

# Should a Company Pursue Shareholder Value?

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## Abstract

What is the appropriate objective function for a firm? We analyze this question for the case where shareholders are prosocial and externalities are not perfectly separable from production decisions. We argue that maximization of shareholder welfare is not the same as maximization of shareholder value. We show that the first objective may not be sustainable in the presence of an unrestrained takeover market and that there may be a tendency for public companies to behave less ethically over time. We suggest that voting by shareholders on corporate policy may be a solution to this problem.

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## 1. Introduction

This paper is concerned with a venerable question: what is the appropriate objective function for a firm, particularly a public company? This question can in turn be divided into two sub-questions. The first is, what does the law (in the United States, say) require the board of directors or managers of a (public) company to do? The second is, what should managers do? We will be concerned more with the second sub-question than the first, but our analysis will have implications also for the design of law.

A natural starting point for our analysis is the famous article that Milton Friedman published in the New York Times Magazine in 1970.<sup>1</sup> In this article, Friedman starts off by arguing that a corporate executive is the employee of the owners of a (public) company and has a direct responsibility to his employers. He goes on to say: “That responsibility is to conduct the business in accordance with their desires, which will generally be to make as much money as possible while conforming to the basic rules of the society, both those embodied in law and those embodied in ethical custom.”

Friedman’s article has been enormously influential and his general position, that companies should maximize profit or market value, commands wide acceptance among both economists and lawyers today. It can even be seen as providing the intellectual foundation for the “shareholder value” revolution.

In this article we take issue with one part of Friedman’s argument. We follow him in supposing that, for many public companies, shareholder welfare is an appropriate objective. However, we argue that it is too narrow to identify shareholder welfare with market value. The ultimate shareholders of a company (in the case of institutional investors, those who invest in the institutions) are ordinary people who in their daily lives are concerned about money, but not just about money. They have ethical and social concerns. In principle, these could be part of the “ethical custom” Friedman refers to, but does not elaborate on. Not only do shareholders give to charity, something Friedman discusses at length, but they also internalize externalities to some extent. For example, someone might buy an electric car rather than a gas guzzler because he or she is concerned about pollution or global warming; she might use less water in her house or garden than is privately optimal because water is a scarce good; she might buy fair trade coffee

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<sup>1</sup> Friedman had written about the same topic earlier; see Friedman (1962). But the question has a much longer history. See, e.g., Berle (1931) and Dodd (1932).

even though it is more expensive and no better than regular coffee; she might buy chicken from a free range farm rather than from a factory farm; etc., etc.

This behavior has the following implication: If consumers are willing to take social factors into account, and internalize externalities, in their private lives, why would they not want the companies they invest in to do the same? To put it another way, if a consumer is willing to spend \$100 to reduce pollution by \$120, why would that consumer not want a company he or she holds shares in to do this too?<sup>2</sup>

A response that Milton Friedman or his followers might make is: we should separate money-making activities from ethical activities. Let companies make money and let individuals and governments deal with externalities. In some settings (like charity, which is Friedman's leading example) this is a powerful argument, but as a general matter we disagree with it because we believe that money-making and ethical activities are often inseparable. Consider the case of Walmart selling high-capacity magazines of the sort used in mass killings.<sup>3</sup> If shareholders are concerned about mass killings, transferring profit to shareholders to spend on gun control might not be as efficient as banning the sale of high-capacity magazines in the first place.

More generally, Friedman's separability assumption requires consumers to have a (scalable) project that is the reverse of the project implemented by the corporation. But is there any reason to think that the reverse of an oil digging project, say, always exists? In many cases this would seem to defy belief.

In this paper we will be particularly interested in non-separable activities, where profit and damage are inextricably connected for technological reasons<sup>4</sup>. The company has the technology to create both, and individuals do not have the technology (costlessly) to undo this. In this case we will argue that Friedman's conclusions do not hold: shareholder welfare is not equivalent to market value. In contrast, in the case where the externality is separable from money-making, such as with charitable giving by companies, Friedman's argument is correct.

A second argument that Friedman and his supporters make in favor of profit maximization is that externalities should be left to government. Like many people these days

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<sup>2</sup> We are by no means the first to argue that shareholder welfare and market value are not the same. Related contributions are Elhauge (2005), Graff Zivin and Small (2005), Baron (2007), Benabou and Tirole (2010), and Morgan and Tumlinson (2012). We will discuss these papers further below.

<sup>3</sup> <https://www.forbes.com/sites/clareoconnor/2015/04/15/walmart-beats-out-church-in-court-over-gun-sales/#5e48811f66c8>.

<sup>4</sup> Elhauge (2005), Benabou and Tirole (2010), and Morgan and Tumlinson (2012) also consider the case of non-separable activities.

(and maybe always), we are not that sanguine about the political process. Moreover, in the United States there are some areas where the Supreme Court has made political intervention very difficult by, for example, ruling that individuals have a constitutional right to own a gun and that corporations have a constitutional right to support political campaigns. If political change is hard to achieve, action at the corporate level is a reasonable substitute<sup>5</sup>. An example of such an action is the attempt by some Walmart shareholders, such as Trinity Church, to include in the Walmart proxy statement a proposal requiring the board to oversee the sale of “products that especially endanger public safety” (Bainbridge and Copland (2016)).

We are aware of a further counter-argument to our suggestion that companies should pursue shareholder welfare rather than value maximization. If the board is encouraged to take into account ethical concerns, which are hard to quantify, might this not open the door to self-interested behavior under the guise of ethical behavior? This is a legitimate worry and we will discuss it, and possible remedies.

Our paper should be seen as a contribution to the vast literature on objectives of firms. This literature can be divided into several parts. One part emphasizes that a Friedman-type argument holds only in an Arrow-Debreu complete markets economy where each firm is a perfect competitor. If there is uncertainty and some contingent commodity markets do not exist, consumers will care about the types of securities firms issue as well as the value of these securities, and shareholders will disagree about what a firm should do: net market value maximization will not be a universally approved goal<sup>6</sup>. The same is true if there are complete markets but the firm is an imperfect competitor in the product or labor markets. A shareholder of General Motors who is also a purchaser of cars may favor a low price policy for GM, even if this sacrifices some profit (see, e.g., Farrell (1985)). Similarly, a GM shareholder who works at GM may favor a high wage policy rather than a profit-maximizing one.

A second part of the literature emphasizes the idea that, particularly these days, shareholders have diversified portfolios and so are interested in total market value rather than the value of a particular firm. If managers respond to this and maximize combined value, the good news is that some coordination failures between firms will be avoided. The bad news is that

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<sup>5</sup> See Benabou and Tirole (2010) for a discussion of this issue.

<sup>6</sup> See the papers in Magill and Quinzii (2008).

managers may be able to exploit their joint monopoly power without needing to reach formal or informal agreements, rendering anti-trust laws powerless<sup>7</sup>.

A third part of the literature has been concerned with the relations between a firm and its stakeholders, which include workers, consumers, producers and creditors, as well as shareholders. In a world of incomplete contracts, these groups are all vulnerable to opportunistic behavior and so to encourage them to make relationship-specific investments it may be important for managers to deviate from short-run profit or value maximization<sup>8</sup>. Under some conditions it may be efficient for the company to be set up as a worker, producer, or consumer co-operative or as a non-profit<sup>9</sup>.

Our paper is closer to a fourth part of the literature that emphasizes corporate social responsibility<sup>10</sup>. This part of the literature, and it is vast, is mainly concerned with the empirical implications of a company's pursuing a broader objective than just shareholder value. Might putting some weight on social issues actually increase profit in the long-run? There is also a small theoretical literature on corporate objectives when shareholders care about public goods and externalities. We will discuss the relationship between our paper and this literature in Section 6. One point to note is that most of the theoretical literature is concerned with corporate gift-giving rather than with the mitigation of externalities, which is the focus of our paper.

The closest work to ours is Elhauge (2005). Elhauge (2005) makes many of the same arguments that we do in a more informal way. Specifically, he recognizes that profit maximization is too narrow a goal for managers when shareholders have social concerns. He also identifies the role of takeovers in pushing companies to maximize profits, even against the interest of shareholders themselves, given that shareholders may be subject to a collective action problem. Elhauge (2005) does not model prosocial behavior, nor does he explain the asymmetry, i.e., why in a world of socially conscious shareholders we do not observe prosocial takeovers; this is one of the concerns of our paper. He also does not advocate shareholder voting as a way to determine corporate policy, as we do. At the same time his paper considers a number of issues that we do not. Stout (2012), like Elhauge (2005), also argues that, given that shareholders are prosocial, managers should pursue a broader agenda than profit maximization.

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<sup>7</sup> For recent empirical work on the importance of this effect, see Azar et al. (2017). For a discussion of the theory, see Rotemberg (1984), Gordon (1990), and Azar (2017).

<sup>8</sup> See ,e.g., Shleifer and Summers (1988), and Blair and Stout (1999). For a recent discussion, see Mayer (2013).

<sup>9</sup> See, e.g., Hansmann (1996).

<sup>10</sup> For a recent survey, see Kitzmueller and Shimschack (2012).

We model prosocial behavior by shareholders in a particular way. We suppose that each individual puts some weight on doing the right or socially efficient thing, as well as on his private payoff, but only if he feels responsible for the action in question. The relative weights on private and social payoffs vary across individuals. This formulation implies that a consumer may vote for a company to adopt a clean rather than a dirty technology even if this reduces profit, but will be willing to hold shares in a dirty company if he is not responsible for the decision (or once the decision has been made). Another way to describe it is that our consumers will pick up litter that they have dropped (as long as the weight on the social payoff is not too small) but will not pick up the litter of others (they do not feel responsible for this). Of course, in reality, some consumers are more altruistic than this and some less. We discuss the robustness of our results to different specifications of moral behavior in Section 5.

The paper is organized as follows. In Section 2 we consider a very simple model of a founder who wants to take a company public. We ask whether the founder prefers to create a “clean” company or a “dirty” company assuming that she has complete control over the company’s future. In Section 3 we discuss various governance structures that will allow the founder to influence the direction of the company given that she does not have complete control over its future. In Section 4 we compare the governance arrangements suggested by our analysis to what is observed or feasible in practice. Section 5 discusses the robustness of our results to the particular way we model prosocial behavior. Section 6 contains a very short literature review. Section 7 concludes.

## 2. A very simple model

Consider a company initially 100% owned by a founder  $F$ . At date 0  $F$  will take the company public and sell off her entire stake. A new board of directors will be appointed and this board together with senior executives will take an action at date 1. For simplicity we suppose that this action  $x$  takes on two values: *clean* or *dirty*. The action has two effects: it creates some profit  $\pi$  that is distributed to shareholders, and some environmental damage that affects people in the rest of the economy (possibly in other countries). Note that this environmental damage is supposed not to affect shareholders directly. We assume that the damage is measured in money. For simplicity we assume that the environmental damage of the clean action is zero while the environmental damage of the dirty action is  $d$ . The interest rate is zero.

We can thus write the payoffs as follows, where social surplus equals profit minus damage:

	<i>profit</i>	<i>damage</i>	<i>social surplus</i>
Clean	$\pi_{clean}$	0	$\pi_{clean}$
Dirty	$\pi_{dirty}$	$d$	$\pi_{dirty} - d$

Our economy contains a large number of consumers (one of whom is F). Most consumers are not wealthy (F is an exception). Consumers are prosocial (or socially conscious) but in a particular way. Specifically, a consumer puts some weight on doing the right or socially efficient thing, as well as on his private payoff, but only if he feels responsible for the action in question. An implication of this is that a consumer does not object to holding shares in a dirty company if he had no role in choosing the dirty action—indeed he will pay full price for such shares<sup>11</sup>. If the consumer is asked to vote on a clean action rather than a dirty action, however, he may be prepared to vote for the former. We will take the view, discussed further below, that a consumer will vote as if he is pivotal since this is the only time his vote matters<sup>12</sup>. Moreover, if his vote is pivotal, he feels responsible for the outcome.<sup>13</sup>

We make a distinction between how a consumer decides between actions and his final payoff. We will refer therefore to two types of payoffs: decision payoffs and final payoffs. The decision payoff incorporates the damage that his decision causes, while the final payoff does not.

We also suppose that in computing his decision payoff a consumer feels responsible only for a proportion of social surplus, where the proportion equals his shareholding in the company.

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<sup>11</sup> In this respect our paper differs from much of the literature, which supposes that prosocial consumers will pay less for shares of dirty companies. See, e.g., Heinkel et al. (2001), Graff Zivin and Small (2005), Barnea et al. (2013), and Baron (2007). We return to our modelling assumptions in Section 5.

<sup>12</sup> We ignore the cost of voting.

<sup>13</sup> For a model of responsibility, see Engl (2017). People may try to avoid knowing about or being responsible for decisions in order to make selfish choices. On this, see Rabin (1995) and Benabou and Tirole (2010). But evading responsibility may be more difficult if you are voting on an issue.

This is to avoid a situation where the social surplus term overwhelms the profit term for a small shareholder<sup>14</sup>. We return to this point in Section 5.

Let us be more precise. The decision payoff from an action that consumer  $i$  feels responsible for is a weighted average of his private payoff and his share of the social surplus corresponding to the action, where the weights are  $(1 - \lambda_i)$  and  $\lambda_i$ , respectively. That is, the decision payoff to consumer  $i$  who owns a fraction  $\alpha_i$  of the company's shares from the dirty action is

$$(1) \quad (1 - \lambda_i)\alpha_i\pi_{dirty} + \lambda_i\alpha_i(\pi_{dirty} - d) = \alpha_i(\pi_{dirty} - \lambda_i d),$$

while from the clean action it is

$$(2) \quad (1 - \lambda_i)\alpha_i\pi_{clean} + \lambda_i\alpha_i\pi_{clean} = \alpha_i\pi_{clean}.$$

where  $0 \leq \lambda_i \leq 1$ .

It follows that consumer  $i$  will vote for *clean* over *dirty* if and only if

$$(3) \quad \alpha_i\pi_{clean} > \alpha_i(\pi_{dirty} - \lambda_i d),$$

which, as long as  $\alpha_i > 0$ , simplifies to

$$(4) \quad \pi_{clean} > \pi_{dirty} - \lambda_i d.$$

Comparing (4) and social surplus, we see that the only difference is that consumer  $i$  puts weight  $\lambda_i$  rather than 1 on damages.

Let us turn now to final payoffs. We assume that once the consumer has made his decision—taking externalities into account—he is no longer plagued by this decision. He neither suffers from the externalities resulting from it nor receives a warm glow from avoiding them<sup>15</sup>. Thus consumer  $i$ 's final payoff if action  $j$  is implemented is  $\alpha_i\pi_{clean}$  if the clean action is implemented and  $\alpha_i\pi_{dirty}$  if the dirty action is implemented. Later in the paper we will provide a fuller discussion of why we distinguish between decision payoffs and final payoffs.

It follows from (4) that a consumer never votes for an action that is less profitable *and* also less socially efficient. More formally, we have

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<sup>14</sup> A similar assumption is made in Graff Zivin and Small (2005) and Baron (2007). The evidence in Schumacher et al. (2017) on dispersed benefits provides another explanation for why the social surplus term may fail to overwhelm the private payoff.

<sup>15</sup> For a discussion of warm glow effects, see Andreoni (1990).



### **Proposition 1**

(a) If  $\pi_{clean} > \pi_{dirty}$ , all consumers vote for *clean* over *dirty*.

(b) If  $\pi_{clean} < \pi_{dirty} - d$ , all consumers vote for *dirty* over *clean*.

To make the analysis interesting we assume a tension between profitability and social efficiency, i.e.

$$(5) \quad \pi_{dirty} > \pi_{clean} > \pi_{dirty} - d ,$$

that is, neither (a) nor (b) applies.

Let us return to the situation of the founder F at date 0. We are interested in the case where F through a choice of the governance structure can affect the determination of the decision at date 1. Thus F will see herself as responsible for the choice of  $x$ . The simplest case is where F can choose  $x$  directly. What  $x$  does she want?

The  $x$  that F chooses will affect the market value of the shares at date 0 and hence the amount that F receives when she cashes out. The market value is given by  $\pi_{clean}$  if clean is chosen and  $\pi_{dirty}$  if dirty is chosen. As with any other person in the economy, F's decision payoff is a weighted average of profit and damage. Thus, if (5) holds, F will choose *clean* and if it does not, then F will choose *dirty*. In other words, F will choose *clean* if and only if

$$(6) \quad \lambda_F > \frac{\pi_{dirty} - \pi_{clean}}{d} ,$$

i.e., if and only if the weight F puts on social considerations is sufficiently large relative to the ratio of the difference between profits and damages. F's final payoff is just given by the profit associated with the action chosen (absence of warm or cold glow).

One special case of our model is when *clean* is a lower profit, lower damage action, but is no more socially efficient than *dirty*, i.e.,

$$(7) \quad \pi_{clean} = \pi_{dirty} - d .$$

One interpretation is that choosing *clean* stands for giving some of the shareholders' money to a (environmental) charity. This is a situation where externalities are separable from money-making activities. Proposition 1(b) tells us that all shareholders would vote for *dirty* over *clean*, as would the founder. In such a case, our model says that value maximization is the appropriate objective of a company. Thus, we can see Friedman's conclusion that individuals rather than companies

should give to charity as a special case of our model where externalities are separable from money-making activities.

So far we have assumed that F chooses  $x$  directly. In the next section we discuss how F's choice might be implemented in practice.

### 3. Implementing the founder's choice

Before we turn to discussing how F could try to implement or at least influence the choice of  $x$ , it is important to analyze how the market for corporate control will affect this choice, in the absence of any restriction. Even though hostile bidders are rare these days, we will analyze how they could impact the choice of  $x$ .

#### *3.1 Amoral drift*

Suppose that a board is expected to choose *clean*. Then the value of the company (just before date 1) will be  $\pi_{clean}$ . A bidder with  $\lambda_i=0$  (or a low  $\lambda_i$ ), that is, someone who cares only or mainly about money, could make an unconditional offer for the company at a price  $\pi_{dirty} > p > \pi_{clean}$ . At the same time he could announce that if successful (more than 50% of the shares are tendered), he plans to freeze-out non-tendering shareholders at a price between  $p$  and  $\pi_{clean}$ . If successful this unconditional offer nets the bidder a profit of  $\pi_{dirty} - p$ .

How will shareholders react to such a bid? We argue that even prosocial shareholders will tender. The reasoning is as follows. Each shareholder is small and so the chance that his tendering decision will determine the success of the bid is negligible. If a shareholder thinks that the bid will fail then it is better for him to tender since he will receive  $p$  and can always buy back his shares at  $\pi_{clean}$ . If the shareholder thinks that the bid will succeed then since he is extremely unlikely to be pivotal he will barely feel responsible for the outcome even if he tenders (to put it another way, the second term in his decision payoff, (1)-(2), will be weighted by the probability of his being pivotal). Thus, the second term in (1)-(2) drops out. Hence he compares  $p$ , the price he receives if he tenders, to the freeze-out price, which is lower. Thus, it is again better to tender.

So tendering is a dominant strategy even for a prosocial shareholder and the bid succeeds<sup>16</sup>. This is true even if the majority of shareholders have high  $\lambda_i$ 's and would have voted against the bid if given the opportunity.

There is a mitigating force. These days it is difficult for a Delaware corporation to make a two-tier offer where the freeze-out price is significantly below  $p$  without incurring a major law suit. The closer the freeze-out price is to  $p$  the less inclined will be a shareholder who favors *clean* to tender if he thinks the bid will succeed. However, even if the freeze-out price equals  $p$ , it will be received later and hence is inferior in present value terms (unlike in our model the interest rate in reality may be significantly positive)<sup>17</sup>.

The bidder is taking advantage of the collective action problem to coerce dispersed shareholders into accepting an outcome that collectively they may not like. A prosocial shareholder with a high  $\lambda_i$  would vote for *clean* rather than *dirty* because he reasons to himself: If my vote is pivotal, and this is the only time it matters, I will be responsible for the dirty outcome if it occurs. I should put a lot of weight on the second term in (1)-(2), and the second term outweighs the first if my  $\lambda_i$  is high. However, such a shareholder will tender to a bidder even if he knows the bidder will choose *dirty* rather than *clean* because he reasons to himself: My decision is almost certain not to be pivotal and so the probability of my being responsible for the success of the bid is very low. Hence the second term in (1)-(2) gets very low weight and according to the first term I should tender.

Thus, the market for corporate control will push a board who wants to choose *clean* into a choice of *dirty*.

It is worth pointing out that activist investors do not pose the same dangers for clean companies as bidders. An activist accumulates a toe-hold in a company but then relies on other shareholders to support its position, which is akin to a vote. Thus if the majority of shareholders favor a clean technology an activist investor should not be able to turn a clean company into a dirty one. We return to this question in Section 4.4.

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<sup>16</sup>This “pressure to tender” problem is well-known. For a discussion, see Bebchuk and Hart (2001), and, in the context of profit-seeking bidders and prosocial shareholders, Elhauge (2005). Note that a version of our argument also holds if the bidder makes a conditional offer at a price  $p > \pi_{clean}$ . Now there are two equilibria. If shareholders expect the bid to succeed they will tender and it will succeed. However, there is a second equilibrium where the shareholders expect the bid to fail, do not tender, and it fails.

<sup>17</sup> Also in some cases a bidder may be able to make it unattractive for a shareholder not to tender by announcing that the bidder will *not* engage in a freeze-out but will instead delist the company if the bid succeeds.

We see that an unfettered market for corporate control can imperil clean companies. Is the opposite true? If there are many consumers with high  $\lambda_i$ 's, might there not be at least one wealthy one who is willing to take over a company that is expected to choose *dirty* and turn it into one that will choose *clean*?

We believe that the answer is no. There is an important asymmetry here. First, when it comes to removing an externality, there is a collective action problem. Someone who takes over a profitable dirty company and converts it into a less profitable green company will take a loss and so each prosocial consumer would prefer someone else to do the job. But there is a second issue. We have assumed that the second term in (1)-(2) enters a prosocial consumer's decision payoff only if he feels responsible for an action, and also that it does not enter his final payoff. Consider the bidder's calculation. If he does not make a bid his payoff is zero. If he does make a bid he will have to offer shareholders (at least) the current market price  $\pi_{dirty}$  to persuade them to tender<sup>18</sup>. Once the bidder has a majority of the shares, say he acquires 100%, he will feel responsible for the choice of  $x$  and so will choose according to (4). If his  $\lambda_i$  is high and he chooses *clean*, his final payoff is

$$(8) \quad -\pi_{dirty} + \pi_{clean} < 0,$$

i.e., he makes a loss. Thus it is better for him not to make a bid.

Note again the assumptions we have made. A consumer takes damage into account if and only if he feels responsible for an action causing the damage. But after he has chosen his (presumably correct) action the damage does not enter his final payoff as a negative term. Nor does the removal of damage enter as a positive term: there is no warm glow.

To use a numerical example, a prosocial consumer might vote to make \$100 profit and cause no pollution rather than to make \$150 profit and cause pollution equal to \$60. Indeed he will do so if his  $\lambda$  exceeds 5/6. His final payoff from doing so, however, will be \$100. Once he makes the right decision he does not feel good about the damage of \$60 that he is preventing.

For this reason the same prosocial consumer would not pay \$150 to change a company that is making \$150 profit and causing damage \$60 into one that makes \$100 profit and causes

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<sup>18</sup> At any price below  $\pi_{dirty}$  it is a dominant strategy for a shareholder not to tender as long as any future freeze-out price has to exceed the pre-bid market price,  $\pi_{dirty}$ ; this is consistent with U.S. corporate law.

no damages. If he did so, his final payoff would be  $-150+100<0$ . There is something like the endowment effect at work here but the cause is different.

Of course, these assumptions about payoffs and behavior could be questioned. Some evidence consistent with them can be found in Lazear et al. (2012) and Della Vigna et al. (2012). In Lazear et al. (2012), half of the subjects exhibit a preference for avoiding a situation where they must decide whether to share the proceeds of a game. Similarly, in Della Vigna et al. (2012), between 10% and 25% of households do not answer the door bell when they have been warned that the visitor might be a fund raiser. Thus, people prefer avoiding finding themselves in the situation of having to make a prosocial decision.

This simple asymmetry has a very sharp implication: without any restriction publicly traded companies will naturally drift towards social indifference, i.e., they will tend to put little weight on the externalities they produce. They will underweight social surplus much more than privately held companies.

Ironically, in the United States proxy access rules are not designed to solve this problem—if anything they go in the opposite direction. Under rule 14a-8, the SEC requirement to include shareholders’ proposals in companies’ proxy material is limited to “proper subjects for action.” The SEC later opined that “proposals which deal with general political, social or economic matters are not, within the meaning of the Rule, ‘proper subjects for action by security holders<sup>19</sup>’”. Consistent with this approach, in 1951 a federal court upheld the exclusion of a proposal seeking desegregation of buses as an improper subject for shareholders (Peck v. Greyhound, 97 F. Supp. 679, 680, S.D.N.Y. 1951). In 1954, the SEC added the “ordinary business” exclusion, which further limited the ability of shareholders to introduce social considerations in proxy ballots.

In the late 1970’s the SEC introduced the idea that the “ordinary business exclusion” would not apply to matters with significant policy implications, such as tobacco to minors, nuclear power and the like (Andersen, 2016). The effective boundaries of this public policy exception are heavily litigated to this day (see the Walmart case mentioned above). Overall, it is fair to say that law and regulation have not helped to prevent the amoral drift.

### *3.2 The founder’s choice*

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<sup>19</sup> The SEC Today Released An Opinion Of Baldwin B. Bane, Exchange Act Release No. 3638, at \*1 (Jan. 3, 1945).

The existence of this amoral drift makes it simple for an F who wants to implement a *dirty* decision, but is worried that a future board might put too much weight on ethical concerns and choose *clean*: F should make hostile takeovers easy<sup>20</sup>. One way she can encourage takeovers is to put in place a non-staggered board<sup>21</sup>.

F's task is more difficult if she wants to implement *clean*. One possibility is to put in place a staggered board. Another possibility is to set up the company as a dual class one and retain voting control with relatively few income rights. We are seeing more and more efforts along these lines: Google and Facebook are prominent recent examples. But dual class companies have their own corporate governance problems, as one can see from the recent spat involving Viacom.<sup>22</sup>

A third possibility is for F to write a charter that specifies the decision *clean* in advance. Of course, in practice this decision is not easy to describe and will be contingent on future states that are also hard to describe. Hence, the complete contracting/charter solution is probably infeasible. It is also the case that the courts might not uphold a charter that is set in stone, particularly if enough future shareholders want to change it.

Given that any actual corporate charter is likely to be incomplete, fiduciary duty, the duty of loyalty and care, which the future board will owe shareholders, becomes important. Everyone agrees that fiduciary duty means that the board (or executives) cannot enrich themselves at the shareholders' expense. Some have also interpreted it to mean that the board must pursue long-run shareholder value. But this is a narrow notion of fiduciary duty. Suppose that F puts a mission statement in the corporate charter, laying out the goals of the company. (A mission statement is just an incomplete version of a complete corporate charter.) The statement might say that future boards should put a lot of weight on environmental protection, should not deal with corrupt regimes, etc., or it might say the opposite: this company is dedicated to making money, while staying within the law. The courts could then interpret fiduciary duty to mean behavior that is consistent with the mission.

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<sup>20</sup> The founder could also encourage managers to pursue profit by placing a large amount of debt in the company's capital structure or imposing high-powered profit-based incentive schemes.

<sup>21</sup> For a discussion of how staggered boards (often in combination with poison pills) can impede takeover bids, see Bebchuk and Cohen (2005). Daines et al. (2016) provide empirical evidence that staggered boards can increase shareholder welfare for reasons other than those emphasized here.

<sup>22</sup> For details see William D. Cohan "Inside The Raging Legal Battle Over Sumner Redstone's Final Days", Vanity Fair, April 2016 <http://www.vanityfair.com/news/2016/03/sumner-redstone-legal-battle-final-days>.

In other words, founders could choose whether to create a “Friedman” company or another type of company. A founder who prefers *dirty* would choose a “Friedman” charter that specifies profit maximization as the goal. A board that did not follow this would be open to breach of fiduciary duty suits by shareholders (presumably those with low  $\lambda_i$ ’s). A founder who prefers *clean* would choose a charter that emphasizes broader goals. In this case, a board that focused too narrowly on profit maximization would be open to breach of fiduciary duty suits by shareholders (presumably those with high  $\lambda_i$ ’s).

We are somewhat skeptical about this third solution. Even with “standard” corporations, where value maximization is taken to be the right goal, the business judgment rule effectively shields boards from most fiduciary duty suits (unless the board enriches itself or uses explicit language to the effect that it is not maximizing value). We can only imagine how much more difficult it would be to sue for failure to stick to a mission statement, or to maximize shareholder *welfare*, a very slippery concept to define and measure.

For these reasons we wonder about the likely success of a new type of corporation that has emerged in the United States, the Benefit Corporation<sup>23</sup>. A benefit corporation is a for-profit corporate entity that includes a positive impact on society and the environment in addition to profit as its legally defined goals. Rather than simply allowing management to take other considerations, e.g., ethical ones, into account, a benefit corporation *requires* them to take particular ones into account. Thus a benefit corporation can be seen as including the kind of mission statement that we have described above. Only time will tell whether founders can write mission statements that are clear, not too rigid, and can be enforced.

A fourth possibility is for F to entrench a board of like-minded individuals, allowing them to co-opt new like-minded board members in the future. This mechanism works well (and is very much used) in charitable foundations, where there is little or no external pressure towards efficiency. Of course there are examples, such as the Ford Foundation, where the wishes of the initial founder were later betrayed. By and large, however, these are exceptions rather than the rule.

In spite of tools like staggered boards and poison pills, this entrenchment strategy is less successful in corporate boards, because it comes with an important cost: it prevents the removal of incompetent or ineffective managers. In charitable foundations, most decisions are about

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<sup>23</sup> For a discussion, see Cummings (2012).

allocation, not efficiency. In these decisions, taste is more important than competence. By contrast, in for-profit corporations the taste component is less important vis-à-vis the efficiency dimension. The cost of entrenching a particular management team can be so high that it is unwise for founders to try to do so. Even when they try, they rarely succeed because of the pressure of activist investors.

An interesting combination is when a large block of shares in a for-profit corporation is endowed to a charitable foundation, where the founder chooses the initial board members to reflect her preferences. An example of this dual structure is the Carlsberg Foundation.<sup>24</sup>

We now turn to our final possibility: voting. One way that a prosocial founder could try to ensure *clean* is to encourage future shareholder voting. Suppose that the board of directors is required to bring matters of policy to a shareholder vote. Assume that it is known at date 0 that shareholders will vote between *clean* and *dirty*. Then *clean* will be the outcome as long as the median value of  $\lambda_i, \lambda_i^m$  say, satisfies

$$(9) \quad \lambda_i^m > \frac{\pi_{dirty} - \pi_{clean}}{d} .$$

In this case the date 0 market value of the firm will equal  $\pi_{clean}$  since investors will anticipate the date 1 choice of *clean*. The outcome is the same as if a prosocial F could choose  $x$  directly.

Of course, for this to work the founder F has to be confident that enough of the future shareholders will have similar preferences to him. If  $\lambda_i^m$  does not satisfy (9), the shareholders will vote for *dirty*. But the important point is that, in contrast to takeovers, there is no asymmetry in voting. If most shareholders put a lot of weight on money, they will vote for *dirty*. If most shareholders put a lot of weight on externalities, they will vote for *clean*. This is in contrast to takeovers where a bidder interested mainly in money has an incentive to take over a *clean* company and turn it into a *dirty* one, but a bidder with strong social concerns does not have an incentive to take over a *dirty* company and turn it into *clean* one<sup>25</sup>.

### 3.3 The impact of competition

<sup>24</sup> <http://www.carlsberggroup.com/Company/Foundations/CARLSBERGFOUNDATION/Pages/Default.aspx>

<sup>25</sup> Bebchuk and Hart (2001) also argue that voting can lead to better outcomes than takeover bids, although the reasons are different from those discussed here.



So far we have considered a company operating in isolation. What happens if the company competes with others?

Consider first the case of perfect competition. Dirty choices by other companies will likely reduce marginal costs and force prices down, reducing this firm's profit, whichever technology it uses. To take a simple example, suppose that the company has a constant marginal cost that is  $c_1$  if the company is dirty and  $c_2$  if it is clean, where  $c_1 < c_2$ . Assume also that the company has a capacity constraint  $Q$ , and that the environmental damage is independent of company scale: it is a fixed social cost that depends only on the choice of technology. Then under perfect competition with a market price of  $p$ ,

$$(10) \quad \pi_{dirty} = (p - c_1)Q,$$

$$(11) \quad \pi_{clean} = (p - c_2)Q$$

as long as  $p > c_2$ . Using (6), we see that a shareholder will vote clean if

$$(12) \quad \lambda_i > \frac{(c_2 - c_1)Q}{d}.$$

However, if  $p$  falls below  $c_2$ , then  $\pi_{clean} = 0$  (it is more profitable to close down than to use the clean technology), and so (12) is replaced by

$$(13) \quad \lambda_i > \frac{(p - c_1)Q}{d}.$$

Clearly the right-hand side of (13) is less than the right-hand side of (12) if  $p < c_2$ , and so a shareholder is *more* likely to vote clean as the environment becomes more competitive.

Of course, in reality, many other factors may be important. We have supposed that environmental damage does not depend on the scale of the company's operations, we have considered a very simple bang-bang technology where a company either operates at full capacity or not at all, and we have conducted a partial not a general equilibrium analysis. Also we have ignored any non-pecuniary benefits that managers or workers might enjoy. The latter might make

survival of the company a first-order concern and might persuade shareholders to vote for a dirty technology if that is the only way for the company to keep going as  $p$  falls. Finally, we have ignored the possibility that as shareholders become poorer they may put less weight on ethical concerns, that is, morality is a normal good. For a discussion of this idea, see Shleifer (2004).

Still the above analysis does suggest that an often-made argument that competition drives out good behavior must be qualified.

A new effect arises once we depart from perfect competition. Suppose that our company A is in duopolistic competition with a second company B that has chosen a dirty technology. Assume that the companies produce a homogeneous good at constant marginal cost (with no capacity constraints) and that competition proceeds a la Bertrand. (The marginal costs of the two companies may be different.) Then the shareholders of company A are faced with the following dilemma. If they choose clean, they will lose the market to company B if B's marginal cost is lower and the consequence may be a large amount of environmental damage by B. On the other hand, if they choose dirty they may produce (possibly smaller) damage themselves and make money. Which is better?

A full analysis of this question is beyond the scope of this paper, but it clearly raises a number of fascinating issues including new moral ones: is it acceptable to do bad things yourself if others would do them anyway in your absence?

#### 4. Practical issues

The question we try to answer in this paper is not just an academic one: it is very relevant for the debate on the fiduciary duty of both corporate directors and investment managers.

##### *4.1 Corporate directors' fiduciary duty*

There is considerable confusion about what the fiduciary duty of a corporate board is. It is not unusual for boards and CEOs to justify a controversial action on the grounds that fiduciary duty to shareholders requires them to do it. This was the case, for example, with the (former) CEO of Turing, Martin Shkreli, who was criticized for raising the price of Daraprim fifty-fold. According to a news article, "Turing opted to not lower the price of Daraprim in order to make money for Turing's shareholders. He [Shkreli] cited a Delaware law that he said states he must

do everything to maximize the financial return for his shareholders—something he claimed was his fiduciary duty.”<sup>26</sup>

As we understand it, this is wrong. Shkreli could easily have refused to raise the price of Daraprim, without the fear of shareholder suits, on the grounds that the reputational effects would be disastrous (as they turned out to be). But the press reported the story as if Shkreli were, or at least might be, right. This muddled state of affairs does not seem to be desirable.

We think that part of the reason for this confusion is that the academic literature itself is confused. Under the current regime, where corporate directors are elected by shareholders to whom they owe a fiduciary duty, they have a duty to maximize shareholders’ *welfare*, not just shareholders’ value. If a company has a single shareholder, nobody would object to the idea that this single shareholder can instruct directors to maximize her utility, rather than her financial return. Why should things be different when there are multiple shareholders?

One reasonable objection is the cost of reaching a consensus among investors on what objectives (other than money) a company has to pursue<sup>27</sup>. We do not think that this problem is insurmountable. Directors can poll their members on some fundamental choices and then decide accordingly. For example, they can ask their investors if they are willing to sacrifice some of their returns to avoid the sale of tobacco to children or of high-capacity magazines to ordinary citizens (as in the Walmart case). In the contemporary wired world, these polls are extremely cheap and fast to arrange. Thus, we do not see any reason why directors and asset managers should not use them.

If there is a concern about the cognitive load of all these decisions on individual investors, then one solution is the formation of mutual fund companies specialized in voting on certain issues. Imagine an index fund, identical in every respect to all other index funds, with the exception that it votes against any sale of assault weapons and ammunition to ordinary citizens. The fund would eliminate the cognitive overload and would not be any more expensive than a standard index fund, which has to pay a proxy advisor anyway to direct it how to vote. Prosocial investors should rush to such a product, ensuring its success in the market. In fact, the idea is so simple that one might wonder why we do not see such products already in the marketplace. We think that the answer can be found in the existing proxy access rules, which make it difficult for

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<sup>26</sup> <http://www.pharmalive.com/turings-says-he-should-have-increased-the-price-of-daraprim-higher-than-5000/>

<sup>27</sup> Hansmann (1996) has argued that one benefit of allocating votes to shareholders is that shareholder preferences are relatively homogeneous in the monetary domain: all shareholders have a strong interest in maximizing profit.

moral issues to be put up for a shareholders' vote. If these rules were eased, we would expect this kind of ethical fund to arise.

#### *4.2 Invest and Engage*

The existing literature on social investing (e.g., Hong and Kacperczyk (2009)) assumes that some (but by no means all) investors are prosocial. Under this assumption, the strategy of divesting from stocks of companies engaging in unethical/sinful/polluting behavior seems at best ineffective, at worst counterproductive.

If the divestment of prosocial investors were to depress the stock price of a targeted company, the non-socially concerned investors would flock in droves to the stock, attracted by the higher yield, driving the price back to the pre-divestment level. Thus, unless the amount of wealth held by prosocial investors vastly exceeds the amount of wealth of selfish investors, divestments cannot have persistent effect on prices and the cost of capital.

If – in spite of the previous argument – divestment had an impact on prices, it would move controversial stocks into the hands of the least prosocial investors, who will maximize the negative externality.

For this reason, we think that a strategy of “invest and engage” is potentially much more successful. Yet, this strategy is available only if moral issues are regularly brought up for a shareholders' vote, something that does not happen today.

#### *4.3 Asset managers' fiduciary duty*

When Friedman wrote his piece, 80% of publicly traded equity was owned by households and only 16% by institutional investors (Zingales (2009)). Now the numbers are reversed: only 27% of public equity is owned by households and 60% by institutional investors. The growing role of institutional investors in corporate governance has raised a new and important question: what should asset managers maximize? This question is particularly significant when the funds are part of a retirement system, since they guarantee the support of older people.

In the United States the fiduciary duty of private pension funds is defined by the Employee Retirement Income Security Act (1974) (ERISA). While not obliged to do so, state pension funds, mutual funds, and endowments tend to follow the ERISA rules as well. Another important normative source that provides guidance on investment decisions for nonprofit and

charitable organizations is the Uniform Prudent Management of Institutional Funds Act (abbreviated UPMIFA), currently adopted in 49 U.S. States.

The ERISA rules state that “a fiduciary shall discharge his duties with respect to a plan solely in the interest of the participants and beneficiaries and for the exclusive purpose of: (i) providing benefits to participants and their beneficiaries...” This obligation is generally expressed in financial terms given that the goal of these plans is to provide retirement benefits. UPMIFA, by contrast, provides more discretion to the fiduciary allowing him (or her) to “consider the charitable purposes of the institution and the purposes of the institutional fund”. It allows him to consider also “an asset’s special relationship or special value, if any, to the charitable purposes of the institution.”

This ambiguity has generated an active debate on whether asset managers should (or even could) factor in other considerations (often defined as environmental, sustainability, and governance or ESG) in their investment decisions (Sullivan et al. (2015)). The intensity of the debate is driven by the fact that there are two opposite risks. On the one hand, if other considerations are allowed, there is the risk of transforming asset managers into political decision makers, without any accountability. On the other hand, preventing any considerations except financial ones will lead to an amoral drift in the way companies are run.

The solution depends upon the type of institutional investors. For mandatory retirement plans (like the California Public Employees Retirement fund), voting at the fund level is the only viable solution. Without a vote, asset managers will either ignore the preferences of investors for anything other than money or be forced to interpret investors’ preferences, running the risk of imposing their own preferences on investors.<sup>28</sup>

If a fund is not part of a mandatory plan, then investors can vote with their feet, as long as there are funds offering alternative approaches. Indeed, there exist open funds aimed at attracting people with special preferences, like reducing CO2 emissions.<sup>29</sup> The strategy of these existing funds, however, is to divest from controversial stocks, not to invest and engage. As we stated earlier, we think that “engaged” funds have not arisen yet because proxy access rules do not favor votes on the issues investors want to engage in.

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<sup>28</sup> For an interesting recent discussion of voting behavior of mutual funds, how this often seems to differ from the preferences of their investors, and what might be done about it, see Hirst (2017).

<sup>29</sup> John Auther, “US pension funds raise the bar in low carbon investment” Financial Times, December 9 2015. <https://www.ft.com/content/8d3e0ff4-9e37-11e5-8ce1-f6219b685d74>

#### 4.4 Activists and takeovers

In the last decade hostile takeovers have been rare. A much more important mechanism to shape the governance of enterprises has been the acquisition of a toehold by activist investors (often hedge funds), which challenge the incumbent managers via a vote on directors' nomination.

Many commentators (e.g., Lipton (2016)) see activist investors as detrimental to corporations. Others (e.g., Brav, Jiang, and Kim (2015)) attribute to them the same beneficial effects as produced by takeover bidders. Yet, both sides perceive activism as a close substitute for hostile takeovers. Our model, however, points to an important difference: the amoral drift present with takeovers does not occur with activist investors. The reason is that activists rely on other shareholders to vote with them and voting allows shareholders to reject welfare-reducing decisions, even when these are wealth maximizing.

One qualification should be made. The support that activists rely on often comes from institutional investors who may believe that they have a fiduciary duty to *their* shareholders to vote for value-maximizing actions. Thus institutions may support an activist who wants to turn a clean company into a dirty one even if most shareholders are against this. This problem would disappear if the position advanced in this paper were accepted, that institutions have a broad fiduciary duty to maximize shareholder welfare rather than shareholder value.

#### 5. Motivating our assumptions<sup>31</sup>

We have chosen a particular way of modelling ethical concerns and it is worth saying more about our assumptions. First, a more standard approach would have treated the damage  $d$  caused by the company in the model of Section 2 as a public good. That is, we could assume that the pollution from firm  $j$  hurts all consumers in the economy including shareholders and write the payoff function of consumer  $i$  as

$$(14) \quad u_i(\alpha_i \pi_j, d_j),$$

where  $j$ =clean or dirty and  $d_j=0$  if  $j$ =clean,  $d_j=d$  if  $j$ =dirty.

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<sup>31</sup> We are very grateful to Niko Matouschek for his suggestions about this section.

We did not proceed in this way because it seems strong to assume that a consumer is affected by all the externalities in the economy. Rather we are interested in a situation where a consumer cares about things that he feels some responsibility for, even though they may not impact him directly (think about environmental damages in another country).

One way we have captured this responsibility is by multiplying the damage  $d_j$  by the shareholding  $\alpha_i$ . The implication is that a small shareholder internalizes only a small part of the damage that firm  $j$  causes. He feels a responsibility that is proportional to his stake in the company.

But this is not all. We have also distinguished between decision payoffs and actual payoffs. The former includes the damage term (weighted by the shareholding), while the latter does not. The reason for this is that we are trying to model limitedly ethical behavior. We are interested in analyzing people who are willing to hold shares in tobacco or gun or oil companies, and indeed will pay full price for these shares, as long as they are not responsible for the company's actions. This is true in our model since consumers put a value  $\pi_j$  on these shares, their payoff from holding them. If a consumer's payoff included the damage term  $d_j$ , a consumer would be willing to pay only  $\pi_j - d_j$ .

The final piece of the picture is that the damage must appear somewhere in the consumer's payoff if ethical concerns are to have any bite. This is why we introduce the decision payoff that does contain the damage term.

The simple example about litter mentioned in the introduction can illustrate our approach. Consider someone who drops a piece of litter on the sidewalk by mistake. Should this person bend down to pick it up? The consumer in our model might do so because she feels responsible for the litter. Her decision payoff is  $-\lambda_i d$  if she does not pick up the litter, where  $d$  is the social damage from the litter lying around, and  $-c$  if she picks it up, where  $c$  is the cost of bending down. (There is nothing corresponding to the shareholding  $\alpha_i$  in this example.) If  $\lambda_i d > c$ , her decision payoff is maximized if she picks up the litter and so she will do this. Her final payoff will be  $-c$ ; she has incurred the cost of bending down, but by assumption there is no warm glow. On the other hand, if  $\lambda_i d < c$ , her decision payoff is maximized if she does not pick up the litter, and so she will not. Her final payoff is zero; the damage term drops out.

Now consider the same consumer who sees a piece of litter on the ground that she has not dropped. Will she pick it up? If she does, her decision payoff is  $-c$ , and if she does not, her decision payoff is 0 (since she does not feel responsible for the litter). Maximizing her decision payoff implies not picking up the litter, and her final payoff is zero.

This modelling choice corresponds to a philosophical assumption on the type of morality shown by prosocial investors. To appreciate this point, it is useful to rewrite the objective function described in (1)-(2) as

$$U_i = \alpha_i \pi_{dirty} - R_i \alpha_i \lambda_i d ,$$

where  $R_i$  is a “responsibility” function, which determines how a prosocial investor internalizes the social damage. In the paper we assume that  $R_i = 1$  if  $i$  causes the externality by taking the action, but  $R_i = 0$  if  $i$  causes the externality by not taking the action.

At first, this assumption may appear very ad hoc. Yet, there are two reasons why we consider it plausible. First, the moral distinction between omission and commission has been discussed at least since the medieval philosopher Aquinas, who wrote that “transgression is a graver sin than omission” (Aquinas (2013)). More importantly, an investor who feels moral responsibility for omission would feel responsible also for all the companies she has not invested in, which is hard to imagine. Thus, even investors with a prosocial attitude have limits on what they feel responsible for and what they do not.

Yet, this is not the only possible choice. Below we briefly explore the robustness of our results to two alternatives with a long intellectual tradition in moral philosophy.

### *5.1 Consequentialism*

A different approach would have been to embrace consequentialism. The Oxford Dictionary defines consequentialism as “the doctrine that the morality of an action is to be judged solely by its consequences.” In terms of our responsibility function this can be written as  $R_i = 1$  if  $i$ 's action causes the externality and zero otherwise. No distinction is made between omission and commission: a consequentialist is as likely to pick up the litter someone else has dropped as litter she has dropped.

In what ways would a consequentialist shareholder behave differently from what we described in Section 3.1? If she owns a stake  $\alpha_i$  in a non-polluting firm, she would feel



responsible for selling to a bidder who buys the firm to start polluting only if she is pivotal, i.e., as before. On the other hand, if she was asked to vote on whether the firm should choose clean or dirty she would make her choice according to (3) and (4), again as before.

The one difference is when a consequentialist shareholder owns a share  $\alpha_i$  of a polluting company and considers the possibility of launching a bid to transform the company into a clean one. In Section 3.1 we showed that the bidder's payoff from such an action is always negative. This is not the case anymore with a consequentialist shareholder, since she feels "guilty" about the pollution produced if she does not act to curb it. Since the utility cost of that guilt is equal to  $\alpha_i \lambda_i d$  (we continue to assume that it is proportional to her shareholding), a consequentialist shareholder will become a bidder if  $\pi_{dirty} - \pi_{clean} < \alpha_i \lambda_i d$ . Therefore, with a consequentialist prosocial investor the amoral drift derived in Section 3 will exist only for moderately inefficient pollution (i.e., pollution such that  $\frac{\pi_{dirty} - \pi_{clean}}{d} > \alpha_i \lambda_i$ ).

Notice that if the initial toehold of the potential social raider is zero, then the result is as in Section 3.1. Given that the potential bidders are few and the number of companies to fix potentially large, then the amoral drift identified in Section 3.1 is largely robust to consequentialism.

## 5.2 Categorical Imperative

An alternative assumption about morality is that shareholders follow a Kantian categorical imperative: "Act only according to that maxim whereby you can, at the same time, will that it should become a universal law" (Kant (1993)). This approach will substantially change our conclusions. For example, a Kantian categorical imperative will deter inefficient takeovers, since social investors would feel morally "responsibility" even when they are not pivotal. Hence, they will tender to a bidder who wants to take over a non-polluting firm and turn it into a polluting one if and only if  $p - \pi_{clean} > \lambda_i d$ . In the extreme case of  $\lambda_i = 1$ , social investors with a Kantian categorical imperative will make all inefficient takeovers impossible.

Yet, prosocial agents following a Kantian categorical imperative change not only some of our results, but most of economic analysis. Pushed to its extreme consequences, the application of a Kantian categorical imperative will eliminate any problem of free riding, of collective

action, even of adverse selection or moral hazard. Selling an overpriced car cannot become a universal law, thus agents will be restrained from doing it. The same can be said for shirking on the job.

### 5.3 *Sin-Averse Investors*

In the existing literature on social investing (e.g., Hong and Kacperczyk (2009)) prosocial investors are typically assumed to have some form of dislike towards “sinful” stocks, such as tobacco stocks. Since this dislike is not explicitly derived from any moral principle, it is not straightforward to map it into our “responsibility” function.

It is clear that these sin-averse investors do not want to own a dirty company and if they happen to own one, they would want to sell it right away. It is also likely that sin-averse investors will vote to reject any proposal to convert a clean company into a dirty one to increase profits, even if their determination to do so might be affected by the magnitude of the profit lost.

What about the decision to tender to a bidder who will turn a clean company into a dirty one for profit? If a sin-averse investor thinks the bid will succeed, she will tender, since she does not want to hold a sinful stock and thus she prefers to sell it now at  $p$ , rather than later at a price no greater than  $p$ . If she thinks the bid will not succeed, a sin-averse investor will also tender, since she prefers to receive  $p$  rather than  $\pi_{clean} < p$ . Nor will she feel any guilt, since she is not pivotal.

If a sin-averse investor is someone who wants to distance herself from evil, but is not willing to do good actively, then we cannot expect sin-averse investors to buy dirty companies and turn them into clean ones: they would suffer a monetary loss, without any psychological gain. In this case, all the results derived in Sections 2 and 3 would go through, including the amoral drift.

If a sin-averse investor is willing to pay a price to do good actively, then the possibility of “social bidders” depends upon how much a sin-averse investor is willing to pay for the pleasure of doing good. As portrayed in the corporate social responsibility literature, sin-averse investors are willing to pay a small cost (in terms of forgone returns) to avoid the pain from owning sinful stocks. Therefore, it is unlikely that any individual sin-averse investor would be willing to pay

the whole cost of turning a dirty company into a clean one. In addition, it is difficult for dispersed investors to coordinate for the purpose of a joint bid. Furthermore, takeover regulation makes this coordination even more costly. In sum, even if sin-averse investors are willing to pay a price to do good, they are unlikely to turn into social bidders, and so the results derived in Sections 2 and 3 will go through, including the amoral drift.

## 6. Comparison to the literature

In this section we briefly compare our work with the relatively small theoretical literature on corporate social responsibility.

Many papers in this literature are concerned with charitable giving by a firm rather than with externalities that are inseparable from the firm's production decision. The main interest is whether charitable contributions by a firm completely crowd out private contributions. Leading examples in this vein are Graff Zivin and Small (2005) and Baron (2007). Both papers assume that individuals experience a warm glow from charitable giving. Graff Zivin and Small consider a public company that already exists while Baron considers the situation from the point of view of a founder. Both sets of authors identify conditions under which complete crowding out does not occur.

Apart from their focus on charitable giving, these papers do not assume that social concerns are present only if a person feels responsible for the decision in question. One significant implication of this is that Baron (2007) finds that prosocial bidders will have an incentive to buy up dirty companies and turn them into green ones. In contrast we obtain an asymmetry: bidders will buy up green companies and turn them into dirty ones but not the other way around.

A paper that does consider externalities that are inseparable from a firm's production decision is Morgan and Tumlinson (2012)<sup>32</sup>. This paper supposes that, in our language, the damage caused by a firm is a public bad that enters every consumer's utility function, whether the consumer is a shareholder or not (and whether he is responsible for the damage or not). Morgan and Tumlinson consider a company that already exists and show that the company can overcome free-rider problems that arise in the provision of public goods. They obtain conditions under which corporate giving can have a positive role.

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<sup>32</sup> See also Besley and Ghatak (2007).

Most of these papers do not consider the implementation and practical issues that are the focus of Sections 3 and 4 (an exception is Baron (2007), who considers the market for corporate control but obtains different results from us).

In spite of the various modeling differences we should stress that we reach conclusions that are broadly consistent with those of the above papers: shareholder value maximization is not the appropriate goal for a company in many circumstances.

## 7. Conclusions

Since Friedman's (1970) celebrated piece, the dominant view in the financial and legal literatures has been that the appropriate objective function for a firm is to maximize profits or more broadly "long-term shareholder value". In this paper we accept Friedman's premise that management's responsibility is to conduct business in accordance with shareholder wishes. We depart only from Friedman's (implicit) assumption that the pursuit of monetary objectives and that of non-monetary ones can be costless separated.

Under these conditions we show that Friedman's conclusion is not valid anymore: maximizing shareholder welfare is not equivalent to maximizing shareholder wealth. We also show that in public companies the existence of an unrestrained market for corporate control will naturally lead to a drift toward amorality over time.

The beauty of Friedman's rule was its simplicity. The risk of abandoning it is that it might create too wide a margin of discretion for management. Our proposed solutions, however, reduce this fear. We do not advocate letting managers arbitrarily choose the social considerations they want to pursue. We suggest instead that they obtain consensus through a vote. If managers' social concerns are shared by a majority of the shareholders, management's proposal will pass. If the majority does not share the same social concerns as management, the proposal will fail. The same idea should apply to asset managers. Rather than imposing the asset managers' social concerns on pension holders, asset managers should consult pension holders. The main cost of subjecting decisions to shareholder approval is the cost of the voting itself. We think that in a wired world this cost is small.

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