

CORPORATE SOCIAL RESPONSIBILITY AND FIRM PERFORMANCE: INVESTOR PREFERENCES AND CORPORATE STRATEGIES

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We address the debate about whether firms should engage in socially responsible behavior by proposing a theoretical model in which the supply of and demand for socially responsible investment opportunities determine whether these activities will improve, reduce, or have no impact on a firm's market value. The theory shows that managers in publicly traded firms might fund socially responsible activities that do not maximize the present value of their firm's future cash flows yet still maximize the market value of the firm.

Debates continue to rage about whether or not firms should engage in socially responsible behavior. On the one hand, traditional economic arguments suggest that managers should make decisions that maximize the wealth of their firm's equity holders (Friedman, 1962). Managers do this by making decisions that maximize the present value of the firm's future cash flows (Copeland, Murrin, & Koller, 1994). To the extent that socially responsible activities are inconsistent with these economic objectives, traditional financial logic suggests that they should be avoided. Indeed, firms that engage in such activities—especially when they are very costly—may be subject to various forms of market discipline, including limited access to low-cost capital, the replacement of senior managers, and takeovers (Jensen & Meckling, 1976).¹

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¹ Interestingly, managers are not required by law to maximize shareholder wealth. Rather, they are required only to carry out the "lawful directives of shareholders" (Fairfax, 2002; Simon, 1993). Thus, managers can engage in activities that reduce shareholder wealth as long as they "do not

On the other hand, some business and society scholars have argued that firms have a duty to society that goes well beyond simply maximizing the wealth of equity holders (Swanson, 1999; Whetten, Rands, & Godfrey, 2001). These scholars argue that such a narrow focus can lead management to ignore other important stakeholders—including employees, suppliers, customers, and society at large—and that sometimes the interests of these other stakeholders should supersede the interests of a firm's equity holders in managerial decision making, even if this reduces the present value of the firm's cash flows (Clarkson, 1995; Donaldson & Preston, 1995; Freeman, 1984; Mitchell, Agle, & Wood, 1997; Paine, 2002; Wood & Jones, 1995).

One way to resolve this conflict is to observe that at least some forms of socially responsible behavior may actually improve the present value of a firm's future cash flows and, thus, may be consistent with the wealth-maximizing interests of the firm's equity holders. For example, socially responsible behavior can enable a

engage in fraud or self-dealing and make rational, informed decisions" (Fairfax, 2002: 440). This paper therefore focuses less on the legal implications of engaging in socially responsible actions and more on the market consequences of these actions. See cases such as *Shlensky v. Wrigley* (1968), *Sinclair Oil Corp. v. Levien* (1971), and *Aronson v. Lewis* (1984) for examples where courts allowed managers to put other interests above profit-maximizing interests. (We thank Timothy Fort for providing these examples.)

firm to differentiate its products in its product market (McWilliams & Siegel, 2001; Waddock & Graves, 1997), can enable a firm to avoid costly government-imposed fines (Belkaoui, 1976; Bragdon & Marlin, 1972; Freedman & Stagliano, 1991; Shane & Spicer, 1983; Spicer, 1978), and can act to reduce a firm's exposure to risk (Godfrey, 2004). All of these socially responsible actions can increase the present value of a firm's future cash flows and are therefore consistent with maximizing the wealth of the firm's equity holders.

However, from a broader theoretical perspective, the entire effort to discover how socially responsible activities can increase the present value of a firm's future cash flows is problematic. After all, the essential point of many business and society scholars is that the interests of a firm's equity holders sometimes need to be set aside in favor of the interests of the firm's other stakeholders (Banfield, 1985; Carroll, 1995; Windsor, 2001). That is, according to social responsibility theorists, firms should sometimes engage in activities that benefit employees, suppliers, customers, and society at large, even if those activities reduce the present value of the cash flows generated by the firm (Mitchell et al., 1997; Paine, 2002; Wood & Jones, 1995). Focusing the study of corporate social responsibility on those actions that increase the present value of a firm's cash flows fails to address this central theme in the corporate social responsibility literature (Windsor, 2001).

In this context, not just examples of socially responsible actions that can have a positive impact on a firm's cash flows—so-called profit-maximizing "ethics" (Windsor, 2001)—are required but, rather, a theory that suggests the conditions under which firms will engage in socially responsible activities, even if those activities reduce the present value of a firm's cash flows—so-called costly philanthropy (Windsor, 2001). In this paper we propose such a theory. This theory builds on the simple observation that equity holders may sometimes have interests besides simply maximizing their wealth when they make their investment decisions. Sometimes, they may want the firms they invest in to pursue socially responsible activities, even if these activities reduce the present value of the cash flows generated by these firms.

ASSUMPTIONS AND DEFINITIONS

Before developing the model, it is helpful to define its key terms and specify its central assumptions. Margolis and Walsh (2003) have noted that much of the current confusion in the corporate social responsibility literature is due to a lack of clarity about definitions and assumptions.

What Is Socially Responsible Behavior?

A wide variety of definitions of corporate social responsibility have been proposed in the literature (Margolis & Walsh, 2003). While these definitions vary in detail, many focus on voluntary firm actions designed to improve social or environmental conditions (Aguilera, Rupp, Williams, & Ganapathi, 2007; Davis, 1973; Waddock, 2004; Wood, 1991a,b; Wood & Jones, 1995). This is the definition of corporate social responsibility we adopt here.

Of course, within this broader definition, different stakeholders may have different preferences for specific socially responsible activities they would like to see their firm invest in (Grass, 1999). Moreover, these preferences may vary as the currency of social issues evolves over time (Clarkson, 1995; Davis, 1973; Moskowitz, 1975; Wartick & Cochran, 1985; Wood, 1991a). However, as long as a firm's actions are consistent with this general definition of social responsibility—that is, as long as they are voluntary and designed to improve social or environmental conditions—they are considered socially responsible for the purposes of the model developed here.

The specific decision-making context modeled here focuses on determining the total demand for investment opportunities in firms engaging in specific socially responsible activities; the current supply of those opportunities in the market; and whether current supply is less than, equal to, or greater than demand. In this sense, the opportunity to invest in a firm that is engaging in specific socially responsible activities can be thought of as a "product" that is sold by firms to potential equity investors as "customers."²

² Of course, equity holders as "customers" for opportunities to invest in socially responsible firms may vary in the kinds of corporate social responsible activities they would

What Is Firm Performance?

A wide variety of definitions of firm performance have also been proposed in the literature (Barney, 2002). Both accounting and market definitions have been used to study the relationship between corporate social responsibility and firm performance (Orlitzky, Schmidt, & Rynes, 2003). However, since most social responsibility scholars seek to understand the ways that socially responsible corporate activities can create or destroy shareholder wealth, market definitions of firm performance seem likely to be more appropriate than accounting definitions of firm performance in this context (Margolis & Walsh, 2001).

In fact, in the model developed here, we adopt such a market definition of firm performance by focusing on how socially responsible corporate activities affect a firm's market value. Market value is defined as the price of a firm's equity multiplied by the number of its shares outstanding. Thus, our model addresses the following question: Supposing managers seek to maximize the market value of their firm in their decision making (Copeland et al., 1994; Friedman, 1962), will they ever choose to invest in socially responsible activities that reduce the present value of their firm's cash flows?

Of course, there is some controversy about the assumption that managers seek to maximize the market value of their firms in their decision making. Some have suggested that under conditions of uncertainty and imperfect information, managers cannot know, *ex ante*, how to maximize the market value of their firm (Alchian, 1950). Others have suggested that managerial interests are often inconsistent with maximizing the value of a firm (Jensen & Meckling, 1976). However, some of these same authors argue that managers who fail to maximize the market value of their firm, *ex post*, may be subject to a variety of market sanctions (Jensen & Meckling, 1976), and, thus, the assumption that

managers seek to maximize the value of their firm is a useful approximation.

For our purposes here, whether or not managers can or do seek to maximize the value of their firm in their decision making is less important. Rather, we conduct a simple "thought experiment": since corporate social responsibility scholars have been interested in understanding the economic consequences for a firm implementing socially responsible activities, we develop a model where managers are assumed to focus on maximizing the market value of their firm, and we examine the impact of socially responsible activities on this market value. In this sense, the assumption that managers seek to maximize the market value of their firm in their decision making provides a standard against which to evaluate the economic consequences of engaging in socially responsible activities that reduce the present value of a firm's cash flows.

Yet while we examine the market value consequences of firms' pursuit of socially responsible activities that reduce the present value of their cash flows, we do not assume that maximizing the present value of a firm's cash flows and maximizing a firm's market value are equivalent. Such an assumption is only justifiable if all of a firm's current and potential equity holders are solely interested in maximizing their wealth in making their investment decisions. If, however, at least some of these investors have interests besides simply maximizing their wealth in making investment decisions, then "maximizing the present value of a firm's cash flows" and "maximizing firm value" are no longer equivalent concepts.

Market Efficiency Assumptions

The model presented here also assumes that capital markets are semi-strong efficient (Fama, 1970). This means that publicly available information about the perceived value of a firm's assets will, on average, be reflected in the market price of those assets. Semi-strong efficiency, in particular, implies that if firms engage in specific socially responsible activities in a public way, current and potential equity holders will be aware of both the nature of these activities and their impact on the present value of a firm's future cash flows and will, on average,

prefer to invest in. The model developed here adopts the simplifying assumption that these equity investors all have a preference for investing in firms pursuing a particular socially responsible activity—although this specific activity is not important in the model. Without loss of generality, this preference can also be interpreted as a preference for a particular bundle of socially responsible activities. This simplifying assumption is relaxed in the model extensions section of the paper.

adjust their valuation of a firm's equities accordingly.

There is substantial evidence that U.S. capital markets are, overall, semi-strong efficient (Copeland et al., 1994). This does not mean that the value of a firm's equity always equals the true underlying value of the firm; certainly, there is a great deal of private information about the value of those assets (Fama, 1970), and investor decisions are often systematically non-rational (Tversky & Kahneman, 1974) and affected by emotions (Schiller, 1999; Shefrin, 2000; Thaler, 1987a,b). However, semi-strong efficiency does suggest that whatever public information exists about the value of a firm's assets is, on average, likely to be reflected in the price of those assets (Fama, 1998).³ In this context semi-strong efficiency suggests that when a firm publicly pursues socially responsible activities that reduce the present value of its cash flows, current and potential investors will factor these actions and their consequences into decisions about whether or not to buy or sell this firm's stock.

Socially Responsible Activities and Firm Cash Flows

Finally, while acknowledging that some socially responsible activities can sometimes have a positive impact on the present value of a firm's cash flows (Godfrey, 2004; McWilliams & Siegel, 2001; Waddock & Graves, 1997), our model examines the consequences of only those socially responsible activities that reduce the present value of a firm's cash flows.⁴ In this way the model focuses on a central theoretical issue raised by those who study corporate social responsibility—that managers should sometimes abandon efforts to maximize the present value of their firm's future cash flows in favor of so-

cially responsible activities that reduce the value of those cash flows.

Obviously, identifying socially responsible activities that increase the present value of a firm's cash flows is interesting in its own right (Godfrey, 2004; McWilliams & Siegel, 2001; Waddock & Graves, 1997). However, no new theory is required to explain why firms will pursue such activities, once identified. Such actions are consistent with received economic and financial theories of firm behavior. But new theory is required to explain why firms might pursue socially responsible actions that reduce the present value of their cash flows. Focusing the model only on these situations helps develop this critical aspect of the theory of corporate social responsibility.

THE MODEL

In this section we present a simple model of the supply of and demand for opportunities to invest in socially responsible firms. We use this model to describe the impact that beginning or ending socially responsible activities that reduce the present value of a firm's cash flows will have on the firm's market value.

As is always the case, we adopt a variety of simplifying assumptions. Many of these assumptions are technical in nature and do not have an impact on the conclusions drawn from the model. Some are more substantive in nature and might have an impact on these conclusions. However, later in the paper, several of these substantive assumptions are relaxed, and the conclusions of the model are reexamined. While relaxing these assumptions does generate important insights, it does not affect the model's central conclusion: the impact of socially responsible activities that reduce the present value of a firm's cash flows on a firm's market value depends on the supply of and demand for opportunities to invest in these types of firms.

Firm Characteristics

Consider an economy with N firms that all sell the same product in the same competitive product market. In this setting these firms will all generate the same earnings, E , from their activities in this product market. By definition, a firm's earnings equal the present value of its future cash flows, before any investments in so-

³ There continues to be significant debate about the impact of nonrational elements in equity holder decision making on the efficient capital markets hypothesis (Fama, 1998). We adopt the simple semi-strong efficient capital markets assumption while acknowledging the importance of extending the model to include these emotional and cognitive phenomena in the future.

⁴ The model is also generalized, later in the paper, to include socially responsible activities that have no material impact, positive or negative, on the present value of a firm's cash flows.

cially responsible activities. The goal of all the firms in this model is to maximize their value, P , through revenues generated from the sale of shares of stock in their firm. Let s equal the number of those shares. Also, for simplicity, the model assumes that each of these firms has the same number of shares of stock to sell, they are the same size, and they do not fund any of their activities through debt.

Indeed, in the model developed here, firms differ only with respect to their decision to invest or to not invest in socially responsible activities. Let θ equal the proportion of firms that choose to fund socially responsible activities. We call these firms "socially responsible firms" throughout the rest of the paper. It follows that $(1 - \theta)$ is the proportion of firms not funding socially responsible activities. We call these firms "traditional profit-maximizing firms" throughout the rest of the paper. In this model socially responsible firms are the only source of socially responsible initiatives in the economy.⁵

Social Initiative Characteristics

The firms in this simple model face a decision, F , of whether or not to fund a discrete bundle of socially responsible initiatives. The decision to fund, $F = 1$, is assumed to be costly and nonrevenue enhancing, which implies that this decision reduces the present value of a firm's cash flow. The firms that choose to use their earnings to fund socially responsible initiatives incur a cost, C , for doing so, which reduces their net earnings by this amount. Thus, firms that fund social initiatives have greater cash outlays than firms that do not fund social initiatives. The choice not to fund socially responsible initiatives, $F = 0$, is assumed to not impact the present value of the future cash flows of the firm.

Investor Characteristics

The number of potential equity investors in the economy is I . For simplicity, assume that each of these investors has been endowed with the same amount of money to invest in equities, equal to m , and that these funds are exhausted

through these investments. By assumption, some of these investors are interested only in maximizing their wealth in making their investment decisions. We call these investors "wealth-maximizing investors." Conversely, other investors may have interests besides simple wealth maximization in making their investment decisions. In particular, some investors may only invest in firms that fund socially responsible activities. We call these investors "socially conscious investors." Let ω equal the proportion of investors in this market who are socially conscious; $1 - \omega$ is the proportion of these investors that are wealth maximizing.

Socially conscious investors derive benefit from the earnings of the firms they invest in, but they derive benefit from the socially responsible activities of these firms as well. The total benefits (or utility) that a socially conscious investor obtains from investing in a firm pursuing socially responsible activities (i.e., $F = 1$) is

$$U_{sc} = \frac{\theta N(E - C)}{\omega I} \quad (1)$$

The numerator of this equation is the total earnings of all the socially responsible firms in the economy (i.e., θN is the total number of socially responsible firms and $E - C$ is their net earnings). The denominator of this equation is the number of socially conscious investors in the economy. The ratio of the numerator (total earnings of all socially responsible firms) and the denominator (number of socially responsible investors) is each investor's share of any earnings created by socially responsible firms.⁶

However, the total utility that a socially conscious investor obtains from investing in a firm not pursuing socially responsible activities ($F = 0$) is zero. This is how the difference between socially conscious and other investors in this model is operationalized: socially conscious investors obtain no utility from investing in firms that do not implement socially responsible activities, whereas other investors do.

⁵ Of course, other institutions and individuals in the economy, besides firms, can fund socially responsible initiatives. However, we ignore these alternative investment opportunities in this version of the model.

⁶ This and the other utility functions in this paper are assumed to be linear. This eliminates considerations of the risk associated with investment decisions. That is, since these firms are identical, except with respect to their social initiatives, the risk associated with investing in them is the same and thus can be ignored for purposes of this discussion.

The benefits derived from investing for wealth-maximizing investors is presented in Equation 2. These benefits are the share of the total earnings created by firms not funding socially responsible activities, $(1 - \theta)NE$, for each of the wealth-maximizing investors, $(1 - \omega)I$. In principle, these investors are not restricted from purchasing equity in firms that are engaging in socially responsible activities. However, since in this model all these activities reduce the present value of a firm's cash flows (i.e., $C > 0$), wealth-maximizing investors will prefer to not invest in such firms.⁷

$$U_{WM} = \frac{(1 - \theta)NE}{(1 - \omega)I} \quad (2)$$

Determining the Stock Price

Determining the price of the stock for socially responsible and traditional profit-maximizing firms depends on establishing the supply of and demand for these different types of stocks in the economy. In the simple model developed here, the total supply of shares of stock in socially responsible firms is simply

$$S_{SR} = \theta sN \quad (3)$$

where S_{SR} is the available supply of stock in firms that are funding socially responsible activities. If there are $N = 100$ total firms in an economy each selling $s = 10,000$ shares of stock, and 25 percent, $\theta = .25$, of these firms engage in socially responsible behavior, then the total supply of stock in socially responsible firms is 250,000 shares.

The total supply of stock for firms not engaging in socially responsible behavior is

$$S_{PM} = (1 - \theta)sN \quad (4)$$

where S_{PM} is the available supply of stock in firms that are funding only traditional profit-maximizing behavior. If there are $N = 100$ total firms in an economy each selling $s = 10,000$ shares of stock, and 75 percent, $(1 - \theta) = .75$, are funding only traditional profit-maximizing behavior, then the total supply of stock in profit-maximizing firms is 750,000 shares.

Demand can be thought of as the total amount of money controlled by different kinds of investors in this economy. Thus, in this simple model, demand for shares of stock in socially responsible firms is equal to

$$D_{SR} = \omega mI \quad (5)$$

where D_{SR} is the total amount of money controlled by socially conscious investors in this market. If there are $I = 200$ total investors in an economy each endowed with $m = \$50,000$, and 25 percent, $\omega = .25$, are socially conscious investors, then the total amount of money controlled by socially conscious investors is \$2,500,000.

The total demand for shares of stock in profit maximizing firms is equal to

$$D_{PM} = (1 - \omega)mI \quad (6)$$

where D_{PM} is the total amount of money controlled by wealth-maximizing investors in this market. If there are $I = 200$ total investors in an economy each endowed with $m = \$50,000$, and 75 percent, $(1 - \omega) = .75$, are wealth-maximizing investors as opposed to socially conscious, then the total amount of money controlled by wealth-maximizing investors is \$7,500,000.

The price for a share of stock in these two types of firms is found by dividing the amount of money controlled by socially conscious and wealth-maximizing investors by the supply of stock of a particular type—for socially responsible and traditional profit-maximizing firms, respectively. This is done in Equations 7 and 8.

$$P_{SR} = \frac{\omega mI}{\theta sN} \quad (7)$$

$$P_{PM} = \frac{(1 - \omega)mI}{(1 - \theta)sN} \quad (8)$$

Using the numbers in the examples taken from above, the price per share for socially responsible stock would be \$10 (\$2.5 million divided by

⁷ This utility function has the nonbinding constraint, $U_{WM} \geq \frac{\theta N(E - C)}{\omega I}$, that the wealth-maximizing investor will choose to invest in socially responsible firms if these investments provide a greater return than investments in traditional profit-maximizing firms. The constraint is nonbinding because if such a situation arose in which wealth-maximizing investors had a financial incentive to invest in socially responsible firms, enough wealth-maximizing investors would pursue these opportunities, driving up the price of shares in socially responsible firms until returns from investing in socially responsible firms equaled returns to investing in traditional profit-maximizing firms for the wealth-maximizing investor.

250,000 shares), and the price per share for profit-maximizing stock would be \$10 as well (\$7.5 million divided by 750,000 shares).

It is not surprising that the prices of these two types of shares in this example are equal. In equilibrium, they should be. Suppose that these share prices were not equal. Firms in this setting would have an incentive to change their social responsibility policies until the maximum share price possible was reached. If the stock price were higher for firms funding social initiatives than for traditional profit-maximizing firms, some of the firms not currently funding social initiatives would have the incentive to divert funds to social initiatives in order to attract some of the excess demand in the equity market for shares in socially responsible firms. Firms would switch types until the share prices were equal and there were no further gains from beginning to fund social initiatives.

If the stock prices were higher for traditional profit-maximizing firms, however, some of the firms currently funding social initiatives would have the incentive to abandon these activities in order to attract some of the excess demand in the equity market for shares in traditional profit-maximizing firms. Firms would switch until the share prices were equal and there were no further gains from abandoning social activities. Thus, in equilibrium, the prices of these different types of shares would be equal.

Knowing that the share prices are equivalent in equilibrium allows us to solve for a crucial result of the model⁸:

$$P_{SR} = \frac{\omega m I}{\theta s N} = \frac{(1 - \omega) m I}{(1 - \theta) s N} = P_{PM} \quad (9)$$

$$\therefore \omega = \theta$$

Thus, in equilibrium, the proportion of socially conscious investors, ω , will equal the proportion of socially responsible firms, θ , and the proportion of wealth-maximizing investors, $1 - \omega$, will equal the proportion of traditional profit-maximizing firms, $1 - \theta$.

This equilibrium result is important not because it exists in real economies. Indeed, in re-

ality, such equilibrium states rarely exist. Rather, this result is important because it helps define the kind of incentives firms face when the economy in which they are operating is out of equilibrium, for when the economy is out of equilibrium, there will be unmet demand for certain types of firms—either socially responsible or traditional profit-maximizing—and firms looking to maximize their stock price will have the incentive to change their type to meet this excess demand. In particular, there will be settings where firms looking to maximize their stock price will have the incentive to pursue socially responsible initiatives, even when those initiatives reduce the present value of the firms' cash flows.

Note that while, in equilibrium, the stock price of socially responsible and traditional profit-maximizing firms is the same, the earnings per share of these firms are not the same. Since funding social initiatives is assumed to be costly and nonrevenue enhancing, the socially responsible firms in the economy that have spent C on social initiatives will have lower net earnings than those firms not funding such initiatives. Hence, earnings per share of the socially responsible firm are lower than the earnings per share of the traditional profit-maximizing firm.

SOCIALLY RESPONSIBLE INVESTMENTS AND FIRM VALUE

With the equilibrium result in Equation 9 in place, it is possible to examine how the social responsibility activities of firms can affect their value. In general, firms can take three different actions with respect to their socially responsible activities: (1) firms that currently do not engage in these activities can begin doing so; (2) firms that currently do engage in these activities can stop; and (3) firms can maintain their current policies—that is, those that currently engage in socially responsible activities can continue to do so, and those that currently do not engage in such activities can also continue to do so. Each of these different activities can have an effect on the market value of a firm, depending on the context within which these activities take place.

Equation 9 suggests that the most important determinant of the impact of these activities on a firm's market value is the relative supply of and demand for opportunities to invest in socially responsible firms in an economy. Again, three pos-

⁸ Note that m , I , s , and N are on both sides of Equation 9. This means that Equation 9 can be simplified to $\omega/\theta = (1 - \omega)/(1 - \theta)$. Simple algebraic manipulation makes it possible to derive the conclusion that, in equilibrium, $\omega = \theta$.

sibilities exist: (1) demand for socially responsible investment opportunities may be greater than their supply, (2) supply for these investment opportunities may be greater than demand, and (3) demand for these opportunities may equal supply.

The impact of a single firm beginning or abandoning social responsibility policies on the market value of that firm under different supply and demand conditions is summarized in Table 1.⁹ These predictions depend on the volume of

trade for the stocks of different types of firms in different supply and demand conditions (Karpoff, 1987; Wang, 1994). The impact of a single firm beginning, abandoning, or not changing its socially responsible activities on the market value of other firms in the economy—those that maintain their socially responsible activities or maintain their traditional profit-maximizing activities—is described in Table 2.

When Demand for Social Responsibility Is Greater Than Supply

This column in Table 1 summarizes the impact of different firm strategies on a firm's market value when demand for socially responsible investment opportunities is greater than supply.

⁹ Table 1 assumes that the firms changing their policies do not bring the economy into equilibrium. That is, we assume that the conditions that demand > supply or supply > demand exist before and after a firm changes its policy by either beginning or abandoning socially responsible activities.

TABLE 1
The Effect of Beginning or Abandoning Socially Responsible Activities on a Firm's Market Value^a

Firm Action	Demand > Supply	Supply > Demand	Supply = Demand
A firm begins socially responsible activities	+	—	—
A firm abandons socially responsible activities	—	+	—

^a The signs of these predictions are derived from Equation 9. Consider, for example, the column of the table where demand > supply. Suppose a firm begins socially responsible activities (row 1). The number of socially responsible firms in the economy changes from θN to $\theta N + 1$. The price of this firm's equity will increase from P_{PM} to P'_{SR} if and only if demand is still greater than supply after this firm switches (ωN is greater than or equal to $\theta N + 1$). The relationship between P_{PM} and P'_{SR} is derived in the following way:

$$P_{PM} = \frac{(1 - \omega)mI}{(1 - \theta)Ns} < \frac{\omega mI}{(\theta N + 1)s} = P'_{SR}$$

$$\frac{(1 - \omega)}{\omega} = \frac{1}{\omega} - 1 < \frac{(1 - \theta)N}{\theta N + 1}$$

$$\frac{1}{\omega} < \frac{(1 - \theta)N + \theta N + 1}{\theta N + 1} = \frac{N + 1}{\theta N + 1}$$

$$\omega N + \omega > \theta N + 1$$

$$\therefore P'_{SR} > P_{PM} \quad \because \text{assumption 1}$$

Now, suppose instead that a firm abandons socially responsible activities (i.e., the number of traditional profit-maximizing firms increases from $(1 - \theta)N$ to $[(1 - \theta)N + 1]$). After switching, the new price for traditional profit-maximizing firms, P'_{PM} , is less than the original price for traditional profit-maximizing firms, P_{PM} :

$$\frac{(1 - \omega)mI}{((1 - \theta)N + 1)s} = P'_{PM} < \frac{(1 - \omega)mI}{(1 - \theta)Ns} = P_{PM}$$

$\therefore$ denominator has increased and numerator has not changed

$$\therefore P'_{PM} < P_{PM}$$

Similar calculations can be conducted for the remaining columns and rows of this table.

TABLE 2
The Effect of a Firm Changing Its Socially Responsible Strategy on the Market Value of Other Firms in the Economy

Action	One Firm Switches from Profit Maximizing to Social Responsibility	One Firm Switches from Social Responsibility to Profit Maximizing	No Firm Switches
Firm maintains socially responsible activities	—	+	0
Firm maintains profit maximizing	+	—	0

Suppose, for example, that the proportion of socially conscious investors in the economy, ω , is .4 rather than .25, while the proportion of socially responsible firms, θ , is .25. In this setting the demand for socially responsible investment opportunities is greater than the supply of such opportunities. The market value of firms that are currently engaging in socially responsible activities in this situation is \$16 per share; the market value of traditional profit-maximizing firms is \$8 per share.¹⁰

First, consider the market value of a traditional profit-maximizing firm that begins to fund socially responsible activities in this setting. If one firm does this, the total supply of socially responsible investment opportunities, θ , increases from .25 to .26. The new price per share of socially responsible firms in this economy is \$15.38. This means that by beginning to fund socially responsible activities, this one firm can shift its share price from \$8 per share to \$15.38 per share. Thus, in this setting, beginning to engage in socially responsible activities creates market value for a firm, even if those activities reduce the present value of the firm's cash flows. This will be true as long as demand for these opportunities is greater than their supply.

Next, consider the market value of a socially responsible firm that decides to become a traditional profit-maximizing firm in this setting. Here, the total supply of socially responsible investment opportunities in the economy, θ , drops from .25 to .24. This firm's price per share will drop from \$16 per share to \$7.89 per share. So, not surprisingly, when demand for socially responsible investment opportunities is greater

than supply, abandoning such activities will reduce the market value of a firm.

When Supply for Social Responsibility Is Greater Than Demand

Suppose now that the proportion of socially conscious investors in the economy, ω , is .15 rather than .25, while the proportion of socially responsible firms, θ , is .25. In this setting the supply of socially responsible investment opportunities is greater than the demand for such opportunities. The market value of firms that are currently engaging in socially responsible activities in this situation is \$6 per share; the market value of traditional profit-maximizing firms is \$11.33 per share.

Consider the market value of a socially responsible firm that drops its socially responsible activities in this setting. If one firm does this, the total supply of socially responsible investment opportunities, θ , decreases from .25 to .24. The new price per share of traditional profit-maximizing firms in this economy is \$11.18. This means that by ending its socially responsible activities, this one firm can shift its share price from \$6 per share to \$11.18 per share. Thus, in this setting, abandoning socially responsible activities can create market value for a firm. This will be true as long as the supply of socially responsible investment opportunities is greater than their demand.

Not surprisingly, a traditional profit-maximizing firm that begins to engage in socially responsible activities when the supply of investment opportunities in these types of firms is greater than demand will see its market value fall. If one traditional profit-maximizing firm begins to engage in socially responsible activities, its price per share will fall from \$11.33 to \$5.77. Traditional profit-maximizing firms will experi-

¹⁰ The price per share of the socially responsible firm, using Equation 7, is $(.4(50,000)(200))/(.25(10,000)(100))$. Equation 8 can be used to calculate the price per share of the traditional profit-maximizing firm in the same way.

ence a drop in their market value from implementing socially responsible activities as long as the supply of socially responsible investment opportunities is greater than the demand for such opportunities.

When Supply for Social Responsibility Is Equal to Demand

Finally, when the demand for socially responsible investment opportunities equals the supply of these opportunities, firms that change their policies—by either becoming socially responsible or abandoning their socially responsible activities—will see their market value fall. This is because either of these actions will have the effect of creating excess supply—of socially responsible investment options in the first case and of traditional profit-maximizing investment options in the second case.

So, if the proportion of socially conscious investors in the economy, ω , is .25 and the proportion of socially responsible firms in the economy, θ , is also .25, then the price per share of socially responsible and traditional profit-maximizing firms in this economy will be \$10. If one firm in this economy decides to change its strategy (say, from a traditional profit-maximizing firm to a socially responsible firm), it will see its share price fall to \$9.62. No profit-maximizing firm will engage in such activities. Thus, if there are no changes in the level of demand for socially responsible or traditional profit-maximizing investment opportunities in an economy, any changes in a firm's corporate social responsibility strategy must destroy some of the firm's market value.

Predicting the Size of Firm Market Value Changes

Table 1 examines the impact of beginning or abandoning corporate social responsibility policies on the market value of the firm engaging in these activities. However, the size of these effects on the market value of this firm is not discussed in the table. The size of these effects depends on the timing of any changes a firm might implement. The first few firms that make a value-enhancing policy change in an economy in disequilibrium will experience much larger increases in market value than the last few firms that make such a change. For example,

using the parameter values stated earlier, if demand for socially responsible investment opportunities is greater than supply, the first traditional profit-maximizing firm to begin engaging in socially responsible activities will see its market value jump from \$8 per share to \$15.83, a 98 percent increase. The last of these firms to change its policy before the economy reaches equilibrium will see its price per share rise from \$9.84 to \$10, an increase of 2 percent.¹¹

While there appear to be significant first mover advantages in this setting, there could also be important first mover disadvantages. For example, changes in demand for socially responsible activities may be difficult to gauge. A firm that changes its policies assuming such changes have occurred when they have not will see its market value fall accordingly.

Implications for the Market Value of Other Firms

Table 1 examines the impact of adding or abandoning socially responsible activities on the market value of a firm that engages in these strategies in different supply and demand conditions. However, these actions not only affect the market value of this firm but also affect the market value of other firms in the economy. Assuming these other firms do not change their current strategies—that is, they either maintain their current socially responsible activities or maintain their current traditional profit-maximizing status—Table 2 shows this impact. The logic behind Table 2 is straightforward. When one firm changes from a traditional profit-maximizing firm to a socially responsible firm, the total supply of socially responsible investment opportunities in the economy increases and the market value of firms maintaining their socially responsible activities will decrease, while the market value of firms maintaining their traditional profit-maximizing status will increase. The opposite effects occur when a socially responsible firm abandons its socially responsible activities and becomes a traditional profit-maximizing firm. Of course, if no firm changes its strategies, then firms that maintain

¹¹ Of course, this last firm has seen its stock price rise from \$8 per share to \$9.84 per share before it decides to change its strategy.

their strategies will see no change in their market value.

Interestingly, while it will be the case that a firm that maintains its socially responsible activities when another firm switches from traditional profit maximizing to socially responsible will see its market value fall, it does not follow that this firm will abandon its socially responsible activities. This firm's market value may be lower than it was before the traditional profit-maximizing firm switched its strategy, but that market value may still be greater than what would be the case if it abandoned its socially responsible status and became a traditional profit-maximizing firm.

For example, using the parameter values from earlier, when demand for socially responsible investment opportunities is greater than supply, a firm switching its strategy from traditional profit maximizing to socially responsible will see its price per share jump from \$8 to \$15.38. A firm that maintains its socially responsible activities in this setting will see its price per share fall from \$16 to \$15.38. However, \$15.38 per share is much higher than the price per share of this firm if it were to abandon its socially responsible strategy. If this firm became a traditional profit-maximizing firm, its price per share would drop from \$15.38 to \$8.

Similar calculations can be done for firms contemplating switching from social responsibility to traditional profit maximizing when the supply for socially responsible investment opportunities is greater than the demand for those opportunities and when one firm has switched from social responsibility to traditional profit maximizing. In this case, the firm that maintains its traditional profit-maximizing strategy will see its market value fall, but it will still have an incentive to maintain that strategy until the economy approaches equilibrium.

MODEL EXTENSIONS

As suggested earlier, in this model of the relationship between a firm's socially responsible activities and its market value, we have adopted several simplifying assumptions. The purpose of most of these assumptions has been to facilitate the exposition of the model and to focus attention on its central conclusion: the impact of socially responsible activities that reduce the present value of a firm's cash flows on the mar-

ket value of a firm depends on the supply of and demand for opportunities to invest in socially responsible firms. However, it is possible to relax many of these simplifying assumptions. While relaxing these assumptions does not alter the central conclusion of the model, it does suggest some potentially interesting extensions. We discuss five of these possible extensions here.

When Equity Holders Vary in the Capital They Have to Invest

In its current form the model assumes that all investors have the same amount of capital to invest. Suppose this was not the case—that some current and potential equity investors had much more money to invest than others. How would this concentration of investment capital affect the socially responsible activities of firms?

In general, holding trading levels equal (Coyne & Witter, 2002), the effect of this concentration of investment capital would depend on the preferences of these powerful investors. If these large investors had a preference for the firms they invest in to engage in socially responsible activities, regardless of the negative cash flow implications of these activities, then demand for these kinds of investment opportunities would increase, and beginning such actions would increase the market value of a firm—even if these activities reduced the present value of the firm's cash flows. Conversely, if these large investors did not have such a preference, then demand for these kinds of socially responsible investment opportunities would be lower, and firms that began such activities would likely see their market value drop.

It is interesting to note that this concentration of investment capital into funds that invest in socially responsible companies may actually be occurring, at least in some economies. In the United States, for example, certain very large pension funds have adopted investment criteria that emphasize social responsibility—for example, CalPERS (Lavelle, 2004). These large funds can have the effect of increasing demand for these kinds of investment opportunities, with subsequent effects on the market value of firms. In deciding whether or not to engage in socially responsible activities, firm managers will have

to estimate the potential effect of this increased demand on their market value.

When Firms Vary in Their Ability to Make Socially Responsible Investments

In the model we have also adopted the simplifying assumption that all firms making socially responsible investments are equally skilled in doing so. This assumption is reflected in the fact that C , the negative impact that making socially responsible investments has on a firm's cash flow, is assumed to be constant across firms.

However, socially responsible investments are like any other investments. Firms may vary in their ability to conceive of and implement these investments (Barney, 1991). If a firm is more effective than others in making socially responsible investments, it can gain a competitive advantage (Peteraf & Barney, 2003). If the resources the firm uses to gain this competitive advantage are path dependent, socially complex, or causally ambiguous (Barney, 1986; Dierickx & Cool, 1989), they may be a source of sustained competitive advantage. A firm with a sustained competitive advantage in funding socially responsible activities will attract a larger proportion of socially conscious investors in the economy than other firms making these investments. This will lead this firm to have a higher market value than would otherwise be the case.

Indeed, it may be possible for a firm with a sustained competitive advantage in funding socially responsible activities to have a relatively high market value, even when the supply of socially responsible investment opportunities is greater than the demand for these opportunities. This is because among all the firms "selling" socially responsible investment opportunities, a firm with a competitive advantage will be able to differentially attract investors.¹²

When Equity Holder Preferences Are Heterogeneous

The model, as it has been developed so far, can be applied to any socially responsible ac-

tivity or any bundle of socially responsible activities that reduces the present value of a firm's cash flow. However, we have assumed that all current and potential equity holders prefer to invest in firms pursuing the same socially responsible activities, whatever they are. Obviously, in reality, the social responsibility investment preferences of current and potential equity investors might vary dramatically. Three ways that these preferences might vary are considered here.

First, suppose that different groups of investors prefer to invest in firms pursuing different socially responsible activities and that these activities are not substitutes for each other. This would be the case, for example, if those that made their investment choices looking at a firm's environmental policy were indifferent to the firm's employment policies, and vice versa. In this setting the supply and demand parameters that are relevant in the model are not the overall supply of and demand for socially responsible investment opportunities but, rather, the supply of and demand for specific socially responsible investment opportunities (e.g., the supply of and demand for opportunities to invest in environmentally responsible firms, the supply of and demand for opportunities to invest in firms with socially responsible employment policies, and so forth). However, within the market segment defined by equity investor preferences, the central conclusions of the model will still hold: the supply of and demand for opportunities to invest in, say, firms pursuing environmentally responsible activities determine the relationship between pursuing these activities and a firm's market value. In choosing which particular socially responsible activities to continue or discontinue, managers seeking to maximize the market value of their firm will have to estimate the supply and demand parameters for each of these segments of the market for socially responsible investment opportunities.

Second, suppose that different groups of investors prefer to invest in firms pursuing different socially responsible activities but that these different activities now are partial substitutes for each other. In this setting the supply of and demand for specific socially responsible investment opportunities would have to be conditioned by the demand for and supply of investment opportunities in firms pursuing socially responsible activities that are partial substi-

¹² Of course, firms may differ in their ability to actually conceive of and implement socially responsible activities, or they may differ in their ability to publicize whatever activities they may be engaging in. Either can be the source of competitive advantage in this context.

tutes. Estimates of the cross-elasticity of demand between these different investment options would have to be included to estimate the effect of a firm's decision to begin, or to cease, engaging in a particular socially responsible activity on that firm's market value.

While this extension of the model significantly complicates the estimate of the supply of and demand for socially responsible investment opportunities, it might nevertheless generate important insights into the relationship between socially responsible activities and firm market value, especially as this model is tested empirically. However, these complications do not alter the central conclusion of the simple model: the supply of and demand for socially responsible investment opportunities determine the effect of these activities on a firm's market value.

Finally, suppose that only a small number of current or potential investors prefer to invest in firms pursuing a particular socially responsible activity and that these investors do not consider alternative socially responsible activities as substitutes. In this setting the demand for this particular investment opportunity is not likely to be large, will rarely be greater than supply, and relatively few firms will find it in their wealth-maximizing interests to pursue these activities. Such "specialist investors" will either have to increase the number of investors with this investment preference or join with other investors, by relaxing their "no substitutes" stance, to have an impact on the market value of firms.

When Commitments to a Social Responsibility Strategy Are Costly to Change

In its current form the model also assumes that firms can change their social responsibility strategy—either beginning to invest in socially responsible activities or ending such activities—without cost. Of course, in reality, such changes are likely to be costly. The cost of these changes in strategy might have implications for, among other things, how quickly investors will respond to corporate announcements of corporate social responsibility initiatives.

For example, changing its social responsibility strategy too frequently is likely to signal to potential investors that a firm's commitment to social responsibility is not genuine. This can lead socially conscious investors to underinvest in the firm, even if the firm is engaging in so-

cially responsible activities. Any empirical investigation of the relationship between a firm's adoption of socially responsible corporate policies and that firm's market value will have to take into consideration the frequency with which the firm changes its policies and the lag between when the firm changes its policies and when socially conscious investors come to believe that the traditional profit-maximizing firm has transformed itself into a socially responsible firm (Whetten & Mackey, 2004).

This logic also suggests that firms that are truly committed to engaging in socially responsible activities will be reluctant to change, even when demand for those activities falls. Ironically, this can actually improve the market value of these firms, for as less committed firms change from socially responsible to traditional profit-maximizing firms, the total supply of socially responsible investment opportunities in the economy falls, and the market value of firms that do not abandon their traditional socially responsible activities will rise.

When Socially Responsible Activities Have No Material Impact on a Firm's Cash Flows

Finally, the model has thus far examined the economic consequences of only those socially responsible activities that reduce the present value of a firm's cash flows. However, Margolis and Walsh (2003), in their review, found that most corporate investments in socially responsible activities are very small. Few have any material impact on a firm's reported accounting performance, including the present value of its cash flows. What impact will investments in socially responsible behavior have on a firm's market value when those investments have no material impact, positive or negative, on the value of the firm's cash flows?

Answering this question depends on understanding that socially conscious investors have interests besides the present value of a firm's cash flows in making their investment decisions. Socially responsible activities, even if they have no material impact on a firm's accounting performance, can still have an impact on the market value of the firm as determined by the demand for and supply of socially responsible investment opportunities. In this context the model suggests that, when the conditions are right, investing in socially responsible activities

that have no impact—positive or negative—on a firm's cash flow can nevertheless have a positive impact on the firm's market value.

IMPLICATIONS AND DISCUSSION

The central assertion of this paper is that the opportunity to invest in a firm engaging in socially responsible activities is a "product" firms sell to current and potential investors. Sometimes, current and potential equity holders may prefer to invest in firms pursuing such activities, even if those activities reduce the present value of the firms' cash flows. The central conclusion of this paper is that the supply of and demand for these investment opportunities determine when socially responsible activities that reduce the present value of a firm's cash flows will be positively or negatively related to that firm's market value.

Beyond this central assertion and conclusion, the arguments developed here have a variety of other empirical, theoretical, and practical implications. We examine some of these other implications below.

Empirical Implications

Overall, the model suggests that there will be a positive correlation between firm choices about investing in socially responsible activities and firm value. This is because the model adopts the assumption that managers make these choices—to begin socially responsible activities, to cease socially responsible activities, or to maintain their current strategies whether they are socially responsible or not—in a way that maximizes the market value of a firm. Recent reviews of the empirical corporate social responsibility literature generally are consistent with this expectation (Orlitzky et al., 2003), although Margolis and Walsh (2003) suggest that the empirical results, while positive overall, are nevertheless mixed.¹³

¹³ Note that in previous empirical work researchers have examined the financial impact of socially responsible activities that have a positive impact on the present value of a firm's cash flows, along with those that have a negative impact on these cash flows. Additionally, much of this prior work has relied on accounting-based measures of performance, which would not be comparable to the theory we develop in this paper.

However, the model developed here suggests that efforts to examine the "overall" correlation between socially responsible activities and firm performance may be less interesting than examining the relationship between the supply and demand conditions under which these decisions are made and a firm's market value. Sometimes, beginning socially responsible activities will increase a firm's market value; sometimes it will reduce its market value. Sometimes, ending socially responsible activities will decrease a firm's market value; sometimes it will increase its market value. And, sometimes, continuing current socially responsible activities—by either continuing to invest in these activities or continuing to not invest in these activities—will increase a firm's market value; sometimes it will decrease a firm's market value. Only by examining the supply of and demand for socially responsible investment opportunities at the time these decisions are made can the relationship between a firm's social responsibility strategies and its market value be understood.

Of course, it will often be difficult to directly measure the supply of and demand for socially responsible investment opportunities. However, it may be possible to develop surrogate measures of these concepts. For example, changes in the number of firms who score high on various aggregate measures of social responsibility might indicate changes in the supply of socially responsible investment opportunities. Also, changes in the total dollars invested in socially responsible mutual funds as a percentage of the total dollars invested in all mutual funds might be an indicator of changes in total demand for socially responsible investment opportunities. Public opinion polls on the importance of various social issues in an economy might also provide some indication of the level of demand for socially responsible investment opportunities.

Whatever measures are ultimately developed, the model presented here suggests that understanding the relationship between the supply of and demand for socially responsible investment opportunities is central to understanding the relationship between socially responsible activities and firm performance, at least as measured by a firm's market value.

Theoretical Implications

The model also has a variety of theoretical implications, both for the study of firm value more broadly and for the study of the relationship between corporate social responsibility and firm value.

Decoupling cash flow and firm market value.

Traditional financial logic suggests that firms maximize their market value by maximizing the present value of their cash flows (Copeland et al., 1994). This link between a firm's market value and the present value of its cash flows is based on the often unstated assumption that all of a firm's equity holders have the same interests: to see their wealth maximized in making their investment decisions (Brealey & Myers, 2003). However, by recognizing that some equity holders may sometimes have interests besides simply maximizing their wealth in making their investment decisions, we decouple "maximizing a firm's market value" from "maximizing the present value of a firm's cash flows." Here, a firm's market value is determined by the supply of and demand for the kind of investment opportunities created by the firm's strategies—in this case, the opportunity to invest in firms implementing different corporate social responsibility strategies.

In fact, there is some reason to believe that at least some current and potential equity investors may be willing to sacrifice some of their wealth-maximizing interests to invest in firms pursuing socially responsible activities. For example, there continues to be significant and steady demand for mutual funds that specialize in investing in firms that meet certain corporate social responsibility criteria. Indeed, in 2003 one out of every ten dollars under professional management in the United States was invested in these kinds of mutual funds (Social Investment Forum, 2005). Moreover, those who invest in these funds often pay a financial penalty for doing so. This penalty can be as high as 3.5 percent for actively managed socially responsible mutual funds (Geczy, Stanbaugh, & Levin, 2003). Thus, at least some investors are apparently willing to invest in firms that engage in socially responsible activities even though these investments may generate lower returns than investments without regard to a firm's socially responsible activities.

It is this demand for opportunities to invest in socially responsible firms, and its relationship to the supply of these investment opportunities, that determines the market value of a firm. Thus, even though the present value of the cash flows generated by socially responsible firms may suffer, the market value of these firms can still increase.

Managerial values and socially responsible investments. This analysis also has implications for the study of the relationship between senior managers and socially responsible activities. In particular, it suggests that senior managers do not have to have particularly strong or unusual moral or value-based commitments to lead their firms to engage in socially responsible activities that reduce the present value of their cash flows. Rather, as long as demand for socially responsible investment opportunities is greater than supply, managers looking to maximize the market value of their firm will find it in their self-interest to make such investments. Managerial or corporate altruism is not required to explain why firms may sometimes make these kinds of investments.¹⁴

Indeed, throughout this paper we adopt the standard economic assumption that firms are trying to maximize their market value. Because firms are profit maximizing, they are willing to change their type—from socially responsible to traditional profit maximizing and back—to the extent that these actions maximize their market value. In other words, this is a theory of social responsibility that does not depend on the existence of agency conflicts between a firm's managers and its equity holders (Wright & Ferris, 1997).

Practical Implications

Finally, the theory developed here has practical implications, both for those charged with making decisions about whether or not invest in socially responsible activities—managers—and those who would like to see the absolute level of such investments in society increase.

¹⁴ Although managerial morality is not required to motivate corporate social responsibility in the model we present here, such considerations may nevertheless influence firm decisions concerning such activities (Aguilera et al., 2007; Schneider, Oppegaard, Zollo, & Huy, 2005).

The managerial task. At first, the task managers face in firms contemplating whether or not to change their social responsibility policies seems daunting. After all, in the model, managers are required to estimate the supply of socially responsible investment opportunities in an economy and the demand for these investment opportunities, and then evaluate whether or not they should change their social responsibility policies accordingly.

While daunting, this task is actually not materially different from the task managers face when estimating the supply of and demand for any of their products or services in the product market. While the product—socially responsible investment opportunities—and the market—current and potential equity investors—are different, the essential challenge of discovering the level of supply and demand is very similar.

Thus, it would not be surprising to see managers adopt many of the same mechanisms and tools they use to gauge supply and demand in the product market to gauge supply and demand in the market for socially responsible investment opportunities. For example, firms often use customer focus groups and product tests to estimate demand in the product market. In the market for socially responsible investment opportunities, it is likely that firms will use focus groups with current and potential investors, along with smaller tentative changes in their social responsibility policies, to estimate the demand for these types of investment opportunities.

Ascertaining the current level of supply of these investment opportunities may be more difficult. Managers can attempt to measure this supply through benchmarking the activities and disclosures of their product market and equity market competitors. Indeed, it seems reasonable to expect that the relationship between the supply of and demand for socially responsible investment opportunities will change over time. In some economic conditions—for example, when there are significant earnings pressures and large numbers of unfriendly takeovers—there may well be a shortage of socially responsible investment opportunities. In other settings there may be an excess number of these investment opportunities.

While at first the decision about whether or not to invest in socially responsible activities seems very complex, the model presented here

does suggest a way that these decisions can be significantly simplified. In particular, the model suggests that the only time a firm seeking to maximize its market value should change its social responsibility policies is when either the demand for or the supply of these investment opportunities changes dramatically. Thus, managers need not directly estimate the size of this demand or supply—only significant changes in these parameters.

Shifts in demand for these investment opportunities will often reflect specific exogenous shocks in the economy. Thus, for example, when the government in South Africa abandoned its apartheid principles, socially responsible activities that supported a ban on business in South Africa were no longer in demand. Obviously, in this kind of setting, continuing to maintain these policies, because they reduced the present value of a firm's cash flows without any compensating firm value advantages, would have reduced a firm's market value. More recently, various business scandals may have increased demand for socially responsible activities, as investors look to put their money into companies whose management they respect and trust.

Firms can also create their own "exogenous shocks" by becoming more international in scope. While equity holders in one country market may have one set of preferences for investing in socially responsible firms, equity holders in a second country market may have a different set of preferences. By beginning to trade in different markets, firms may have to adjust their social responsibility policies to be more consistent with the preferences of the new stockholders they are trying to attract. Of course, this could mean that a firm will become either more or less socially responsible, depending on the preferences of equity holders in the markets into which it is entering.

Estimating changes in supply and demand for socially responsible investment opportunities is likely to be more challenging when these parameters evolve slowly over time in an economy. In these settings it would not be surprising to see managers change their policies toward social responsibility only very slowly and incrementally. In this way firms can estimate the total demand for and supply of socially responsible investment opportunities in an economy and adjust their own policies accordingly.

Changing the demand for socially responsible investment opportunities. Finally, this model also has implications for those interested in increasing the level of socially responsible firm activities in the economy (Waddock, 2006). Thus far, we have assumed that the demand for socially responsible investment opportunities was given, and the task facing firms was to estimate that demand and the relevant supply of these investment opportunities in determining their strategic actions. However, the actions of various individuals and groups in an economy could have an impact on this demand. Successful efforts to increase the demand for socially responsible investment opportunities would have the effect of making it in the value-maximizing interests of more firms to make such investments.

According to the model developed here, the task facing those interested in seeing the level of socially responsible investments made by firms in an economy increased is to engage in activities that change the preferences of potential investors. Marketing campaigns that highlight the social responsibility failures of some firms, the social responsibility successes of other firms, and how investment dollars are used to either help or hurt society may have the effect of increasing the number of people looking for socially responsible investment opportunities in an economy over time. When demand for these investment opportunities increases, value-maximizing managers will find it in their self-interest to begin to make these investments, even if doing so reduces the present value of their cash flows.

The model also suggests that direct appeals to managers to increase their level of investment in socially responsible activities without a corresponding increase in demand for these kinds of investment opportunities are unlikely to be successful. Managers have the market-enforced responsibility to maximize the market value of their firm. While the model developed here demonstrates that engaging in socially responsible activities that reduce the present value of a firm's cash flows can sometimes increase a firm's market value, it can only be expected to do so when demand for these investment opportunities is greater than supply. In this sense, increasing the overall level of demand for these investment opportunities is likely to precede firm decisions to increase so-

cially responsible activities, especially when those activities reduce the present value of a firm's cash flows.

CONCLUSION

We began this paper by arguing that efforts to examine how socially responsible activities can increase the present value of a firm's cash flows do not address a central issue in the corporate social responsibility literature—that sometimes firms should invest in socially responsible activities, even if those activities reduce the present value of a firm's cash flows.

This paper provides an explanation of when investments in these kinds of socially responsible activities will occur. In developing this theory, we suggest that some investors may have interests besides wealth maximization in making their investment decisions. If the demand for socially responsible investment opportunities generated by these investors is greater than the supply of these investment opportunities, then such investments can create economic value for a firm. However, the paper also suggests that if supply and demand conditions are not favorable, engaging in the same socially responsible activities can actually reduce the market value of a firm.

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