Reputation and the Wall Street Walk

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1 August 2023

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August 1, 2023

Abstract

This study examines whether the threat of exit by blockholders can alleviate managers' moral hazard problems when they have reputation concerns in stock markets. When future cash flows decline over time, the threat of exit and reputation concerns both discipline managers. However, when future cash flows rise over time, blockholders trade based on information about the managers' commitment ability rather than their past performance, thereby weakening reputational discipline.

JEL Classification: G10, G30, G34.

Keywords: exit, reputation concerns, governance.

*I gratefully acknowledge the financial support from the Japan Society for the Promotion of Science through a Grant-in-Aid for Scientific Research (No.20K13448). All remaining errors are my own.

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1 Introduction

Large shareholders play an important role in corporate governance through the channel of the so-called "exit" or "Wall Street Walk." In this channel, blockholders sell their shares and drive stock prices down if they are aware about a firm's underperform. Since Admati and Pfleiderer (2009) and Edmans (2009) developed a model in which the threat of exit is effective in improving a firm's performance, the literature that highlights the exit mechanism has received considerable attention (see Edmans and Holderness, 2017).

However, the impact of blockholder governance on the other governance mechanisms remains unclear. Especially, given that reputation concerns are an important source of discipline in financial markets (e.g., Diamond, 1989), the interaction between governance through reputation and governance through exit is a primary concern.

In this study, we introduce managers' reputation concerns into the Admati and Pfleiderer (2009) model. When future cash flows decline over time, the blockholder who observes the manager's undesirable action decides to exit. In this case, the threat of exit and reputation concerns, both act as disciplining devices and have a positive impact on the firm's value. However, when future cash flows rise over time, the blockholder who observes the manager's lack of commitment ability decides to exit. In this case, the blockholder's presence undermines reputational discipline and has a negative impact on the firm's value. These results imply that the blockholder can increase firm value when the firm is in decline and decrease firm value when the firm is growing.

Our study is particularly related to the theoretical literature that examines the threat of exit's effectiveness. Admati and Pfleiderer (2009) argue that the presence of the blockholder can have a negative impact on the firm depending on the agency problem and information structure. Dasgupta and Piacentino (2015) show that the threat of exit is weaker when the blockholder has career concerns. In contrast to these studies, we focus on the effectiveness of exit when reputation concerns discipline managers.

The remainder of this study is organized as follows. Section 2 describes the setting of the model. Section 3 analyzes the equilibrium. Section 4 concludes.

2 Model

We describe the mode setup in this section.

There are four dates ($t = 0, 1, 2, 3$) and all agents are risk-neutral with no discounting. We consider an all-equity-financed firm run by a manager ("he"). The manager can be of one of two types, $i \in \{B, G\}$, which is private information. $i = B$ ($i = G$) corresponds to the bad (good) type. A manager of type $i = B$ faces the following moral hazard problem: At $t = 0$, he performs a hidden action $a \in \{0, 1\}$. $a = 0$ leads to date-2 cash flows $v = v_H > 0$, whereas $a = 1$ leads to $v = v_L \equiv v_H - \Delta$ with some $\Delta \in (0, v_H)$. By choosing $a = 1$, the manager gains a stochastic private benefit of $\tilde{\beta} \in [0, \overline{\beta}]$ with the cumulative distribution function F. He privately observes $\tilde{\beta}$ before choosing a.

At $t = 2$, after the cash flows v become public, the manager chooses a hidden action $a' \in \{0, 1\}$. If he chooses $a' = 0$, the cash flows at $t = 3$ are $v'_H \equiv v_L + \Delta'$, with $\Delta' > 0$. If he chooses $a' = 1$, the cash flows are v_L, and he enjoys a private benefit $\beta' > 0$.

A manager of type $i = G$ commits to choosing $a = a' = 0$. A manager's reputation is defined as the market's belief about the probability that the manager's type is $i = G$ and is given by $\phi \in (0, 1)$ at $t = 0$.

The manager's compensation is based on the realized market prices of the firm at $t = 1$ and $t = 2$, denoted by P_1 and P_2. The manager's payoff is given by $\omega_1 P_1 + \omega_2 P_2 + \beta a + \beta' a'$, where $\omega_1 > 0$ and $\omega_2 > 0$ represent the dependences of compensation on the short- and long-term stock prices, respectively, and β is the realized value of $\tilde{\beta}$. We assume that the manager's compensation does not depend on the market price at $t = 3$. This ensures that at $t = 2$, the type B manager is concerned only about the private benefit β' and chooses $a' = 1$.

Prices P_1 and P_2 are set by a competitive market maker based on all available public information. The firm is owned by many small shareholders and a single blockholder ("she"). At $t = 1$, she privately observes the manager's type i and action a and then decides whether to sell her shares. We assume that, at $t = 1$, the blockholder may be subject to a liquidity shock. With probability $\theta \in (0, 1)$, she must sell her shares, while with probability $1 - \theta$, she sells if the expected firm value, given her private information, is smaller than P_1. The market maker cannot observe whether the liquidity shock hits the blockholder. To summarize, at $t = 1$, the blockholder's trading is public information, and at $t = 2$, the cash flows v are additional public information.

3 Equilibrium Analysis

In this section, we analyze the equilibrium. Section 3.1 considers the situation without the blockholder. This setup is close to the standard model of reputation acquisition in financial markets, as in Diamond (1989). Section 3.2 considers the situation with the blockholder. We focus on perfect Bayesian equilibrium in pure strategies.

3.1 Equilibrium without the blockholder

As a benchmark case, suppose there is no blockholder. At $t = 2$, the type B manager chooses $a' = 1$ because his payoff is not affected by the value of the firm at $t = 3$. At $t = 0$, when the type B manager chooses $a = 0$, his payoff is given by $\omega_1 P_1 + \omega_2 P_2 + \beta'$. When he chooses $a = 1$, his payoff is given by $\omega_1 P_1 + \omega_2 P_2 + \beta + \beta'$ and is increasing in β. This implies that there will be a cutoff $\hat{\beta}$ such that he chooses $a = 0$ for any $\beta \leq \hat{\beta}$.

At $t = 2$, after observing v, the market maker uses Bayes' rule to form the posterior probability that the manager's type is $i = G$. Conditional on v_L, the posterior probability is 0, and conditional on v_H, it is $\frac{\phi}{\phi+(1-\phi)F(\hat{\beta})}$. Thus, P_2 is given by

$$\begin{cases} P_2^L = 2v_L & \text{if } v = v_L, \\ P_2^H = 2v_L + \Delta + \dfrac{\phi}{\phi + (1-\phi)F(\hat{\beta})}\Delta' & \text{if } v = v_H. \end{cases} \tag{1}$$

Since only the type G manager chooses $a' = 0$ and increases cash flows by Δ' at $t = 3$, the posterior probability affects P_2.

We now characterize the type B manager's optimal cutoff. When he chooses $a = 0(a = 1)$, he knows that $P_2 = P_2^H(P_2 = P_2^L)$. Because the market maker does not receive any information at $t = 1$, P_1 is independent of a. Thus, the type B manager is indifferent between $a = 0$ and $a = 1$ at the equilibrium cutoff β_{No-L}, which must satisfy

$$\omega_2 \left\{ \Delta + \frac{\phi}{\phi + (1-\phi)F(\beta_{No-L})}\Delta' \right\} - \beta_{No-L} = 0. \tag{2}$$

Since the left-hand side of (2) is positive when $\beta_{No-L} = \omega_2\Delta$ and decreases in β_{No-L}, we can establish that β_{No-L} is unique and larger than $\omega_2\Delta$.

Proposition 1 *Suppose there is no blockholder. There exists an equilibrium characterized by a cutoff $\beta_{No-L} > \omega_2\Delta$ such that the manager chooses $a = 0$ if and only if $\beta \leq \beta_{No-L}$. The cutoff β_{No-L} solves (2).*

If there are no reputation concerns ($\Delta' = 0$), the type B manager chooses $a = 0$ for $\beta \leq \beta_{No-L} = \omega_2\Delta$. However, if there are reputation concerns ($\Delta' > 0$), the type B manager mimics the type G manager by choosing $a = 0$ to improve the reputation and increase P_2. Reputation consideration provides discipline against moral hazard, that is, $\beta_{No-L} > \omega_2\Delta$.

3.2 Equilibrium with the blockholder

Suppose that the blockholder is present at $t = 1$. As in Section 3.1, the type B manager chooses $a = 0$ for any $\beta \leq \hat{\beta}$ at $t = 0$ and chooses $a' = 1$ at $t = 2$.

First, consider an equilibrium in which the blockholder makes a trading decision based on information about the manager's action. The blockholder who does not face a liquidity shock does not sell when she observes $a = 0$ and sells when she observes $a = 1$.

At $t = 2$, because the market maker can observe v, information about a from blockholder's trading is redundant, implying that P_2 is given by (1). At $t = 1$, the blockholder's trading decision affects P_1. When she does not sell, the market maker infers that the manager chooses $a = 0$, and the stock price is

$$P_1^{ns}(\hat{\beta}) = 2v_L + \Delta + \frac{\phi}{\phi + (1-\phi)F(\hat{\beta})}\Delta'. \quad (3)$$

When the blockholder sells, the market maker cannot distinguish the case in which she faces a liquidity shock from the case in which she observes $a = 1$; thus, the stock price is

$$P_1^{s}(\hat{\beta}) = 2v_L + \frac{\phi\theta + (1-\phi)F(\hat{\beta})\theta}{\theta + (1-\theta)(1-\phi)(1-F(\hat{\beta}))}\Delta + \frac{\phi\theta}{\theta + (1-\theta)(1-\phi)(1-F(\hat{\beta}))}\Delta'. \quad (4)$$

When the type B manager chooses $a = 0$, he knows that $P_2 = P_2^H$ and that $P_1 = \theta P_1^s + (1-\theta)P_1^{ns}$ because the blockholder will face a liquidity shock with probability θ. When he chooses $a = 1$, he knows that $P_2 = P_2^L$ and that $P_1 = P_1^s$. Thus, the equilibrium cutoff $\beta_{L,a}$ must satisfy

$$\omega_1(1-\theta)\left\{P_1^{ns}(\beta_{L,a}) - P_1^{s}(\beta_{L,a})\right\} + \omega_2\left\{\Delta + \frac{\phi}{\phi + (1-\phi)F(\beta_{L,a})}\Delta'\right\} - \beta_{L,a} = 0. \quad (5)$$

Since $P_1^{ns}(\beta_{L,a}) - P_1^{s}(\beta_{L,a})$ is positive for any $\beta_{L,a}$ and decreases in $\beta_{L,a}$, the left-hand side of (5) is positive when $\beta_{L,a} = \beta_{No-L}$ and decreases in $\beta_{L,a}$. This ensures that $\beta_{L,a}$ is unique and larger than β_{No-L}.

We then check the blockholder's incentives. She receives $P_1^s(\beta_{L,a})$ when she sells her shares. If she observes that the type G manager chooses $a = 0$, then she will get $2v_L + \Delta + \Delta' > P_1^s(\beta_{L,a})$ from not selling; thus, she prefers not to sell. If she observes that the type B manager chooses $a = 1$, then she will obtain $2v_L < P_1^s(\beta_{L,a})$ from not selling, and thus, she prefers to sell. If she observes that the type B manager chooses $a = 0$, then she will get $2v_L + \Delta$ from not selling; thus, she prefers not to sell if $2v_L + \Delta \geq P_1^s(\beta_{L,a})$, that is, $\Delta' \leq \hat{\Delta}(\beta_{L,a})$, where

$$\hat{\Delta}(\hat{\beta}) \equiv \frac{(1-\phi)(1-F(\hat{\beta}))}{\phi\theta}\Delta > 0. \tag{6}$$

Holding $\beta_{L,a}$ constant, the blockholder trades based on information about a when the relative importance of future cash flows to current period cash flows $\frac{\Delta'}{\Delta}$ is low and reputation ϕ is low. Even though Δ, Δ' and ϕ affect $\beta_{L,a}$ from (5), as long as F does not change significantly with respect to change in $\beta_{L,a}$, (6) holds when $\frac{\Delta'}{\Delta}$ and ϕ are low.

Next, consider an equilibrium in which the blockholder makes a trading decision based on information about the manager's type. The blockholder who does not face a liquidity shock does not sell when she observes $i = G$ and sells when she observes $i = B$.

At $t = 2$, both v and the blockholder's trading decision affect the posterior probability that the manager's type is $i = G$ because her trading conveys information about i. When the manager's type is $i = B$, conditional on v_L, the posterior probability is 0, and conditional on v_H, it is $\frac{\phi\theta}{\phi\theta+(1-\phi)F(\hat{\beta})}$. Thus, P_2 is given by

$$\begin{cases} P_2^L & \text{if } v = v_L, \\ P_2^{H,s} = 2v_L + \Delta + \dfrac{\phi\theta}{\phi\theta + (1-\phi)F(\hat{\beta})}\Delta' & \text{if } v = v_H, \end{cases}$$

where $P_2^{H,s} < P_2^H$ because the market maker becomes more convinced that the manager's type is $i = B$ by observing sale. At $t = 1$, regardless of the type B manager's action, the block sale occurs, and the price is given by

$$P_1^s(\hat{\beta}) = 2v_L + \frac{\phi\theta + (1-\phi)F(\hat{\beta})}{\theta + (1-\theta)(1-\phi)}\Delta + \frac{\phi\theta}{\theta + (1-\theta)(1-\phi)}\Delta'.$$

When the type B manager chooses $a = 0 (a = 1)$, he knows that $P_2 = P_2^{H,s}(P_2 = P_2^L)$.

Thus, the equilibrium cutoff $\beta_{L,i}$ must satisfy

$$\omega_2 \left\{ \Delta + \frac{\phi\theta}{\phi\theta + (1-\phi)F(\beta_{L,i})} \Delta' \right\} - \beta_{L,i} = 0. \tag{7}$$

The left-hand side of (7) is negative when $\beta_{L,i} = \beta_{No-L}$ and decreases in $\beta_{L,i}$. This ensures that $\beta_{L,i}$ is unique and smaller than β_{No-L}.

We then check the blockholder's incentives. If she observes that the type G manager chooses $a = 0$, then she does not sell because $2v_L + \Delta + \Delta' > P_1^s(\beta_{L,i})$. If she observes that the type B manager chooses $a = 1$, she sells because $2v_L < P_1^s(\beta_{L,i})$. If she observes that the type B manager chooses $a = 0$, she sells if $2v_L + \Delta < P_1^s(\beta_{L,i})$, that is, $\Delta' > \hat{\Delta}(\beta_{L,i})$, where $\hat{\Delta}(\beta_{L,i}) > \hat{\Delta}(\beta_{L,a})$, because $\beta_{L,i} < \beta_{L,a}$ and $\hat{\Delta}$ is decreasing in $\hat{\beta}$ from (6). Holding $\beta_{L,i}$ constant, the blockholder trades based on information about i when the relative importance of future cash flows to current period cash flows $\frac{\Delta'}{\Delta}$ is high and reputation ϕ is high.

Proposition 2

1. *If $\Delta' \leq \hat{\Delta}(\beta_{L,a})$ given by (6), then there exists an equilibrium characterized by a cutoff $\beta_{L,a} > \beta_{No-L}$ such that the manager chooses $a = 0$ if and only if $\beta \leq \beta_{L,a}$ and the blockholder exits if the manager chooses $a = 1$. The cutoff $\beta_{L,a}$ is determined by (5), where P_1^s and P_1^{ns} satisfy (3) and (4), respectively.*

2. *If $\Delta' > \hat{\Delta}(\beta_{L,i})$, then there exists an equilibrium characterized by a cutoff $\beta_{L,i} < \beta_{No-L}$ such that the manager chooses $a = 0$ if and only if $\beta \leq \beta_{L,i}$ and the blockholder exits if the manager's type is $i = B$. The cutoff $\beta_{L,i}$ is determined by (7).*

3. *Otherwise, there is no pure strategy equilibrium.*

Proposition 2 suggests that the effect of blockholder trading on the the manager's actions depends on the firm's characteristics. When the firm has low reputation and its manager will not generate high cash flows in the future, the blockholder exits when she observes an undesirable action, and thus, the threat of exit has a positive impact on the firm's value ($\beta_{L,a} > \beta_{No-L}$). However, when the firm has high reputation and its manager generates high cash flows rise in the future by exerting efforts, the blockholder makes the trading decision by using information about the manager's ability. This implies that the threat of exit has no disciplinary effect. Moreover, her ability to exit weakens the disciplinary impact of reputation concerns because the exit lowers the manager's reputation. Hence, the presence of a blockholder has a negative impact on the firm's value ($\beta_{L,i} < \beta_{No-L}$).

These results have important implications about the relationship between firm performance and corporate governance. If the firms are expected to show poor performance in the future, the blockholders can exert governance via the threat of exit, independent of reputational discipline. However, if the firms are expected to show good performance in the future, the blockholders are not good monitors because they weaken the disciplinary effect of reputation concerns. Thus, a dispersed ownership structure might be desirable for growing firms.

4 Conclusion

We examine whether the threat of exit by a blockholder can be an effective governance mechanism when managers have reputation concerns in stock markets. We show that when firms are in decline, both the threat of exit and reputation concerns discipline managers, while when firms are growing, the presence of the blockholder undermines reputational discipline. This suggests that the threat of exit is particularly effective in improving the value of low-performing firms.

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