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 show that maximization of shareholder welfare does not necessarily equate to maximization of long-term shareholder value. We also show that the first objective is not sustainable in the presence of an active takeover market and that there is a tendency for public companies to behave less ethically over time. We discuss how companies can purse shareholder welfare maximization without falling prey to agency problems.

1.Introduction

This paper is concerned with an old and 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, one of particular interest to lawyers and the other to economists. 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 Times Magazine in 1970.[1] In this article, Friedman starts off by arguing that a corporate executive is the employee of the owners of a 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."

As legal scholars have pointed out, Friedman is wrong to say that top executives are employees; rather the board and executives are fiduciaries— they owe a duty of loyalty and care to shareholders. But in spite of this, 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 we are talking about 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

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[1] 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).

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 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?

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. Take a company that digs for oil, thereby creating some environmental damage. Using the same numbers as above, suppose that the company makes $100 profit from doing this, but the environmental damage is $120. Then a simple conclusion follows: It is socially efficient for the project *not* to be carried out. Could it be socially efficient for the project to be carried out and for consumers to abate the environmental damage on their own? This would require each consumer to have a (scalable) project that is the reverse of the above project: at a cost of $100 a consumer can reduce environmental damage by $120. But is there any reason to think that the reverse of the oil digging project exists, let alone is available to all members of society? 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. The company has the technology to create both, and individuals do not have the technology to undo this. In this case we will argue that Friedman's conclusions do not hold: shareholder welfare does not equate 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.

What of Friedman's argument that externalities should be left to the government? Like many people these days (and maybe always), we are not that sanguine about the efficiency of the political process. Moreover, the very fact that individuals deal with externalities in their own lives, as illustrated in the above examples, suggests that many people share our belief that government cannot be relied on to solve all problems, thus leaving a role for private action, including at the corporate level.

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 only holds in an Arrow-Debreu complete markets economy where each firm is a perfect competitor. If some markets do not exist, consumers will care about the types of securities firms provide to the market through their production as well as the value of these securities, and shareholders will disagree about what the firm should do: net market value maximization will not be a universally approved goal[2]. 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)). But equally a shareholder of GM who already has a car may feel differently. 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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[2] See the papers in M.Magill and M.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[3].

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[4]. In some cases it still makes sense for the firm to pursue long-run value maximization, but in other cases it does not. If the latter is true, then it may be efficient for the company to be set up as a worker, producer, or consumer co-operative or as a non-profit; or to adopt a dual class share structure[5].

Our paper is closer to a fourth part of the literature that emphasizes corporate social responsibility[6]. 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) and Stout (2012). Elhauge (2005) identifies the role of takeovers in pushing companies to maximize profits even against the interest of shareholders themselves, who end up being trapped in a collective action problem. Yet Elhauge (2005) does not explain the asymmetry, i.e., why in a world of socially conscious shareholders we do not observe prosocial takeovers. Like Stout (2012), we assume that shareholders may have objectives other than money. This possibility is recognized also in Friedman (1970), but he is quick to conclude that those objectives are better pursued through the creation of non-profits. Unlike Stout (2012), we show that Friedman's conclusion holds only if the pursuit of monetary and social objectives can be separated without any cost. Note that corporate charity, the example

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[3] For recent empirical work on the importance of this effect, see Azar et al. (2016). For a discussion of the theory, see Azar (2016).

[4] See ,e.g., Blair and Stout (1999). For a recent discussion, see Mayer (2013).

[5] See, e.g., Hansmann (1996).

[6] For a recent survey, see Kitzmueller and Shimschack (2012).

used by Friedman and by most authors including Elhauge (2005), does exhibit perfect separability and thus in this case profit maximization does not generate any inefficiency.

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 suppose that the founder and investors are socially conscious but in a particular way. Specifically, 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. We ask whether the founder prefers to create a "green" 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 socially conscious behavior; as far as we know our modeling approach has some new elements. 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: $x=0$ or 1. The action has two effects: it creates some profit π that is distributed to shareholders, and some environmental damage d 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.

We can thus write the payoffs as follows:

	profit π	damage d	social surplus $\pi - d$
$x = 0$	π_0	d_0	$\pi_0 - d_0$
$x = 1$	π_1	d_1	$\pi_1 - d_1$

Without loss of generality let $x=0$ be the "green" action and $x=1$ the "dirty" action. That is, we assume

$$(1) \qquad\qquad d_1 > d_0 \ .$$

Our economy contains a large number of consumers (one of whom is F). Most consumers are not wealthy (F is an exception). Consumers are socially conscious (or prosocial), 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[7]. If the consumer is asked to vote on a green 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[8]. Moreover, if his vote is pivotal, he feels responsible for the outcome.[9]

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.

Let us start with decision payoffs. We assume that the decision payoff from an action that consumer i feels responsible for is a weighted average of his private payoff and the social surplus corresponding to the action, where the weights are $(1-\lambda_i)$ and λ_i, respectively.[10] That is, the decision payoff to consumer i who owns a fraction α_i of the company's shares from action $x=j$ is

$$(2) \qquad\qquad (1-\lambda_i)\alpha_i\pi_j + \lambda_i\alpha_i(\pi_j - d_j) = \alpha_i(\pi_j - \lambda_i d_j),$$

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[7] 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.

[8] We ignore the cost of voting.

[9] For a model of responsibility, see Engl (2016). 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.

[10] Schumacher et al. (2016) provide experimental evidence that people often put less weight on social benefits that are widely dispersed over the population than on those that are concentrated. We do not make this distinction here.

where $0 \leq \lambda_i \leq 1$. Note that we weight the social surplus term, as well as the profit term, by the consumer's shareholding[11]. This avoids a situation where the social surplus term completely overwhelms the private payoff for someone with a small shareholding[12].

It follows that consumer i will vote for $x=0$ over $x=1$ if and only if

(3) $\qquad \alpha_i(\pi_0 - \lambda_i d_0) > \alpha_i(\pi_1 - \lambda_i d_1)$,

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

(4) $\qquad \pi_0 - \lambda_i d_0 > \pi_1 - \lambda_i d_1$.

Comparing (4) and social surplus, $\pi_j - d_j$, we see that the only difference is that consumer i puts weight λ_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[13]. Thus consumer i's final payoff if action j is implemented is

(5) $\qquad \alpha_i \pi_j$.

Later in the paper we will provide a fuller discussion of why we distinguish between decision payoffs and actual payoffs.

Note that the left-hand side of (2), after we have divided by the shareholding α_i is

(6) $\quad (1 - \lambda_i)\pi_j + \lambda_i(\pi_j - d_j)$.

It follows from (6) that a consumer never votes for an action that is less profitable *and* also less socially efficient. More formally, we have

Proposition 1

Assume (1). Then:

(a) If $\pi_0 - d_0 > \pi_1 - d_1$ and $\pi_0 > \pi_1$, all consumers vote for $x=0$ over $x=1$.

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[11] A similar assumption is made in Graff Zivin and Small (2005) and Baron (2007).

[12] The evidence in Schumacher et al. (2016) on dispersed benefits provides another explanation for why the social surplus term may fail to overwhelm the private payoff.

[13] For a discussion of warm glow effects, see Andreoni (1990).

(b) If $\pi_0 - d_0 \leq \pi_1 - d_1$, all consumers vote for $x=1$ over $x=0$.

Note that (b) follows from the fact that $d_1 > d_0$ and $\pi_0 - d_0 \leq \pi_1 - d_1$ imply $\pi_0 < \pi_1$.

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

(7) $\qquad\qquad \pi_0 - d_0 > \pi_1 - d_1$ and $\pi_0 < \pi_1$,

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 x 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 π_j. Like any other person in the economy, F's decision payoff is a weighted average of π_j and d_j, as in (4). If (4) holds, F will choose $x=0$ and if it does not, then F will choose $x=1$. In other words, F will choose $x=0$ if and only if

(8) $\qquad\qquad\qquad\qquad \lambda_i > \dfrac{\pi_1 - \pi_0}{d_1 - d_0},$

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. If F chooses action j, her final payoff will be π_j.

One special case of our model is when $x=0$ is a lower profit, lower damage action, but is no more socially efficient than $x=1$, i.e.,

(9) $\qquad\qquad\qquad\qquad\qquad \pi_0 - d_0 = \pi_1 - d_1.$

One interpretation is that choosing $x=0$ 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 $x=1$ over $x=0$, 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; similar arguments apply to activist investors.

3.1 Amoral drift

Suppose that a board is expected to set $x=0$. Then the value of the company (just before date 1) will be π_0. A bidder with $\lambda_i=0$ (or a low λ_i), that is, someone who cares only or mainly about money, could make an unconditional offer for the company at a price $\pi_1 > p > \pi_0$. 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 π_0 and p in a second stage merger; as a majority owner he will be able to vote this second-stage merger through. Such a bid seems consistent with U.S. corporate law. If successful this unconditional offer nets the bidder a profit of $\pi_1 - p$.

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 π_0. 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, (2), will be weighted by the probability of his being pivotal). Thus, the second term in (2) drops out. Hence he compares p, the price he receives if he tenders, to the freeze-out price that is below p if he does not. Obviously it is again better to tender.

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So tendering is a dominant strategy even for a prosocial shareholder and the bid succeeds[14]. This is true even if the majority of shareholders have high λ_i's and would have voted against the bid if given the opportunity.

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 socially conscious shareholder with a high λ_i would vote for $x=0$ rather than $x=1$ 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 (2), and the second term outweighs the first if my λ_i is high. However, such a shareholder will tender to a bidder even if he knows the bidder will choose $x=1$ rather than $x=0$ 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 (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 do $x=0$ into a choice of $x=1$.

Is the opposite true? If there are many consumers with high λ_i's, might there not be at least one wealthy one who is willing to take over a company that is expected to choose $x=1$ and turn it into one that will choose $x=0$?

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 (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

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[14]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 $p > \pi_0$. 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.

will have to offer shareholders (at least) the current market price π_1 to persuade them to tender[15]. 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 λ_i is high and he chooses $x=0$, his final payoff is

$$(10) \qquad\qquad\qquad -\pi_1+\pi_0<0,$$

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 pollution equal to $20 rather than to make $150 profit and cause pollution equal to $80. Indeed he will do so if his λ exceeds 5/6. His final payoff from doing so, however, will be $100. Once he makes the right decision he does not feel bad about the damage of $20 he is causing, nor does he feel good about the damage of $80 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 $80 into one that makes $100 profit and causes damage $20. 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

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[15] At any price below π_1 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, π_1; this is consistent with U.S. corporate law.

weight on the externalities they produce. They will underweight social surplus much more than privately held companies.

Ironically, in the United States legal restrictions only exacerbate this problem. Since 1942 the SEC has regulated shareholders' proposals under rule 14a-8. Shareholders can submit proposals for inclusion in the proxy statement but only if they are "a proper subject for action." The SEC was quick to interpret what "a proper subject for action" was: "The opinion of the Director interprets the phrase 'proper subject for action' to mean proposals which relate directly to the affairs of the particular corporation and concludes 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[16]'". 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 restricted the possibility of introducing social considerations in the 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. Yet it is safe to say that law and regulation have made it more difficult, not easier, to prevent the amoral drift.

3.2 The founder's choice

The existence of this amoral drift makes it simple for an F who wants to implement $x=1$, but is worried that a future board might put too much weight on ethical concerns and choose $x=0$: F should make hostile takeovers and/or the intervention of activist investors easy[17]. One way she can achieve this is to put in place, and try to keep in place, a non-staggered board[18].

F's task is more difficult if she wants to implement $x=0$. One possibility is to put in place, and try to keep 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

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[16] The SEC Today Released An Opinion Of Baldwin B. Bane, Exchange Act Release No. 3638, at *1 (Jan. 3, 1945).

[17] 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.

[18] 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.

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.[19] In any case we will suppose that F wants a full retirement, and has no trusted family members or friends to exert control on her behalf.

A third possibility is for F to write a charter that specifies $x=0$ in advance. Of course, in practice x 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.

In other words, founders could choose whether to create a "Friedman" company or another type of company. A founder who prefers $x=1$ 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 λ_i's). A founder who prefers $x=0$ would choose a charter that emphasizes broader goals, such as being green. 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 λ_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

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[19] 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.

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 corporation that has emerged in the United States, the Benefit Corporation[20]. A benefit corporation is a type of 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 is consistent with what we observe in most boards: they are self-perpetuating and isolated from shareholder requests for access and participation. Yet they are not fully insulated from corporate control pressure and/or from the pressure of activists. Staggered boards and poison pills can insulate them further, but these provisions have the negative side-effect of preventing the removal of incompetent or ineffective managers and board members. In charitable foundations, where the efficiency goal is minimal, this co-option system may work well. In corporations it is unlikely to work, unless the responsibility is split between a foundation/trust, which hold the majority of the stock but does not manage the company, and an ordinary board, which manages the company and can easily be changed. An example of this dual structure is the Carlsberg Foundation.[21]

We now turn to our final possibility: voting. One way that a prosocial founder could try to ensure $x=0$ 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 $x=0$ and $x=1$. Then $x=0$ will be the outcome as long as the median value of λ_i, λ_i^m say, satisfies

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[20] For a discussion, see Cummings (2012).
[21] http://www.carlsberggroup.com/Company/Foundations/CARLSBERGFOUNDATION/Pages/Default.aspx

$$(11) \qquad\qquad \lambda_i^m > \frac{\pi_1 - \pi_0}{d_1 - d_0} \quad .$$

In this case the date 0 market value of the firm will equal π_0 since investors will anticipate the date 1 choice of $x=0$. 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 λ_i^m does not satisfy (11), the shareholders will vote for $x=1$. 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 $x=1$. If most shareholders put a lot of weight on externalities, they will vote for $x=0$. This is in contrast to takeovers where a bidder interested mainly in money has an incentive to take over an $x=0$ company and turn it into an $x=1$ company, but a bidder with strong social concerns does not have an incentive to take over an $x=1$ company and turn it into an $x=0$ company[22].

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 an active debate among U.S. corporate lawyers about how much discretion boards of directors of public companies have. In the United States this debate is focused on the law in Delaware since many of the most economically important companies are incorporated there. At one extreme there are those like Leo Strine, the Chief Justice of the Delaware Supreme Court, who argue that fiduciary duty means that boards must take actions that maximize long-run shareholder value (see Strine (2015)). Anything else and the board may successfully be sued by shareholders.

At the other extreme there are those like Lynn Stout, who argue that, protected by the business judgment rule, the board can by and large take decisions that favor workers, consumers, creditors, society or whomever (except, of course, for themselves). (See Stout (2012).)

In spite of these differences, there seems to be agreement on one thing: As a practical matter a board can do pretty much what it likes as long as it says that it is pursuing long-term

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[22] 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.

shareholder value maximization. Thus, for example, a board could refuse to deal with a noxious regime on the grounds that, while this might be profitable in the short-run, it would damage the reputation of the company and hence its long-run value. In other words, as long as the board is careful with its language it can achieve the Stout outcome while not running afoul of the Strine doctrine.

The one case exception is if the company puts itself up for sale. Then according to the Revlon ruling the board has to accept the highest value offer (among all the offers submitted). That is, the board cannot accept a lower value offer rather than a higher one on the grounds that this would be better for other stakeholders. Since the company will cease to exist as an independent entity there is no long-run for the shareholders and so there is no distinction between long-run and short-run shareholder value; fiduciary duty requires that the board must maximize both.

At the same time there seems to be nothing in the law that prevents the use of a broader notion of fiduciary duty. In fact, Strine suggests that if fiduciary duty were defined more broadly, with reference to a mission statement, this broader notion would be enforced[23].

Although the current law seems to offer the possibility of mission statements, few if any public companies seem to adopt them. Rather the language in corporate charters seems to be generic. For example, even a company like the New York Times (incorporated in New York and admittedly a dual class company), whose core purpose is apparently "to enhance society by creating, collecting and distributing high-quality news, information and entertainment,"[24] includes only boilerplate language in its certificate of incorporation.

There is also considerable confusion about the current legal environment. 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

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[23] Skog (2015) argues similarly in the Swedish context, although he notes that it is highly unusual for the articles of association of a company to stipulate a business purpose other than the generation of profit.
[24] http://www.nytco.com/who-we-are/culture/standards-and-ethics/

everything to maximize the financial return for his shareholders—something he claimed was his fiduciary duty." [25]

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.

4.2 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 important 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 endowment 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" in managing and investing an 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

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[25] http://www.pharmalive.com/turings-says-he-should-have-increased-the-price-of-daraprim-higher-than-5000/

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.

4.3 A possible solution

Our framework provides a way to resolve the tensions for both corporate directors and asset managers. Directors and asset managers should not introduce arbitrary social considerations in their investment decisions. Instead they should poll their members on some fundamental choices and then decide accordingly. For example, they can ask their investors or pension holders if they are willing to sacrifice some of their returns to avoid the sale of tobacco to children or automatic guns to ordinary citizens. 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.

5. Motivating our assumptions

We have chosen a particular way of modelling ethical concerns and, although we do not think that our results depend on it, it is worth saying a bit more about our assumptions. 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

$$(12) \qquad\qquad u_i(\alpha_i \pi_j,\, d_j).$$

We did not proceed in this way because it seems strong to assume that a consumer is affected directly by the damage caused by a firm in which he has a shareholding. Rather we are interested in a situation where a consumer cares about things that he feels some responsibility for, even though he may not be directly affected by them (we might be talking about environmental damage in another country).

One way we have captured this responsibility is by multiplying the damage d_j by the shareholding α_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 π_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.

A simple example from another context 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. 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.

Of course, there are people in the world who are more prosocial than this consumer and pick up litter they have not dropped. These people may also not be willing to hold shares in tobacco, gun, or oil companies. We could have built our model around such individuals, but chose not to do so. We doubt that our results would be very different if we had. One exception is

our asymmetry result. If shareholders are very prosocial, one of them may be willing to incur a loss to turn a dirty company into a green one.

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 (2016)[26]. 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.

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).

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[26] See also Besley and Ghatak (2007).

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 does not equate to maximizing shareholder wealth. We also show that in public companies the existence of a 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, the 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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