performance of firms over three time horizons: 1999, 1995–1999 inclusive, and 1990–1999 inclusive, we also define unusual social performance over corresponding time horizons. For the contemporaneous time period, we define firms with unusually high social performance as those lying in the top 10 percent of the ranking based on the size of their residuals. Similarly, we define firms with unusually low social performance as those lying in the bottom 10 percent of the ranking, and those with normal social performance as those in the middle 20 percent of the ranking, based on the size of their residuals. In order to avoid introducing survivorship biases into the identification of firms with unusual social performance within a longitudinal context, we decided not to classify firms on the basis of their incidence of firms in the top 10 percent, middle 20 percent, or bottom 10 percent of the ranking. Instead, we computed each firm's average rank over five- and 10-year horizons and

⁶ We conducted some robustness checks to ensure that the classification of firm social responsiveness strategies was robust to alternative operationalizations of some key variables. Specifically, we explored using the natural logarithm of the number of employees as an alternative measure of firm size, and the ratio of pretax profits to capital employed and sales respectively as alternative measures of profitability. We found that our classification was robust to these alternative operationalizations.

used the top 10 percent, middle 20 percent, and bottom 10 percent of this average to classify firms as having unusually high, normal, or unusually low social performance respectively.

The empirical approach of drawing inferences concerning CSP strategy on the basis of the residuals of the empirical model of corporate giving clearly involves some measurement error in that the residual captures all of the variance in corporate giving unaccounted for by the empirical model. It is likely that, in addition to revealing something concerning CSP strategy, the residual reflects a range of idiosyncratic firm effects. However, it should be noted that such measurement errors will tend to mitigate any relationships between our conception of CSP strategy and firm financial performance and, in that sense, create a bias in favor of null findings.

The method described provides a means to discriminate between the four models of the CFP-CSP relationship discussed earlier. For example, Model (i) predicts that firms that have unusually high levels of social performance should, on average, also exhibit higher levels of financial performance compared to firms whose social performance is less than or approximately equal to that predicted by the first-stage model. Of course, Model (ii) predicts the direct opposite of this, while Model (iii) predicts that firms that exhibit moderate levels of social performance will, on average, outperform those with unusually high or low levels of social performance. Finally, Model (iv) predicts that unusually high or low levels of social performance are associated with improved financial performance compared to those firms whose social performance is approximately as expected.

Measuring financial performance

Existing studies of the CSP-CFP relationship employ a very broad variety of measures of firm financial performance (Griffin and Mahon, 1997). Most studies measure financial performance using either an accounting-based measure of profitability (e.g., Aupperle *et al.*, 1985) or a measure of firm stock market performance (e.g., Alexander and Buchholz, 1978; Vance, 1975). Advocates of accounting-based measures argue that market-based performance measures are influenced by a range of factors unrelated to the activity of the individual firm (Shane and Spicer, 1983). Advocates of market-based performance measures question

the objectivity and informational value of accounting data (Benston, 1982) and maintain that market performance is the dimension of financial performance most relevant to investors and shareholders. The key flaws of existing surveys using market-based measures of firm financial performance are that they often employ small samples, use data for a single year, and fail to control for risk (Aupperle *et al.*, 1985).

Market-based performance measures are employed in this study. This reflects both the emphasis on the possible trade-offs involved in ownership of stock in companies with different social performance characteristics and the diversity of the industrial composition of the sample. The market performance (MP) of firm *i* in year *t* is

$$MP_{it} = \frac{(P_t - P_{t-1}) + DIV_t}{P_{t-1}}$$

where P_t and P_{t-1} are the market price of firm *i*'s shares in the current and previous year respectively and DIV_t is the dividend paid in the current year. Market performance is equal to share price growth plus dividend payout over a year relative to the investment an investor would have had to make to earn those gains/losses. In common with existing research, annual market performance was calculated using monthly data (Alexander and Buchholz, 1978). Clearly, MP does not control for risk. Differential risks associated with share ownership were controlled for by the construction of an *ex-post* reward-to-variability-ratio or Sharpe ratio (Sharpe, 1994). The ratio compares the difference between the market performance of share *i* and a risk free alternative to the variability in the standard deviation of the historical market performance of share *i*. Formally, our risk adjusted measure of market performance is

$$RAM P_{it} = \frac{MP_{it} - RISKFREE_t}{\sigma_{MPi}}$$

where MP_{it} is the market performance of share *i* in year *t*, $RISKFREE_t$ is the rate of return available on U.K. government bonds in year *t* and σ_{MPi} is the standard deviation of the average annual market performance of share *i* over the period 1990–1999.

Data, sample, and estimator

The empirical analysis was conducted using a longitudinal data sample extracted from the annual

Table 1. Sample composition and descriptive statistics

Industry	No. of observations	% of sample	Average sales (£'000)	Average charitable donations (£'000)	Average rate of profit	Average leverage
Oil/gas/mining	11	2.05%	5,678,304	4,293	0.11	0.11
Chemicals/pharmaceuticals	32	5.96%	1,909,002	1,728	0.08	0.19
Food/drink/tobacco	43	8.01%	2,578,323	887	0.08	0.22
Electrical products	37	6.89%	680,777	55	0.08	0.12
Engineering	49	9.12%	623,520	82	0.06	0.20
Paper/publishing	30	5.59%	863,300	755	0.07	0.19
Automotive/aerospace	27	5.03%	1,108,232	167	0.07	0.17
Other manufacturing	30	5.59%	269,696	33	−0.02	0.08
All manufacturing	259	48.23%	1,367,068	675	0.06	0.17
IT services	29	5.40%	283,173	23	0.09	0.06
Business support	33	6.15%	567,650	37	0.07	0.14
Retailers	45	8.38%	1,897,264	476	0.06	0.11
Hotels/leisure	17	3.17%	1,013,703	97	0.09	0.28
Transport	34	6.33%	1,108,475	213	0.08	0.24
Other services	30	5.59%	615,071	100	0.15	0.17
All services	188	35.01%	987,737	187	0.09	0.15
Construction	67	12.48%	724,703	64	0.07	0.09
Utilities	23	4.28%	2,588,358	616	0.17	0.29
All industries	537	100.00%	1,206,429	426	0.08	0.16

reports and accounts of a sample of 537 firms quoted on the London Stock Exchange in 1999. The dataset is an unbalanced panel in that the sample is defined in 1999 and then data extracted for sample companies for all years in which they existed in the period 1990–1999. The total number of observations is 4,459. Since the sample is large (including over 90% of the sales of manufacturing firms listed on the FTSE Allshare index in 1999) and was drawn approximately proportionally from size strata, we are confident that our sample is representative of the population of large U.K. enterprises. The major sampling constraint was the need for sales data in the construction of several variables. This excluded financial sector firms from our analysis. Table 1 reports the industrial breakdown of the sample and provides some descriptive statistics for industry subsamples.

The U.K.'s Department for Trade and Industry's (DTI) Small Business Service data suggest that approximately 56 percent of the large firms⁷ in the sectors covered by our analysis are manufacturers, approximately one-quarter of one percent are utilities or are involved in extraction, 26 percent are wholesalers or retailers, 11 percent are involved with transport, storage, or communication and six

percent are hotels or restaurants.⁸ By this yardstick, the sample analyzed here is broadly representative. Differences arise primarily because of the relatively rough industrial classification employed in the DTI statistics and because our sample is composed chiefly of very large firms. This leads to the disproportionate sampling from industries where the average size of firms is very large. Hence our sample includes a higher than expected proportion of firms from the utilities and oil/gas/mining sectors and a lower than expected proportion of firms from the retail sector.

Data from companies' annual reports was extracted using DataStream. Since firms have no statutory obligation to disclose their levels of advertising expenditure and consequently this information is only patchily reported in the annual reports of the firms in our survey, firm-level advertising data are difficult to obtain in the United Kingdom. However, there are some useful firm-level advertising data in the public domain. Media research agencies monitor the incidence

⁸ The proportions of the total number of enterprises in different size classifications are only reported to one decimal place. Hence the proportion of large construction firms is reported as 0.0 percent. The upper bound of the possible number of large construction firms (0.04%) would indicate that approximately six percent of large firms are construction firms.

⁷ A 'large firm' is a firm with more than 250 employees.

of advertisements at the brand level throughout the main advertising media (TV, newspapers and magazines, radio, outdoor/poster, etc.) and construct estimates of the levels of expenditure incurred. These expenditures are then reported in media publications for the largest brands and their owners and occasionally breakdowns of significant advertisers are made to the market level. The data disclosed are therefore helpful in identifying many of the firms for which advertising constitutes an important tool in their competitive armory. However, the coverage of the surveys available is insufficiently comprehensive for us to be able to make any claims about being able to aggregate expenditure data satisfactorily from the brand to the firm level. We constructed a dummy variable on the basis of identification of a firm in *Marketing* magazine's 'Top 100 Advertisers' or as an owner of one of the 'Biggest Brands' in the United Kingdom in 1999. Given that the levels of expenditure on advertising tail off dramatically at the foot of these rankings, we are confident that our methodology allows us to capture the vast majority of the firms for which advertising is a key competitive tool. In the absence of the information necessary to construct a continuous variable to capture firm-level advertising intensity our (binary) indicator of firm-level advertising intensity probably constitutes an improvement upon using industry-level data.

The amount that a firm gives is a censored variable in the sense that it cannot take negative values. Many studies of charitable giving in the existing literature (e.g., Adams and Hardwick 1998) involve analysis of a *censored sample* of firms who are givers. This approach introduces sample selectivity biases and therefore, as Navarro (1988) notes, the use of a truncated regression technique is necessitated since ordinary least squares estimation can provide both biased and inconsistent parameter estimates. A variety of approaches exist that make the distinction between the decision to participate in giving and the subsequent decision of the level of donations (see Maddala, 1983; Greene, 1993). However, the most commonly adopted solution is to estimate a Tobit model of the rate of expenditure by maximum likelihood. Since the analysis conducted here is concerned primarily with the identification of firms whose charitable giving is unusual and this approach provides consistent and unbiased parameter estimates, we proceed with

the estimation of a Tobit model.⁹ The basic Tobit model estimated here takes the following form:

$$y_i^* = X_i\beta + \varepsilon_i$$

where an observed dependent variable, y_i (which is equal to y_i^*) is generated if $X_i\beta + \varepsilon_i > 0$ and is otherwise equal to zero. X_i is a vector of explanatory variables that are hypothesized to influence corporate charitable donations.

RESULTS

The determinants of corporate charitable donations

Table 2 reports the results of estimating a Tobit model of the determinants of the rate of charitable giving. The results are consistent with the findings of earlier studies (e.g., Navarro, 1988; Adams and Hardwick, 1998; McElroy and Siegfried, 1985) in that they suggest that larger ($p = 0.000$), more profitable ($p = 0.000$), more highly R&D ($p = 0.000$) and advertising ($p = 0.001$) intensive firms are expected to make donations at a higher rate. In addition, variations in resource availability significantly affect the rate of corporate giving with less leveraged firms ($p = 0.008$), and those with more liquid cash reserves ($p = 0.000$) making a higher rate of donations. The model also indicates that there is some important industry variation in the rate of giving. Firms in environmentally damaging industries such as mining, and those in consumer oriented sectors such as retailing, give significantly more heavily to charity than other firms, while firms in newer, cleaner industries such as the IT and electronic equipment sectors give significantly less heavily to charity. This might reflect a difference in the extent of spare financial resources, the availability of investment opportunities, or governance conditions between new and established firms, or the sensitivity of decisions relating to charitable giving to the broad social responsibilities of firms. Finally, we note that none of the year effects was found to be statistically significantly different from zero suggesting that, *ceteris*

⁹ As a consistency check, a variety of other estimations were carried out to determine if the firms identified as unusual varied dramatically according to which estimation technique was employed. In fact the pattern of the outliers was very stable.

Table 2. Results of estimating a Tobit model of the determinants of charitable giving

Dependent variable: ratio of charitable donations to sales		
<i>Significant industry effects</i>	<i>Other variables</i>	
Positive	Size	0.442 E-04***
Mining***		
Supermarkets**	R&D/sales	0.152 E-02***
Other retailing***		
Paper & publishing***	Profitability	0.154 E-03***
Broadcasting***		
Insurance***	Advertising intensity	0.634 E-04***
Tobacco & alcohol***		
Textiles***	Labor intensity	0.248 E-03***
Construction***		
	Leverage	-0.113 E-03***
Negative		
IT***	Cash	0.137 E-05***
Water***		
Electrical equipment**	Dividends	0.677 E-05***
No. of observations	4499	
Log-likelihood	24647.6	

The presence of coefficient estimates that are significantly different from zero is indicated by the presence of asterisks with

* indicating $p < 0.10$; ** indicating $p < 0.05$; *** indicating $p < 0.001$

paribus, the rate of giving as a proportion of sales has remained relatively constant over time.

Analysis of corporate financial performance characteristics

The residuals of the Tobit estimation were retrieved for analysis. They indicate how much the rate of firm charitable giving differs from that predicted on the basis of its size, industry, profitability, leverage, cash holdings, and its advertising, R&D, and labor intensities. Examination of the residuals permits the identification of firms whose measured rate of contributions to charity is unusual in the sense that it is higher or lower than that expected on the basis of its firm and industry characteristics. The size distribution of residuals was used to classify firms into groups according to the size of their residual according to the method described earlier. Four groups were selected for analysis. First, those firms that, over a given time period, lay in the top 10 percent of the size distribution of residuals (i.e., the firms who gave at a rate most in excess of that predicted by the model). The second group comprise those firms that, over a given time period lay in the bottom 10 percent of the size distribution (i.e., the firms who gave at a rate most below that predicted by the model). A third

group consists of those firms that lay in the 'middle' 20 percent of the size distribution (i.e., those firms whose rate of giving was most similar to that predicted by the model). A final group consists of all the firms in the sample. In order to capture the longitudinal variation in the CSP-CFP relationship, we examine the financial performance characteristics of each group over one-, five, and 10-year time horizons.

Table 3 reports the financial performance attributes of these groups of firms. The first three rows of Table 3 report some descriptive statistics for the groups. As anticipated, the average level of charitable donations made by firms in the top 10 percent group is significantly higher ($p = 0.000$)¹⁰ than that by other firms, and the level of donations in the bottom 10 percent is significantly lower than that in the middle group ($p = 0.002$). The firms in the top 10 percent group are also significantly larger than those in any other group ($p = 0.016$). Perhaps most significantly, the standard deviation of the market performance of the bottom 10 percent group is significantly higher ($p = 0.011$) than that of other groups. These firms have considerably less stable market performance and in that sense

¹⁰ All tests of differences are independent sample t-tests and all significance levels are based on two-tailed testing.

Table 3. The financial performance characteristics of firms grouped according to the percentiles of the distribution of the Tobit estimation residuals

	TOP 10%	MIDDLE 20%	BOTTOM 10%	ALL FIRMS
<i>Average sales 1999 (£'000)</i>	2,466,312	1,754,731	1,231,595	1,313,404
<i>Average charitable donations 1999 (£'000)</i>	2,974	233	13	468
<i>Average SD MP (1990–1999)</i>	0.40	0.39	0.51	0.41
<i>Short-run market performance characteristics (market performance in 1999)</i>				
<i>Average MP</i>	0.30	0.24	0.49	0.33
<i>Average risk adj MP</i>	0.52	0.40	0.93	0.55
<i>Medium-run market performance characteristics (average over the period 1995–1999)</i>				
<i>Average MP</i>	0.20	0.11	0.17	0.13
<i>Average risk adj MP</i>	0.45	0.19	0.25	0.24
<i>Long-run market performance characteristics (average over the period 1990–1999)</i>				
<i>Average MP</i>	0.16	0.11	0.16	0.12
<i>Average risk adj MP</i>	0.39	0.21	0.24	0.24

are more risky investments than firms in the other groups.

Table 3 goes on to highlight the variation in the financial performance, both in raw terms and adjusted for risk, of the four groups of companies under analysis over time.¹¹ Throughout Table 3, financial performance figures refer to the simple averages for the firms in each group, which is equivalent to constructing an equally weighted portfolio of companies in each group.¹² Two striking patterns emerge in Table 3. First, over every time period, firms in the middle 20 percent group have lower financial performance than those in other groups. Over the short run, this difference is statistically significant before risk is adjusted for ($p = 0.090$). Firms in the middle 20 percent also have significantly lower financial performance than those in the bottom 10 percent both before and after risk is adjusted for ($p = 0.008$, and 0.010 , respectively). When the financial performance of companies is considered over a medium (five-year) time horizon, we continue to find that firms in the middle 20 percent of companies perform significantly more poorly than other firms. In particular, the performance of the middle 20 percent group

is significantly lower than both the top and bottom 10 percent groups before risk is adjusted for ($p = 0.008$, and $p = 0.046$, respectively), and significantly lower than the top 10 percent once risk is taken into account ($p = 0.008$). This pattern is repeated for the long (10-year) time horizon, with the performance of the middle 20 percent group being significantly lower than both the top and bottom 10 percent groups before risk is adjusted for ($p = 0.019$, and $p = 0.054$, respectively), and significantly lower than the top 10 percent once risk is taken into account ($p = 0.028$).

The second key observation concerns the variation across time periods in the highest performing category of companies. Over the short-run (one-year) horizon, we see that firms in the bottom 10 percent group significantly outperform other companies both before ($p = 0.025$) and after ($p = 0.091$) risk is adjusted for. However, over a five-year horizon, the financial performance of the top 10 percent group is, overall, highest and this group's financial performance is significantly higher than that of other companies both before and after risk is adjusted for ($p = 0.011$, and $p = 0.049$, respectively). The raw and risk adjusted financial performance of the top 10 percent group significantly outperforms the middle 20 percent ($p = 0.008$, and $p = 0.008$, respectively), and the top 10 percent group outperforms the bottom 10 percent group once risk is adjusted for ($p = 0.049$). A very similar pattern is observed over the long (10-year) time horizon. The financial performance of the top 10 percent firms is higher than other firms before and after risk is adjusted for ($p = 0.055$, and

¹¹ Since the number of firms in the sample varies over time, it should be borne in mind that there is some variation in sample size and composition of the different portfolios. In 1999, 537 firms are present, 380 firms are present for at least five years, and 293 firms are present for the entire sampling period.

¹² As a consistency check, we also calculated weighted averages of the financial performance of each of the groups. Market capitalization was used to derive the weights. The results were very similar, and so we decided to proceed using simple averages, which are more relevant to corporate strategic decision making.

Table 4. The financial performance characteristics of firms grouped according to the percentiles of the distribution of the Tobit estimation residuals (Including only those firms in the sample in all years)

	TOP 10% (29)	MIDDLE 20% (58)	BOTTOM 10% (29)	ALL FIRMS (293)
Short-run market performance characteristics (market performance in 1999)				
<i>Average MP</i>	0.24	0.23	0.38	0.29
<i>Average risk adj MP</i>	0.50	0.46	0.71	0.62
Medium-run market performance characteristics (average over the period 1995–1999)				
<i>Average MP</i>	0.15	0.09	0.14	0.12
<i>Average risk adj MP</i>	0.36	0.15	0.21	0.21
Long-run market performance characteristics (average over the period 1990–1999)				
<i>Average MP</i>	0.16	0.11	0.16	0.12
<i>Average risk adj MP</i>	0.39	0.21	0.24	0.24

$p = 0.005$). The top 10 percent category also significantly outperforms the middle category ($p = 0.019$, and $p = 0.028$), and the bottom 10 percent category once risk is taken into account ($p = 0.043$).

The longitudinal aspect of our analysis encompasses two distinct dimensions. A first dimension addresses the variation over time in the CSP-CFP relationship among established companies. To conduct this analysis we selected the subset of the sample of firms that existed throughout the entire period 1990–1999. This controls for variation in the composition of the sample over the period of our analysis. A second dimension focuses on those companies not present for the entire sample period and, thereby, examines the role of changing industrial composition, and in particular, the presence of new firms in young industries on the CSP-CFP relationship. The first dimension requires us to repeat our analysis on the subsample of 293 firms for which all data were available for the entire 10-year observation period. These results are substantially similar to those discussed above and are reported in Table 4. However, in part due to the reduction in the number of degrees of freedom, fewer of these differences are statistically significant. Concerning the relatively poor financial performance of firms in the middle 20 percent category, we continue to note the lower financial performance of this group of companies relative to all other groups both before and after risk is adjusted for. There are no statistically significant differences in the short-run performance of the groups, but over the medium and long run, the middle group continues to perform significantly less well relative to both the top 10 percent and bottom 10 percent

groups. The top 10 percent group has significantly higher risk-adjusted financial performance than the middle 20 percent group over a five-year horizon ($p = 0.063$), and significantly higher raw and risk-adjusted performance over 10 years ($p = 0.019$, $p = 0.028$). The bottom 10 percent group has significantly higher raw financial performance than the middle 20 percent group over 10 years ($p = 0.054$).

Considering the changing pattern of the highest performing category of companies, the pattern is, once again, very similar to that observed in Table 3. The short-run financial performance of the bottom 10 percent group of firms is higher financial performance than other companies, but differences between the groups are not now statistically significant. However, once risk is controlled for, we continue to find that firms in the top 10 percent group outperform other firms over five years before risk is adjusted for ($p = 0.042$), and over 10 years both before and after risk is adjusted for ($p = 0.055$, and $p = 0.005$).

A final step in the analysis considers the financial performance of companies that ‘entered’ the analysis during the 10-year period, but which were not present for all of the years under investigation. On average, these companies tend to be smaller, give less to charity, and are somewhat disproportionately associated with industries that grew significantly during the 1990s, such as the business services, electronics, and computing/Internet sectors. These results are presented in Table 5.¹³

¹³ The performance of firms is examined only over one- and five-year horizons since, by construction, none of these companies were present for the complete 10-year sampling period.

Table 5. The financial performance characteristics of firms grouped according to the percentiles of the distribution of the Tobit estimation residuals (excluding those firms present in the sample in all years)

	TOP 10%	MIDDLE 20%	BOTTOM 10%	ALL FIRMS
<i>Short-run market performance characteristics (market performance in 1999)</i>				
<i>Average MP</i>	0.34	0.26	0.68	0.36
<i>Average risk adj MP</i>	0.63	0.32	1.36	0.42
<i>Medium-run market performance characteristics (average over the period 1995–1999)</i>				
<i>Average MP</i>	0.33	0.11	0.25	0.20
<i>Average risk adj MP</i>	0.66	0.19	0.36	0.37

Qualitatively, the key findings reported in Table 5 are very similar to those of the earlier analysis. In particular, the middle 20 percent of companies continues to perform poorly relative to all other categories. In the short run, the middle 20 percent group of companies performs significantly less well than the bottom 10 percent of companies ($p = 0.006$, and $p = 0.005$), and over the longer, five-year, horizon, the middle group performs significantly less well than all other companies before risk is taken into account ($p = 0.051$). The middle 20 percent group also performs less well than both the bottom and top 10 percent groups before risk is adjusted for ($p = 0.033$, and $p = 0.046$), and less well than the top 10 percent group after risk is taken into account ($p = 0.038$). We also identify similar patterns with respect to the variation of the best-performing category of companies over time. Specifically, in the short run, the bottom 10 percent group significantly outperforms other companies both before and after risk is adjusted for ($p = 0.037$, and $p = 0.064$), whereas the top 10 percent group outperforms other companies over a five-year horizon ($p = 0.064$, and $p = 0.090$).

DISCUSSION

To date, the literature has identified no clear pattern in the relationship between corporate social and financial performance (Margolis and Walsh, 2003; Griffin and Mahon, 1997; Orlitzky *et al.*, 2003; McWilliams and Siegel, 2000). Our findings suggest one source of this ambiguity may be due to the nonlinearity of the CSP-CFP relationship. Our evidence indicates that only those firms that exhibit unusually good, or bad, social performance in the sense that they make a higher, or lower, rate of charitable giving than that which

would be predicted given their attributes have significantly higher financial performance. Returning to our earlier conceptual development, our evidence suggests that the relationship between CSP and CFP may be curvilinear, as hypothesized in Model (iv). Consistent with Porter's (1980) generic strategy framework, our results suggest that high performing firms either differentiate themselves by investing in an unexpectedly high degree of social responsibility or choose to save the resources that could have been invested in social responsibility. Those that give at an unexpectedly high rate differentiate themselves in the eyes of stakeholders and reap the benefits of this differentiation in improved employee motivation and increased customer and investor loyalty. Firms that give at an unexpectedly low rate conserve the financial resources they might have otherwise donated to charity. These resources can then be allocated to alternative investment projects or returned to shareholders as dividends. Firms that give at around the expected rate neither differentiate themselves from competitors nor conserve resources and may thus be 'stuck in the middle' in the sense that neither their social nor their financial performance is exceptional. Future research into the relationship between the scope and nature of CSR policy and corporate strategy may prove fruitful.

Our evidence also suggests that there are significant longitudinal aspects to the relationship between CSP and CFP that may also have generated ambiguous results in existing studies, many of which are cross-sectional in nature, or which introduce short lags into the relationship (e.g., Aupperle *et al.*, 1985; Waddock and Graves, 1997; McGuire *et al.*, 1988). Earlier, we identified two distinct aspects of the CSP-CFP relationship. The first of these focused on the variation over time in the relationship between CSP and CFP in the context of established companies. Among these companies,

we found that firms that exhibit unusually good social performance do not outperform, and, if anything, may under perform, relative to less socially responsible rivals over the short run. However, an examination of the pattern of financial performance over longer periods of time indicates significantly higher financial returns are earned by those companies that demonstrate an unusual degree of social sensitivity. This suggests that it takes time for being socially responsive to translate into higher financial returns and that it is the consistent application of a strategy of social sensitivity that ultimately pays off in financial terms.

A further longitudinal dimension to our findings is revealed through the separate subsampling of firms consistently present over the 10-year period of our analysis from those newer companies that are present for only a proportion of that time. The attributes of the two groups differ in that the newer companies are, on average, smaller, give less to charity, and are disproportionately from the computer/Internet, and electronic equipment sectors. Consistent with the arguments advanced by McWilliams and Siegel (2001) concerning the role played by the industry life cycle in shaping corporate decisions concerning social performance, we identify a more pronounced positive short-run financial performance of firms making unusually low rates of charitable donation in the group of newer firms, compared with those present in all years. Younger firms in embryonic and rapidly growing industries face little demand pressure for product differentiation from consumers, and invest heavily in product and process development (McWilliams and Siegel, 2001). Thus, compared with their counterparts in stable, mature industries, these companies face fewer incentives to invest in social performance as a differentiator, a stream of alternative investment opportunities with high payoffs through product and process innovation, and few spare financial resources to devote to improving social performance. This finding suggests that the relationship between CSP and CFP may be contingent upon the life cycle of the firm and that, therefore, the conceptualizations of the relationship between CSP and CFP developed earlier omit a consideration of the dynamic aspects of a firm's competitive context.

The implications of our results for socially responsive investment are also more complex than earlier studies have indicated, in part because, in

contrast to many earlier studies, we control for differential levels of risk between ethical and standard funds (Hamilton, Jo, and Statman, 1993; Carhart, 1997). Our results suggest that the returns associated with investing in socially responsive stocks arise over longer time horizons and that, for a subset of companies, there may be a payoff in short-run financial terms to investing in unusually socially unresponsive companies. Over longer, five- and ten- year, time horizons, we find that unusually socially responsive stocks perform better than other stocks, particularly when their typically less volatile stock performance is taken into account. These findings echo those of Barnett and Salomon (2002) who highlight the importance of variation in the severity of the ethical screens used by socially responsible investment funds. In a longitudinal analysis of 67 socially responsible funds, Barnett and Salomon (2002) find evidence of a U-shaped relationship between performance and the strength of the screen, concluding that funds that employ minimal screens are still able to diversify well, while funds that employ very strict screens are able to filter out poor quality firms effectively. Significantly, funds that employ intermediate-level screens have the weakest performance, neither forcefully weeding out firms to avoid nor being able to diversify sufficiently across the remaining firms in the investable universe.

CONCLUSIONS

This study has investigated the link between corporate social and financial performance using a distinctive empirical approach. Specifically, we estimated a model of the determinants of the intensity of corporate charitable contributions and subsequently analyzed the financial performance characteristics of firms that make donations at a significantly different rate than expected on the basis of their firm and industry characteristics. In contrast to much of the existing literature, our analysis is longitudinal, employing a 10-year panel dataset for over 500 large U.K. companies. We have identified significant differences in the stock market performance of firms that make unexpectedly high or low rates of contributions to charity and shown how these differences vary over time.

Our key findings concerned the significance of deviation from 'expected' or 'optimal' rates of

social performance for a firm's financial performance and the longitudinal variability in the link between CSP and CFP. We found that firms with both unusually high and low social performance have higher financial performance than other firms with unusually poor social performers doing best in the short run, and unusually good social performers doing best over longer time horizons. The significantly higher financial performance of young firms with poor social performance active in new and rapidly growing industries is of particular interest since it suggests that the industry life cycle may play an important role as a contingency in the relationship between CSP and CFP. This could form the basis of future research.

There are two limitations of our study that other future work might seek to address. First, our analysis has focused exclusively on a single aspect of corporate social performance: charitable giving. Given that CSP is a rich and multidimensional construct that embodies a wide range of corporate behavior related to employee relations, community relations, issues concerned with women and minorities, environmental responsibility, and product safety (e.g., Hillman and Keim, 2001; Griffin and Mahon, 1997), it is important to extend our analysis to other specific dimensions of CSP. Second, our empirical methodology precludes us from drawing any strong conclusions concerning causal relationships between firms making unexpectedly high levels of charitable donations and poor stock market performance. The issue of causality in the CSP-CFP relationship is deserving of significant further work.

REFERENCES

- Adams M, Hardwick P. 1998. An analysis of corporate donations: United Kingdom evidence. *Journal of Management Studies* **35**(5): 641–654.
- Alexander GJ, Buchholz RA. 1978. Corporate social responsibility and stock market performance. *Academy of Management Journal* **21**(3): 479–486.
- Atkinson L, Galaskiewicz J. 1988. Stock ownership and company contributions to charity. *Administrative Sciences Quarterly* **33**: 82–100.
- Aupperle KE, Carroll AB, Hatfield JD. 1985. An empirical examination of the relationship between corporate social responsibility and profitability. *Academy of Management Journal* **28**(2): 446–463.
- Barnett ML, Salomon RM. 2002. Unpacking social responsibility: the curvilinear relationship between social and financial performance. *Academy of Management Proceedings: SIM*; B1–B6.
- Bartkus BR, Morris SA, Seifert B. 2001. Stronger governance mechanisms: do they influence corporate philanthropy. Paper presented at the annual meeting of the Academy of Management, Washington, D.C.
- Benston GJ. 1982. Accounting numbers and economic values. *Antitrust Bulletin* **27**: 161–215.
- Berman SL, Wicks AC, Kotha S, Jones TM. 1999. Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance. *Academy of Management Journal* **42**(5): 488–506.
- Bhattacharya CB, Sen S. 2004. Doing better at doing good: when, why and how consumers respond to corporate social initiatives. *California Management Review* **47**(1): 9–24.
- Brammer S, Millington A. 2004. Stakeholder pressure, organizational size, and the allocation of departmental responsibility for the management of corporate charitable giving. *Business & Society* **43**(3): 268–295.
- Carhart M. 1997. On persistence in mutual fund performance. *Journal of Finance* **52**: 57–82.
- Carroll AB. 1979. A three-dimensional model of corporate performance. *Academy of Management Review* **44**: 497–505.
- Donaldson T, Preston LE. 1995. The stakeholder theory of the corporation: concepts, evidence and implications. *Academy of Management Review* **20**: 65–91.
- Dorfman R, Steiner PO. 1954. Optimal advertising and optimal quality. *American Economic Review* **44**: 826–836.
- Fama EF. 1981. Stock returns, real activity, inflation, and money. *The American Economic Review* **71**(4): 545–565.
- Freeman RE. 1984. *Strategic Management: A Stakeholder approach* (Pitman Series in Business and Public Policy). Pitman: Boston, MA.
- Friedman M. 1970. The social responsibility of business is to increase its profits. *New York Times Magazine*, 13 September; 122–126.
- Godfrey PC. 2005. The relationship between corporate philanthropy and shareholder wealth: a risk management perspective. *Academy of Management Review* **30**(4): 777–798.
- Greene WH. 1993. *Econometric Analysis*. Macmillan: New York.
- Greening DW, Turban DB. 2000. Corporate social performance as a competitive advantage in attracting a quality workforce. *Business & Society* **39**(3): 254–280.
- Griffin JJ, Mahon JF. 1997. The corporate social performance and financial performance debate: twenty-five years of incomparable research. *Business & Society* **36**(1): 5–31.
- Hamilton S, Jo H, Statman M. 1993. Doing Well While Doing Good? The Investment Performance of Socially Responsible Mutual Funds. *Financial Analysts Journal* **49**(6): 62–66.
- Hart SL. 1995. A natural-resource-based view of the firm. *Academy of Management Review* **20**(4): 986–1,014.

- Hillman AJ, Keim GD. 2001. Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strategic Management Journal* **22**(2): 125–139.
- Jacobson LS, LaLonde RJ, Sullivan DG. 1993. Earnings losses of displaced workers. *American Economic Review* **83**(4): 685–709.
- Jensen MC, Meckling WH. 1976. Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Accounting* **3**(4): 305–360.
- Johnson O. 1966. Corporate philanthropy: an analysis of corporate contributions. *Journal of Business* **39**: 489–504.
- Jones TM. 1995. Instrumental stakeholder theory: a synthesis of ethics and economics. *Academy of Management Review* **20**(2): 404–437.
- Kapstein EB. 2001. The corporate ethics crusade. *Foreign Affairs* **80**(5): 105–119.
- Konar S, Cohen M. 2001. Does the market value environmental performance? *Review of Economics and Statistics* **83**(2): 281–289.
- Maddala G. 1983. *Limited Dependent and Qualitative Variables in Econometrics (Econometrics Society Monograph)*. Cambridge University Press: Cambridge, UK.
- Margolis JD, Walsh JP. 2003. Misery loves companies: rethinking social initiatives by business. *Administrative Science Quarterly* **48**: 268–305.
- McElroy KM, Siegfried JJ. 1985. The effect of firms size on corporate philanthropy. *Quarterly Review of Economics and Business* **25**(2): 18–26.
- McGuire JB, Sundgren A, Schneewiess T. 1988. Corporate social responsibility and firm financial performance. *Academy of Management Review* **31**(4): 854–872.
- McWilliams A, Siegel D. 2000. Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal* **21**(5): 603–609.
- McWilliams A, Siegel D. 2001. Corporate social responsibility: a theory of the firm perspective. *Academy of Management Review* **26**(1): 117–127.
- Meier KJ, O'Toole LJ Jr. 2002. Public management and organizational performance: the effect of managerial quality. *Journal of Policy Analysis & Management* **21**(4): 629–643.
- Milgrom P, Roberts J. 1986. Price and advertising signals of product quality. *Journal of Political Economy* **94**(4): 796–821.
- Moskowitz M. 1972. Choosing socially responsive stocks. *Business and Society Review* **10**: 71–75.
- Navarro P. 1988. Why do corporations give to charity? *Journal of Business* **61**: 65–93.
- Orlitzky M. 2001. Does firm size confound the relationship between corporate social performance and firm financial performance? *Journal of Business Ethics* **33**(2): 167–180.
- Orlitzky M, Schmidt FL, Rynes SL. 2003. Corporate social and financial performance: a meta-analysis. *Organization Studies* **24**(3): 403–441.
- Palmer HD, Whitten GD. 1999. The electoral impact of unexpected inflation and economic growth. *British Journal of Political Science* **29**(4): 623–639.
- Porter ME. 1980. *Competitive Strategy: Techniques for Analyzing Industries and Competitors*. Free Press: New York.
- Porter ME, Kramer MR. 2002. The competitive advantage of corporate philanthropy. *Harvard Business Review* **80**: 56–68.
- Porter ME, van der Linde C. 1995. Toward a new conception of the environment-competitiveness relationship. *Journal of Economic Perspectives* **9**: 97–118.
- Prahalad CK, Hamel G. 1994. Strategy as a field of study: why search for a new paradigm? *Strategic Management Journal* Summer Special Issue **15**: 5–16.
- Rowley T, Berman S. 2000. A brand new brand of corporate social performance. *Business & Society* **39**(4): 397–418.
- Russo MV, Fouts PA. 1997. A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal* **40**(3): 534–559.
- Saia DH, Carroll AB, Buchholtz AK. 2003. Philanthropy as strategy: when Corporate charity begins at home. *Business & Society* **42**(2): 169–201.
- Sen S, Bhattacharya CB. 2001. Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research* **38**: 225–243.
- Shane PB, Spicer BH. 1983. Market response to environmental information produced outside the firm. *Accounting Review* **58**(3): 521–538.
- Sharpe WF. 1994. The Sharpe ratio. *Journal of Portfolio Management* **21**(1): 49–59.
- Siegfried JJ, McElroy KM, Biernot-Fawkes D. 1983. The management of corporate contributions. *Research in Corporate Performance and Policy* **5**: 87–102.
- Smith CN. 1994. The new corporate philanthropy. *Harvard Business Review* **72**(3): 105–116.
- Smyth J. 2000. *Guide to UK Company Giving* (3rd edn). Directory of Social Change: London, UK.
- Turban DB, Greening DW. 1996. Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal* **40**: 658–672.
- Ullman AA. 1985. Data in search of a theory: a critical examination of the relationship among social performance, social disclosure, and economic performance. *Academy of Management Review* **10**(1): 540–557.
- Vance SC. 1975. Are socially responsible corporations good investment risks? *Academy of Management Review* **64**(8): 18–24.
- Waddock SA, Graves SB. 1997. The corporate social performance-financial performance link. *Strategic Management Journal* **18**(4): 303–319.
- Williamson OE. 1964. *The Economics of Discretionary Behavior: Managerial Objectives in a Theory of the Firm*. Prentice Hall: Englewood Cliffs, NJ.

- Wiseman RM, Gomez-Mejia LR. 1998. A behavioral agency model of managerial risk taking. *Academy of Management Review* **23**: 133–153.
- Wood DJ, Jones RE. 1995. Stakeholder mismatching: a theoretical problem in empirical research on corporate social performance. *International Journal of Organizational Analysis* **3**(3): 229–267.
- Woolsey C. 1992. Continued growth seen in work-family benefits. *Business Insurance* **26**: 13–14.