

Implicit Contracts and Dominant Shareholders

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Abstract

This paper presents an efficiency argument that contributes to understand why corporate governance structures with a dominant shareholder are so prevalent in so many countries around the world.

In an environment where outsiders cannot accurately monitor the performance of transactions made between firms and stakeholders, the existence of a controlling shareholder who is an insider to the firm's management allows for efficient contracting with stakeholders. Firms controlled by outside shareholders cannot sustain relationships with stakeholders, because managers of such firms have an incentive to falsely claim that transactions with stakeholders have produced an outcome that is unfavorable to the firm, and misappropriate the cash flows associated with the true outcome. To avoid being expropriated, the controlling party will fire the manager and it will refuse to make good on costly obligations toward the stakeholder, in response to the announcement of an unfavorable outcome. However, because outsiders cannot observe the transaction's true outcome, punitive actions by outside shareholders will occur even when the manager truthfully reports an unfavorable outcome. Since these misguided disciplinary actions reduce the ex-ante value of transactions to stakeholders, stakeholders only accept doing business with firms controlled by outside investors if the frequency of misguided disciplinary actions is not too high.

Thus, where outside shareholders cannot target accurately disciplinary actions to opportunistic managers, insider control is required for efficient contracting with stakeholders. This efficiency benefit of insider control should be taken into account if one wants to explain the prevalence of firms featuring dominant shareholders with a hands-on approach to their firms' management.

I. INTRODUCTION

According to La Porta et al. (1999) the dominant ownership and governance structure around the world is that of a controlling shareholder – typically a family – who owns control rights well in excess of his cash-flow rights and actively participates in management. For example, the authors report that all of the top 20 largest traded firms from Argentina, Greece, Austria, Hong Kong, Portugal, Israel and Belgium have a shareholder who controls at least 20% of the votes. It is well known that the coexistence of a controlling shareholder and outside shareholders within the same company gives rise to an important agency conflict. The agency conflict arises because the party who runs the firm enjoys private benefits of control, which are unavailable to outside shareholders. Bebchuk, Kraakman and Triantis (2000) examine the agency costs arising from such ownership structures – which they call “controlled-minority structures” or CMS for short - and conclude that they are potentially large. Their analysis also indicates that the agency costs of CMS are likely to be larger in countries where outside investors cannot easily monitor corporate behavior or cannot easily obtain redress against opportunistic actions undertaken by corporate insiders through the legal and the judiciary system.

As referred by Bebchuk, Kraakman and Triantis (2000), the prevalence of CMS firms presents us with a conundrum. Why are CMS so common in spite of their large agency costs? And why are CMS so common particularly in those countries where their agency costs are likely to be bigger? A simple equilibrium argument suggests there should exist some countervailing efficiency benefits associated with CMS or otherwise they should be driven out of existence by firms adopting improved governance and

ownership structures. In addition, such efficiency benefits ought to be positively associated with the same factors that contribute to magnify the agency costs of CMS.

In this paper we put forward a theory that highlights one efficiency benefit resulting from assigning control to corporate insiders.¹ We argue that where firm value derives largely from transactions made with stakeholders and the performance of such transactions are hard to monitor by outsiders, insider control emerges endogenously as an efficient solution to a contracting problem. Furthermore, the efficiency of insider control goes up as the ability of outsiders to gauge transaction performance declines. This is a desirable property if one wants to explain the CMS puzzle, since the agency costs surrounding insider control are also bigger where the transparency of firms' business dealings is poor.

If the performance of transactions made between the firm and stakeholders is only imperfectly observed by outsiders, formal contracts are useless since they cannot be externally enforced by courts. That implies that a substantial portion of the value created by firms becomes dependent on implicit contracts made with stakeholders such as workers, suppliers, customers, business partners and government officials. A contract is implicit if its enforcement depends on market mechanisms – say the desire to preserve a reputation or an established relationship – rather than the enforcement of the law.

One feature of many transactions with stakeholders is that their payoffs are only determined ex-post, after the terms of the transaction have been agreed upon. An investment made by a supplier in relationship specific capital, an insurance policy granted

¹ Khanna and Palepu (2000) suggest another benefit of CMS. They argue that CMS are efficient in emerging markets, if control is held within a large and well-diversified business group. In these economies, business groups are able to internally replicate the functions that are commonly provided by stand-alone

to a worker against uncertain productivity, or yet a service contract or a product warranty sold to a customer are examples of transactions in which the ultimate outcome is uncertain at the outset of the relationship. Often the outcomes on such transactions are unfavorable to the firm. When that happens firms have an incentive to break-up their implicit contracts, without regarding the adverse effect of such an action on stakeholders. A rational stakeholder who anticipates such an opportunistic behavior will be reluctant to enter into an implicit contract with the firm. Thus unless there is some enforcement mechanism that coerces firms to uphold their poorly performing implicit contracts, many advantageous business transactions with stakeholders will fail to occur.

We examine how governance structures influence the efficiency of implicit contracting in an environment where firms interact repeatedly with a limited number of stakeholders. First, we show that firms controlled by an inside shareholder who closely monitors the management, will refrain from breaking-up poorly performing implicit contracts, as the controlling shareholder is aware of the potentially disruptive effect of such actions on valuable business relationships with stakeholders. Hence, if a substantial portion of firm value stems from very profitable relationships with a limited number of business partners, a governance structure featuring an inside controlling shareholder is effective in capturing such value for the firm's owners. There is however, a downside. When shares are also held by outside shareholders, the manager is prone to falsely report losses on implicit contracts and divert to the controlling shareholder funds or assets that belong to the firm. This incentive is exacerbated if the controlling shareholder controls the firm through the ownership of shares with concentrated voting rights or through

firms in advanced economies. Firms unaffiliated with business groups find it either impossible or costly to obtain access to such functions.

pyramidal holdings and therefore, holds few cash-flow rights.² In sum, although firms controlled by inside shareholders are able to sustain valuable relationships with stakeholders, most of the benefit arising from such relationships is appropriated by the controlling shareholder and therefore, shares held by outsiders are worth little.

Secondly, we consider a firm that is vulnerable to a hostile takeover launched by outside investors. We show that in that case takeovers cannot discipline opportunistic managers without simultaneously disrupting relationships with stakeholders. To understand this result consider a firm, which has all its shares held by outside investors. Since the outcome of implicit contracts is not observable by outsiders, managers have an incentive to report outcomes characterized by losses against stakeholders and appropriate for themselves funds that belong to the firm. Thus outside investors will never believe managers' claims on the performance of implicit contracts, even when those claims are true³. If allowed, outside investors will launch a takeover to prevent the manager from withdrawing funds from the firm to pay to stakeholders. Rational stakeholders anticipate the possibility of being expropriated and refuse to enter into implicit contracts.⁴

² A false report of an unfavorable deal outcome does not necessarily entail outright cash theft by the controlling shareholder. For example, the controlling shareholder can buy personal loyalty from workers, suppliers, business partners and politicians by granting them rents while claiming to outside shareholders that such payments are due to them under past agreements. The loyalty of stakeholders is a valuable asset that the controlling shareholder can redeploy outside the firm when and where it best suits his interests.

³ The problem is similar to that presented by Stulz (1990) in his model of managerial discretion. In Stulz the manager always claim that cash flow is low because he likes to invest and hence wants to raise as much capital as possible. Shareholders never believe manager's claim and refuse to provide funds.

⁴ The relationship between hostile takeovers and implicit contracts was examined by Shleifer and Summers (1988). They argue that the wave of hostile takeovers that occurred in the US in the 1980s led to a breach of trust between firms and their stakeholders. According to these authors the premia paid by acquirers for shares of target companies can be accounted by the expropriation of rents enjoyed by stakeholders of target companies such as workers and suppliers. These rents however, consisted of a fair payment that was due to them under implicit contracts they had previously made with the firm. Thus, takeovers caused a breach of trust and made stakeholders reluctant to enter into new implicit contracts. Shleifer and Summers however, do not tackle one important issue. In the context of their analysis hostile takeovers cause two effects of opposite sign on the value of shares of target firms. On the one hand there is a positive effect resulting from

The analysis suggests that in countries where firms' business is done through private transactions, which cannot be externally monitored, insider control emerges endogenously to guarantee efficient contracting with stakeholders. Controlling parties pay for their private benefits ex-ante when they gain control of the firm. Consequently, large blocks of shares, shares with concentrated voting rights or yet shares of holding companies located at the top of pyramidal corporate structures will command high valuations relative to shares which are traded for investment purposes only.

The remaining of the paper is organized as follows. Section II presents the model and summarizes its major results. The implications of the model are discussed in section III. Section IV examines how a controlling shareholder finds external cash to fund growth opportunities without foregoing control. Section V addresses the risk diversification problem faced by controlling shareholders. Section VI concludes.

II. THE MODEL

II.1. Characterization of business transactions with stakeholders

In this section we characterize the business environment in which firms operate, taking a special focus on the description of transactions mediated through implicit contracts. Initially, we consider a manager-owned firm⁵ and examine how such firm engages in transactions with stakeholders. The manager-owned firm exemplifies an ownership structure in which corporate control is securely held by a party who is an insider to the firm's management decisions. Although more complex ownership regimes

the expropriation of rents from stakeholders; on the other hand there is a negative effect caused by the increased reluctance of stakeholders to enter into new – and mutually advantageous - implicit contracts with the firm. The interaction between the two effects is an issue left unresolved by the authors.

featuring secure control by insiders could be considered, a manager-owned firm illustrates in a simple fashion – and without loss of generality - how insider control sustains efficient contracting with stakeholders. In the following sections we study the impact of allocating corporate control to outsiders on the transaction efficiency of implicit contracts.

In every period firms have a chance to make a business deal with a stakeholder (we will refer to the stakeholder as the deal’s counterpart), which pays off at some later date. Although the payoffs are initially uncertain, the deal is mutually advantageous on an *ex-ante* basis, conditional on both parties upholding the deal. The payoffs depend on the realization of an exogenous state variable that takes either a high value (**upstate**) or a low value (**downstate**). The realization of the state variable occurs after the deal has been agreed upon and is only observed by the contracting parties. Since the state variable is not observable by outsiders, the firm and the stakeholder cannot write a state contingent contract enforceable by the courts. Therefore neither party can be forced to stick to the deal if it turns out to yield an unfavorable outcome. For simplicity – and without loss of generality - we assume that the upstate and the downstate occur with equal probability and that it’s never optimal for the counterpart to break up the deal. In contrast, it’s optimal for the firm to renege the deal in the downstate. Such a breakup however, entails a loss to the counterpart. It is assumed that the loss is equal or smaller than the gain obtained by the firm so that an ex-post efficient renegotiation of the deal cannot prevent the firm from breaking up in the downstate. The payoffs from the deal are detailed in

⁵ By a manager-owned firm we refer to a firm in which all cash-flow and control rights are held by the manager.

Table 1 and are assumed to be common knowledge to the firm's manager and to the counterpart.

Upstate (50% probability)			
		Counterpart (c)	
		Uphold the deal	Break up the deal
Firm (f)	Uphold the deal	(π_f^u, π_c^u)	(0,0)
	Break up the deal	(0,0)	(0,0)
Downstate (50% probability)			
		Counterpart (c)	
		Uphold the deal	Break up the deal
Firm (f)	Uphold the deal	(π_f^d, π_c^d)	(0,v)
	Break up the deal	(0,v)	(0,v)

Table 1
Payoffs from a business transaction made
between the firm and a stakeholder (counterpart)

The preceding discussion implies the following restrictions on the payoffs contained in Table 1:

- i. $\pi_f^u + \pi_c^d > 0$ (the deal has a strictly positive NPV for the firm, conditional on both parties upholding the deal);
- ii. $\pi_c^u + \pi_c^d \geq 0$ (the deal has a non-negative NPV for the counterpart, conditional on both parties upholding the deal);
- iii. $\pi_c^u \geq 0, \pi_c^d > v$ (the counterpart never gains by breaking up the deal);
- iv. $\pi_f^d < 0$ (the firm gains by breaking up the deal in the downstate);
- v. $-\pi_f^d > \pi_c^d - v$ (an efficient ex-post renegotiation of the deal cannot prevent the firm from breaking up the deal in the downstate);
- vi. $\pi_c^u + v < 0$ (the NPV of the deal for the counterpart, conditional on the firm breaking up in the downstate, is negative).

One illustration of this set up is that of a firm which hires a contractor to build a factory. The cost of building the factory is initially unknown. The contractor pays for the construction costs from his own pocket while the factory is being built and bills the firm for the total expenses (plus some additional markup) when the job is over. In this example the upstate corresponds to the scenario in which the construction costs turn out to be lower than expected whereas the downstate corresponds to a scenario of cost overrun. In the scenario of a cost overrun the firm may refuse to take ownership of the factory and reject the bill presented by the counterpart, causing a substantial financial loss to the contractor.

Another example is the case in which a firm is granted by a government official monopoly rights to service a market in exchange for a bribe (or in exchange for a promise of future employment). In the upstate the firm makes profits from servicing the market whereas in the downstate it makes losses. If the firm walks away from the contract in the downstate it puts the government official in a tight political spot for failing to guarantee service to the market (and perhaps subjecting the government official to a criminal investigation).

The obvious issue that arises in such business transactions is how to induce firms to stick to deals. In other words, one needs to find a mechanism to enforce implicit contracts made between the firm and stakeholders. We address this issue by assuming that a firm that breaks up a deal damages its ability to clinch future deals with the same counterpart. Under this assumption, a manager-owned firm will comply with its current deal if the present value of future business lost as a result of a break up exceeds the short-term gain obtained by abandoning the deal in the downstate. This condition is likely to be

satisfied if firms and counterparties interact repeatedly over time so that there is always a non-negligible probability of firms and counterparties encountering each other again in the future for new business transactions.

Suppose that firms have, in every period, a constant probability, p , of meeting a particular counterpart. Furthermore, firms that fail to engage in a transaction with a counterpart in any given period forego the possibility of doing business with another counterpart in that same period. Finally, assume that counterparties permanently cut off business relationships with firms that break up a deal with them. In this environment, a manager-owned firm will stick to a deal in the downstate if $-\pi_f^d < 0.5(\pi_f^u + \pi_f^d)\frac{p}{r}$, where r is the periodic discount rate. We assume that this inequality holds so that manager-owned firms are able to contract efficiently with stakeholders.

In the rest of the paper we focus on a firm dealing with a single stakeholder, who is periodically available for a business transaction with the firm (so that $p = 1$). The focus on such special case entails no loss of generality but reduces the complexity of the analysis. The manager-owned firm will then stick to a deal in the downstate if the following inequality holds:

$$\frac{0.5(\pi_f^u + \pi_f^d)}{r} > -\pi_f^d \tag{1}$$

II.2. Firms vulnerable to hostile transfers of control from outside investors

We now examine whether a firm, whose control is held by outside investors that do not know the performance of transactions with stakeholders, is still able to contract efficiently with stakeholders via implicit contracts. Consider a firm that is entirely

financed by traditional one share-one vote equity. The firm is run by a manager who owns a minority equity stake, α . All other shares are held by outside investors.

The manager's task is to engage in business transactions with the firm's single stakeholder (counterpart) on behalf of the firm. Specifically, the manager directly negotiates deals with the counterpart and observes privately – jointly with the counterpart - the outcomes of such deals. After learning the outcome, the manager announces publicly to shareholders a deal outcome. Since the true outcome is private information shared only by the manager and the counterpart, the manager may falsely report the downstate and jointly appropriate with the counterpart the benefits of misrepresenting the outcome.

However, if the manager reports the downstate, a raider may launch a hostile tender-offer aimed at forcing a break up of the deal and, in doing so, saving the firm the amount $-\pi_f^d$, the negative pay-off associated with upholding the contract in the downstate. A take-over takes place if the market value of the firm under control of the raider (net of a transaction cost, k) exceeds the market value of the firm under the incumbent manager. The transaction cost, k , represents a reduced form parameter capturing the various types of costs that the raider must bear to assemble a controlling block of shares.

Because the model encompasses repeated business dealings between the firm and stakeholders, the value of the firm under control of the raider reflects the immediate savings resulting from a break up of the current deal plus the potentially disruptive effect

of the raid on future deals available to the firm.⁶ To help the raider decide whether or not to launch a takeover, a public signal of the true deal outcome is observed

$$Z = \rho I + u, \quad E[u] = 0, \quad 0 \leq \rho \leq 1 \quad (2)$$

where u is a random variable with cumulative density function $\Pr(u < U) = \Phi(U)$ and I is an indicator variable that takes the value 1 if the upstate has occurred and 0 otherwise. The public signal may represent free information that becomes spontaneously available to the market or may reflect the result of an audit to the firm's activities. It is assumed that the public signal is observed only after the manager has announced an outcome so that the manager cannot condition her reporting policy on the value of the public signal.

After gaining control, the raider breaks up the deal and fires the incumbent manager. He then hires a new manager and sells her an equity stake α . Finally, he sells all his remaining shares to outside investors and exits the firm. This assumption guarantees that the ownership and the control structure of the firm at the end of the period is exactly the same as the one prevailing at the beginning of the period, independently of whether a takeover has occurred in the intervening period. At the beginning of the following period the firm is offered the opportunity to make a new business deal with the stakeholder and a fresh cycle is started. The sequence of events is summarized in Figure 1.

⁶ We chose to adopt a very simple takeover model since our focus is on the effects of control challenges launched by outside investors on efficient contracting with stakeholders. Our results hold for more complicated takeover models.

A self-consistent rule has to satisfy the following inequalities:

$$V_{raider} - V_{manager} > 0, \quad \text{if } Z > Z^* \quad (3)$$

$$V_{raider} - V_{manager} \leq 0, \quad \text{if } Z \leq Z^* \quad (4)$$

where V_{raider} and $V_{manager}$ are, respectively, the market value of the firm under the raider and under the incumbent manager.

If the counterpart continues making business deals following the takeover then

$$V_{raider} - V_{manager} = -\pi_f^d - k \quad (5)$$

In this case the successful takeover has impact only on the current cash-flows: the transaction costs incurred by the raider and the immediate savings resulting from breaking up the current deal. If however, the takeover jeopardizes the firm's ability to make new deals, then

$$V_{raider} - V_{manager} = -\pi_f^d - k - \frac{0.5(\pi_f^u + \pi_f^d)}{r} \quad (6)$$

where the last term represents the present value of all future business deals lost as a result of the takeover. We assume that $-\pi_f^d > k$, so that it's optimal for the raider to launch a takeover when the downstate is reported, as long as that does not disrupt the relationship with the stakeholder. Since, from (1), $\frac{0.5(\pi_f^u + \pi_f^d)}{r} > -\pi_f^d$, then the raider will choose the lowest possible value of Z^* that does not jeopardize the relationship with the stakeholder.

II.2.II. The manager's problem

The manager secretly splits up with the counterpart the funds that she diverts away from the firm. If the manager misreports the downstate and there is no subsequent

take-over, the amount of funds available to be split up between the manager and the counterpart is equal to $\pi_f^u - \pi_f^d$. On the other hand, if a takeover occurs following a false announcement of the downstate, the amount of funds available for diversion is equal to zero since the raider, once in control of the firm, forces the break up of the current deal. We assume that the manager keeps for herself a fixed percentage λ of the funds available for diversion.⁷

The decision faced by the manager is whether to lie or tell the truth about the deal's outcome after privately observing the upstate.⁸ Denote φ_t as the probability of the manager reporting the upstate truthfully at date t , W_t as the manager's wealth at date t and $W_t | U$ as the manager's wealth at date t conditional on observing the upstate. The value of $W_t | U$ can be written as:

$$\begin{aligned}
W_t | U &= \varphi_t \left[\alpha \pi_f^u + \frac{E[W_{t+1} | \text{no takeover at } t]}{1+r} \right] + \\
&+ (1 - \varphi_t) \Pr \left(\begin{array}{l} \text{no takeover at } t | \\ \text{downstate is falsely reported} \end{array} \right) \times \left[\lambda (\pi_f^u - \pi_f^d) + \alpha \pi_f^d + \frac{E[W_{t+1} | \text{no takeover at } t]}{1+r} \right] + \\
&+ (1 - \varphi_t) \Pr \left(\begin{array}{l} \text{takeover at } t | \\ \text{downstate is falsely reported} \end{array} \right) \left[\frac{E[W_{t+1} | \text{takeover at } t]}{1+r} \right] \quad (7)
\end{aligned}$$

⁷ The division of diversion funds between the manager and the stakeholder could be endogenously derived on the basis of relative bargaining power. Making λ endogenous however, would make the model more complex without changing its main results.

⁸ The manager always reports the downstate after observing it since, by assumption, there are no non-pecuniary benefits of control. We make this assumption to keep the model simple and focused on the role of implicit contracts as a vehicle for the misappropriation of company funds.

The manager chooses the level of φ_t that maximizes $W_t | U$. It follows from (2) that:

$$\Pr\left(\begin{array}{l} \text{takeover at } t | \\ \text{downstate is falsely reported} \end{array}\right) = \Pr(Z > Z^* | I = 1) = \Pr(u > Z^* - \rho) = 1 - \Phi(Z^* - \rho) \quad (8)$$

and

$$\Pr\left(\begin{array}{l} \text{no takeover at } t | \\ \text{downstate is falsely reported} \end{array}\right) = \Phi(Z^* - \rho) \quad (9)$$

Substituting (8) and (9) into the objective function, taking the derivative with respect to φ_t and noting that the terms $E[W_{t+1} | \text{takeover at } t]$ and $E[W_{t+1} | \text{no takeover at } t]$ are independent of φ_t , we get

$$\begin{aligned} \frac{dW_t}{d\varphi_t} = & \alpha\pi_f^u + \Phi(Z^* - \rho) \left[-\lambda(\pi_f^u - \pi_f^d) - \alpha\pi_f^d \right] + \\ & + \left[1 - \Phi(Z^* - \rho) \right] \frac{E[W_{t+1} | \text{no takeover at } t] - E[W_{t+1} | \text{takeover at } t]}{1+r} \end{aligned} \quad (10)$$

This derivative is independent of φ_t which implies that the manager's optimal reporting strategy, φ_t^* , is of the bang-bang type (i.e., φ_t^* is either zero or one). The manager is more likely to report the downstate truthfully if (i) the gain in expected future wealth from keeping the job is large, (ii) her ownership stake is large, (iii) the probability of takeover is high, (iv) the fraction of the funds diverted from the firm that she appropriates for herself is small and (v) the public signal is highly correlated with the deal's true outcome.

We turn now to the relationship between the manager's optimal reporting strategy and the takeover rule adopted by the raider. Inspection of (10) reveals that the manager can always be induced to report deal outcomes truthfully by setting Z^* sufficiently low.

To understand this result note that as $Z^* \rightarrow -\infty$, $\Phi(Z^* - \rho) \rightarrow 0$ and expression (10) becomes positive; conversely, as $Z^* \rightarrow +\infty$, $\Phi(Z^* - \rho) \rightarrow 1$ and expression (10) becomes negative (as long $\alpha < \lambda$). To put it into words, the manager always tells the truth if she is certain that a downstate announcement triggers a takeover; conversely, the manager always lies if she is convinced that there is no takeover following a report of the downstate.

Another key feature of expression (10) is that it is monotonically decreasing in Z^* . That implies that there exists a maximum value of Z^* (which we denote Z^{\max}), that's necessary and sufficient to induce the manager to tell the truth. In sum, the manager will only report the upstate truthfully if $Z^* < Z^{\max}$.

II.2.III. The counterpart's problem

A stakeholder who is evaluating a possible business deal with the firm will consider the likelihood of a takeover following a downstate announcement. The ex-ante value of the business deal to the counterpart is equal to

$$\begin{aligned}
 NPV_{\text{counterpart}} &= 0.5\varphi_t(Z^*)\pi_c^u + \\
 &+ 0.5(1 - \varphi_t(Z^*))\Pr\left(\begin{array}{l} \text{no takeover} \mid \\ \text{downstate is falsely reported} \end{array}\right) \left[\pi_c^u + (1 - \lambda)(\pi_f^u - \pi_f^d) \right] + \\
 &+ 0.5\Pr\left(\begin{array}{l} \text{no takeover} \mid \\ \text{downstate is truthfully reported} \end{array}\right) \pi_c^d + \\
 &+ 0.5\Pr\left(\begin{array}{l} \text{takeover} \mid \\ \text{downstate is truthfully reported} \end{array}\right) v
 \end{aligned} \tag{11}$$

From (2) it follows that:

$$\Pr\left(\begin{array}{l} \text{no takeover |} \\ \text{downstate is truthfully reported} \end{array}\right) = \Pr(Z < Z^* | I = 0) = \Pr(u < Z^*) = \Phi(Z^*) \quad (12)$$

$$\Pr\left(\begin{array}{l} \text{takeover |} \\ \text{downstate is truthfully reported} \end{array}\right) = \Pr(Z > Z^* | I = 0) = \Pr(u > Z^*) = 1 - \Phi(Z^*) \quad (13)$$

Substituting (8), (9), (12) and (13) into expression (11) yields

$$\begin{aligned} NPV_{\text{counterpart}} = & 0.5 \left\{ \varphi_t(Z^*) \pi_c^u + v + \Phi(Z^*) (\pi_c^d + v) \right\} + \\ & + 0.5 \left\{ (1 - \varphi_t(Z^*)) \Phi(Z^* - \rho) \left[\pi_c^u + (1 - \lambda) (\pi_f^u - \pi_f^d) \right] \right\} \end{aligned} \quad (14)$$

The counterpart will enter into a deal only if (14) is non-negative. Denote Z^{\min} as the lowest value of Z^* at which the *NPV* of the deal to the counterpart is equal to zero. Since for $Z^* < Z^{\min}$ the *NPV* is negative, the counterpart will only accept making deals if $Z^* \geq Z^{\min}$.

II.2.IV. Equilibrium

To study the model's equilibria one needs to characterize the beliefs held by the counterpart vis-à-vis the takeover rule followed by raiders, and also how these beliefs change in face of contradictory evidence. To keep the solution simple we assume that the counterpart initially believes that the raider's takeover rule satisfies $Z^* \geq Z^{\min}$. This belief is held as long as it is not contradicted by evidence; if however, a raider launches a takeover when $Z < Z^{\min}$, the initial belief is shattered and the counterpart will permanently refuse to make more deals with the firm.

Under these assumptions the equilibrium of the model is determined by the relationship between the maximum threshold that is required to induce managers to report outcomes truthfully (i.e., Z^{\max}) and the minimum threshold that allows counterparties to break-even (i.e., Z^{\min}).

Consider first the case where $Z^{\max} \geq Z^{\min}$. Here there exist many takeover rules (i.e., all values of Z^* satisfying $Z^{\max} \geq Z^* \geq Z^{\min}$) that induce managers to report outcomes truthfully and simultaneously allow the counterpart to earn, on average, positive profits on its business transactions with the firm. Among all feasible takeover rules however, only the rule $Z^* = Z^{\min}$ is self-consistent. This rule produces an equilibrium with the following characteristics:

- (i) After the downstate is reported the raider launches a takeover if and only if $Z \geq Z^{\min}$;
- (ii) Managers always report deals' outcomes truthfully;
- (iii) The *ex-ante* value of deals to the counterpart is equal to zero so that the counterpart accepts continuing the relationship with the firm;
- (iv) The value of the firm is equal to $V = \frac{0.5[\pi_f^u + \pi_f^d \Phi(Z^{\min})]}{r}$.

Hence, in this equilibrium the firm is able to contract efficiently with its stakeholder despite the ongoing takeover activity.

The more interesting equilibrium occurs when $Z^{\max} < Z^{\min}$. In this case the level of takeover activity that is required to induce the manager to report deals' outcomes truthfully makes the *ex-ante* value of deals to the counterpart negative. That implies that

business deals between the firm and the stakeholder cannot be sustained in equilibrium and thus the value of the firm collapses to zero.

The two equilibria are illustrated in figure 2. The equilibrium which sustains implicit contracts is presented in Panel B. It features a more precise signal of the deal's true outcome, thus making it possible for takeovers to be targeted more accurately towards managers who falsely report the downstate. The counterpart is able to break-even despite the on-going takeover activity because takeovers are unlikely after a truthful report of the downstate. The equilibrium without implicit contracts is presented in Panel A. Here, the firm cannot contract efficiently with the stakeholder because takeovers are too blunt to effectively discipline managers. A noisy signal makes it difficult for the raider to distinguish between a false and a truthful report of the downstate. To induce managers to be honest, raiders make too many mistakes targeting firms that truthfully report the downstate. With so many misguided takeovers the stakeholder cannot break-even and consequently, prefers to discontinue his relationship with the firm.

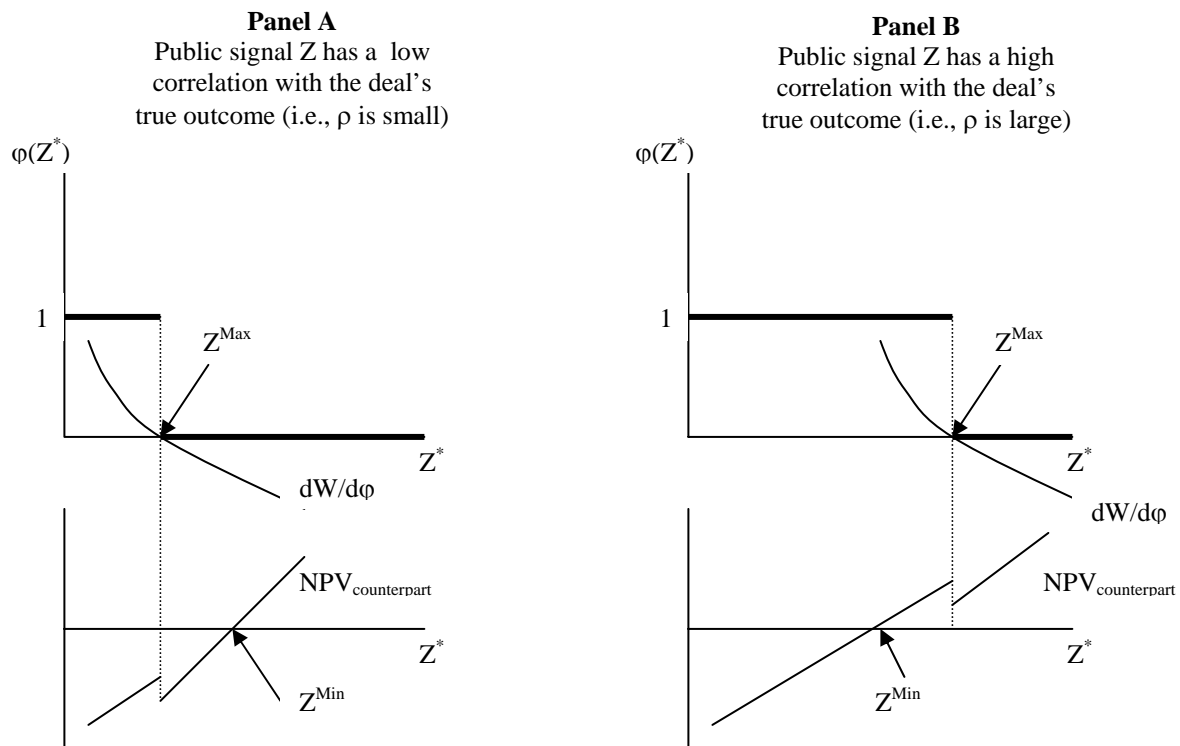


Figure 2

The two equilibria of the model

In panel A the public signal is noisy, so that in equilibrium the firm cannot sustain business deals and firm value collapses to zero. In Panel B the public signal of the deal's true outcome is precise, so that in equilibrium the firm sustains business deals and the manager reports deals' outcomes truthfully; in

this case, the value of the firm is equal to $V = \frac{0.5[\pi_f^u + \pi_f^d \Phi(Z^{\min})]}{r}$.

II. 2. V. A numerical example

A numerical example helps to illustrate the model. Consider a business deal whereby the manager periodically requests a supplier to make a relationship-specific investment that is beneficial to both parties. The manager's request to the supplier is made against the promise of full reimbursement of the investment cost, which is initially uncertain. In the upstate the investment cost borne by the supplier is equal to zero; in the

downstate it is equal 10. As a result of the investment the firm obtains a once-and-for-all profit of 6 whereas the supplier obtains a once-and-for-all profit of 2. Accordingly, the payoff to the firm from a deal that is upheld by both parties is $\pi_f^u = 6 - 0 = 6$ in the upstate and $\pi_f^d = 6 - 10 = -4$ in the downstate; the payoff to the supplier is equal to 2 in either state (i.e., $\pi_c^u = \pi_c^d = 2$).

If a takeover occurs following an announcement of the downstate, the new management refuses to pay the investment cost claimed by the supplier. Since the supplier cannot use the courts to enforce his contract with the firm, he has no choice but to accept the deal break-up and try to recoup as much as possible of the investment cost. Assuming that he can recoup 70% of the investment, his payoff following a takeover is equal to 0 in the upstate and equal to $v = (1 - 0.7) \times (-10) = -3$ in the downstate.⁹

Next we determine the amount of funds available for diversion following a false report of the downstate. If there is no takeover, the manager withdraws from the firm an amount equal to the supplier's investment cost in the downstate. Since the real investment cost borne by the supplier is zero, the manager and the supplier can jointly divert away from the firm an amount equal to 10. On the other hand, if a takeover occurs no funds are available for diversion.

Assume that the manager's ownership stake in the firm is equal to 10% (i.e., $\alpha = 0.1$) and that the supplier has no bargaining power over the division of the diverted funds (i.e., $\lambda = 1$). Regarding the public signal, Z , let the random variable, u , be

⁹ Note that the chosen parameters satisfy all the conditions enumerated in section II.1: The ex-ante value of the deal to both parties is positive; the supplier never gains by breaking up the deal; the firm gains by breaking up in the downstate; and finally, an efficient ex-post renegotiation of the deal in the downstate cannot prevent the firm from breaking up the deal.

distributed uniformly between -1 and 1 . Under this assumption,

$$\Pr(u < x) = \Phi(x) = \frac{1+x}{2} \text{ and } \Pr(u > x) = 1 - \Phi(x) = \frac{1-x}{2}.$$

We can now investigate the model's equilibria. The maximum threshold of the takeover rule that gives the manager the inducement to report outcomes truthfully (i.e., Z^{\max}), is obtained by setting expression (9) equal to zero and solving it for Z^* :

$$\begin{aligned} \frac{dW_t}{d\varphi_t} = & (0.1) \times 6 + \left(\frac{1+Z^* - \rho}{2} \right) [(0.1) \times 4 - (6+4)] + \\ & + \left(\frac{1-Z^* + \rho}{2} \right) \left(\frac{E[W_{t+1} | \text{no takeover at } t] - E[W_{t+1} | \text{takeover at } t]}{1+r} \right) = 0 \end{aligned} \quad (16)$$

We know that the manager's optimal reporting strategy in the current period is of the bang-bang type – i.e., after observing the upstate, the manager either tells the truth and reports the upstate or lies and reports the downstate. Since we are looking for a solution where the current outcome is reported truthfully, to guarantee time consistency such solution must encompass truthfully reporting of deal outcomes in every future period. In that case

$$E[W_{t+1} | \text{no takeover at } t] - E[W_{t+1} | \text{takeover at } t] = 0 \quad (17)$$

since, by assumption, the manager enjoys no non-pecuniary benefits from control.

Substituting (17) in (16) yields:

$$\frac{dW_t}{d\varphi_t} = 0.6 + \left(\frac{1+Z^* - \rho}{2} \right) [0.4 - 10] = 0 \quad (18)$$

which has the solution $Z^{\max} = \rho - 0.875$. Consequently, in order to induce the manager to reveal the outcomes on implicit contracts truthfully the raider must launch a takeover in response to a report of the downstate if and only if the public signal exceeds $\rho - 0.875$.

The *ex-ante* value of the deal to the counterpart as a function of the raider's takeover rule is given by expression (15). Substituting the assumed parameter values yields

$$NPV_{\text{counterpart}} = 0.5 \left\{ \varphi_t(Z^*) \times 2 - 3 + [1 - \varphi_t(Z^*)] (1 + Z^* - \rho) + \frac{(1 + Z^*) \times 5}{2} \right\} \quad (19)$$

The two equilibria of the model are easy to characterize. For the good equilibrium to prevail the supplier must achieve a positive *NPV* when the raider's takeover rule is equal to $\rho - 0.875$ (and so the upstate is reported truthfully); that is

$$\begin{aligned} & \left[NPV_{\text{counterpart}} \mid Z^* = \rho - 0.875; \varphi_t(Z^* = \rho - 0.875) = 1 \right] = \\ & = 0.5 \left\{ 2 - 3 + \frac{5}{2} \times (1 + \rho - 0.875) \right\} \geq 0 \end{aligned} \quad (20)$$

which is satisfied if $\rho \geq 0.275$. When $\rho < 0.275$ the bad equilibria prevails.

III. Discussion

The model has a number of important parameters that influence the type of equilibrium that prevails. We have already seen that a noisy public signal (i.e., a low ρ) makes it harder for firms to sustain relationships with stakeholders. That suggests that regulations or policies aimed at narrowing the informational gap between management and outside shareholders – such as an improvement in the disclosure of financial

performance as recommended by the OECD¹⁰ - will help firms vulnerable to hostile transfers of control secure relationships with stakeholders, thus diminishing the importance of controlling shareholders in corporate governance structures. The ownership stake of the manager also plays an important role. An increase in α reduces the manager's benefit from misrepresenting deals' outcomes. That in turn raises Z^{\max} thus helping to sustain business deals.

One can interpret these effects under the light of Fluck's (1998) model of outside equity. Fluck shows that outside equity financing is sustainable if managers and investors interact repeatedly over time and managerial actions are observable by outsiders. We depart from Fluck's framework in assuming that managerial actions are only imperfectly observable. To sustain external equity our model requires the manager to hold a cash-flow claim, so that her interests are more closely aligned with those of outside investors. Specifically, the model requires the manager's cash flow claim to be above a minimum threshold for her to report outcomes on implicit contracts truthfully; moreover, such threshold is negatively related to the precision of the public information available about managerial dealings with stakeholders.

Another factor is captured by the parameter k , which measures the amount of transaction costs incurred by the raider when launching a hostile acquisition. Transaction costs may simply consist of costs associated with putting together a tender offer such as legal costs and fees paid to investment bankers. They may also consist of indirect costs stemming from the free-rider problem that occurs when the ownership of shares among

¹⁰ OECD- Principles of Corporate Governance (1999). The OECD recommends that disclosure should include information on material issues regarding key executives, employees and other stakeholders; that information about publicly traded firm should be prepared, audited, and disclosed in accordance with high standards of accounting, financial and non-financial disclosure, and audit; that an annual audit should be

outside investors is widely dispersed. Yet another source of transaction costs are the costs of overcoming takeover amendments enshrined in corporate charters - such as poison pills and supermajority rules - designed to make hostile takeovers expensive to the acquirer.

The transaction cost parameter determines the net gain to the raider from taking over the firm. With low transaction costs it's profitable to take over a firm announcing losses on implicit contracts, provided that the takeover does not cause stakeholders to withhold future dealings with the firm. With large transaction costs takeovers become unprofitable thereby giving the manager effective control of the firm. This last case corresponds to that of a firm featuring a controlling shareholder who holds a small cash flow claim. Under such an ownership and governance structure the firm contracts efficiently with stakeholders but the controlling party expropriates outside shareholders.

The role of ownership concentration in the model has an interesting parallel with that suggested by Burkart, Gromb and Panunzi (1997). These authors present a model where ownership concentration facilitates the intervention of outside shareholders in the firm's management. The upside of increased intervention is to limit managerial moral hazard over project choice, i.e., the manager is curtailed in her ability to choose projects with high private benefits and low cash flow. The downside is to reduce the incentive held by the manager to search for profitable projects. Hence, a higher ownership concentration reduces managerial moral hazard but also reduces the value of the projects available to the firm. If we view the relationship between the manager and the firm as an implicit contract whereby the firm promises the manager to give him discretion over

conducted by an independent auditor in order to provide an external and objective assurance on the way financial statements have been prepared and presented.

project choice in exchange for a commitment to invest effort in project research, then we can argue that excessive shareholder intervention disrupts the firm's ability to sustain implicit contracts with management.

Their model however, differs from ours in an important respect. In their model a firm controlled by an inside shareholder selects projects solely on the basis of cash flow - so that the private benefits generated by projects are completely disregarded by the controlling shareholder. Hence, such a firm cannot sustain an implicit contract with its management. In our model the same controlling shareholder considers in his choice of project the private benefits accruing to the manager from each available alternative, since he knows that ignoring the manager's preferences weakens her motivation to search for new projects. This distinction between the two models leads to opposite implications regarding the effect of ownership concentration. Whereas in Burkart et al. an increase in ownership concentration reduces the firm's ability to sustain implicit contracts with its management, in our model it will produce the opposite effect as long as higher concentration shifts the balance of power from outside to inside shareholders. The two models also yield opposite implication with respect to the role of informational asymmetries between controlling shareholders and management. Narrowing informational asymmetries helps implicit contracting in our model and hinders it in their model.

At a deeper level, the issues raised in this paper delve into the relationship between the nature of the firm's assets and the nature of the firm's financing arrangements. A firm which needs to engage in private transactions with third parties to create value cannot easily deal with arm's length financing, be it external equity or risky

debt. That means that we will observe a limited usage of arm's length financing whenever implicit contracts are important to mediate business transactions. La Porta et al. (1997) document that the legal environment is a key determinant of the size and extent of a country's capital market. In particular, they find that countries whose law originates from the French civil code and in which the quality of law enforcement is poor have weak capital markets. In the same vein, Demirguç-Kunt and Maksimovic (1998) report that companies from countries which score poorly on an index of respect for legal norms, use little long-term external debt and equity to fund their growth. Our model suggests an explanation for such patterns of finance. Because in these countries it is inefficient for firms to do business through explicit contracts, transactions with stakeholders migrate to the framework of implicit contracts. When that happens inside financing emerge endogenously as a means to provide for secure business relationships.

IV. Funding growth with external equity

We have seen that firms which rely on implicit contracts need a controlling shareholder to contract efficiently with stakeholders. One downside of having a controlling shareholder is that it makes it harder for the firm to obtain external equity, since outside investors fear being expropriated. If the firm needs cash to finance investment opportunities the reluctance of investors in providing funds can be very detrimental for firm value.¹¹ Is there a way for the controlling shareholder to raise money by selling shares to outsiders?

¹¹ Demirguç-Kunt and Maksimovic (1998) report that firms from countries with a low rating for compliance with legal norms tend to grow slower and to obtain less external financing. These are countries where implicit contracts are likely to be important.

There are several possible answers to this question. Firms with growth opportunities can raise funds from outside investors gradually over time, coming back to the market on an on-going basis until they have funded all available investment opportunities. Under this arrangement the controlling shareholder refrains from expropriating outside shareholders because she knows she will need them later on.¹² This strategy of “stage financing” however, is inherently unstable in a rational expectations framework, because the incentive of the controlling shareholders to distribute funds to outsiders weakens over time as the amount of unfunded growth opportunities diminishes.¹³

Another solution for the controlling shareholder is to sell the entire firm to an investor who is sufficiently wealthy to fund all the firm’s growth opportunities. This argument suggests that in countries where implicit contracts are important we should observe a higher concentration of corporate control, since firms with good growth prospects but short of cash will generally be acquired by bigger and more established companies, instead of being floated in the capital market. LaPorta et.al. (1999) find that in countries such as Sweden, Belgium, Greece, Portugal and Israel controlling shareholders (i.e., families and banks) control, on average, more than two of those countries’ 20 largest companies, a number that is much higher than the corresponding figures for the US or the UK. They interpret this result as evidence of very significant control of productive resources by the largest controlling shareholders. The level of

¹² Bullow and Rogoff (1989) use a similar argument in the context of sovereign borrowing.

¹³ According to this view the crashes in equity prices occurred in recent years in emerging economies can perhaps be explained by a sudden downgrade in investors’ expectations about the growth prospects of local companies. Prices fell dramatically because investors realized that the deterioration of business opportunities caused controlling shareholders to abandon their normal restraint regarding the expropriation of outside investors. An alternative explanation is suggested by Johnson, Boone, Breach and Friedman

concentration of control of corporate resources is likely to be even higher among less developed nations.

Yet another answer is for the controlling shareholder to sell a minority stake to a financier, invite him to join the board of directors and give him the power to cause trouble to the firm. For example, the financier could be offered the power to block managerial decisions through a requirement of qualified majority voting on a number of issues of strategic importance to the firm. If the firm engages in implicit contracts involving illegal dealings with stakeholders then the financier can hurt the firm simply by blowing the whistle. What's important here is to give the financier the ability to retaliate if he feels he is being expropriated. Since the financier sits in the board of directors he observes the outcomes on implicit contracts and hence, knows exactly when the controlling shareholder is misappropriating corporate resources. In a similar vein, Bennesen and Wolfenzon (2000) develop a model for closely held corporations where an owner-entrepreneur, in need of external capital, commits to a low level of inefficient extraction of private benefits of control by choosing an ownership structure featuring multiple large shareholders. Such structure forces shareholders to talk to each other and to act in a concerted fashion, which helps to internalize the consequences of inefficient diversion of funds.

V. Risk diversification

Even if the firm has all the cash it needs to fund growth opportunities the controlling shareholder will still be interested in selling a minority equity stake just to

(2000). These authors argue that the deterioration of the economic prospects of East Asian firms reduced the opportunity cost of diverting funds from legitimate investment activities to controlling shareholders.

help diversify her wealth. Just as before however, outside investors will refuse to buy shares.

A curious solution for the risk diversification problem is for the controlling shareholder to simultaneously swap minority equity stakes and board members with a similarly motivated controlling shareholder from a different firm. The share swap ensures that the controlling shareholders can mutually inflict damage by discretionarily expropriating their minority shareholder. The swap of board members ensures that controlling shareholders are insiders to each other's management. By crossing ownership and making their managerial actions mutually observable the two firms create a mechanism of self-restraint, thus allowing for a "good" equilibrium to emerge whereby each firm deals fairly with its own minority shareholder. This equilibrium is sustained by the belief that an incident of abuse by one firm will trigger immediate retaliation by the other firm. Through such an arrangement controlling shareholders are able to diversify their wealth. From the point of view of risk diversification it's even desirable to swap equity stakes across firms from different industries since that reduces the correlation between cash flows.¹⁴

To verify the intuition consider the following simple model. There are two identical firms ($i=A,B$), each fully owned and managed by its own entrepreneur. Firms produce a perpetual stream of independent and identically distributed cash flow, c_t ($t=1,2,3,\dots$), with $E(c_t) = \mu$ and $\text{Var}(c_t)=\sigma^2$. Cash-flow is generated by transactions made with third parties in the framework of implicit contracts and is observed solely by firm's

¹⁴ Although cross-holdings of shares among firms are frequent in many countries (OECD (1995)) we still don't have a good explanation to account for it.

insiders - the manager plus the members of the board of directors. Moreover, assume that third parties refuse to enter into implicit contracts with a firm if they think the firm is vulnerable to a change of control. Thus entrepreneurs must maintain control or otherwise their firms will stop generating cash flow.

Entrepreneurs' wealth is initially fully invested in their companies. Assume that the utility function at date t is of the form:

$$U_i(W_{i,t+1}) = \beta_{1i}E(W_{i,t+1}) - \beta_{2i}\text{Var}(W_{i,t+1}) \quad (21)$$

where $W_{i,t+1}$ is the entrepreneur's wealth at date $t+1$. Under the stated assumptions about the cash-flow generating process the utility function in (21) simplifies to

$$U_i = \gamma_i \mu - \theta_i \sigma^2 \quad (22)$$

Suppose now that the entrepreneurs swap a minority stake $(1-\alpha)$ and take seats on each other's board of directors. Assuming that firms deal fairly with their minority shareholders, the utility of entrepreneur i becomes

$$U_i = \gamma_i \mu - \theta_i \sigma^2 \{\alpha^2 + (1-\alpha)^2\} \quad (23)$$

Thus the share swap will achieve diversification gains provided entrepreneurs can commit to play fairly with their minority shareholders. . This commitment is credible if entrepreneurs (i) mutually observe cash flow and (ii) mutually believe that the first occurrence of expropriation of a minority shareholder will be followed by repeated expropriation. Under this belief the best response for an entrepreneur who learns that her minority stake is being expropriated is to stop distributing funds to her own minority shareholder. Consequently, an entrepreneur who chooses to deviate from the cooperating equilibrium ends up lowering her utility to the level prevailing before the share swap. Since entrepreneurs also swap board seats, they closely monitor each other's cash flows

and hence will immediately detect any misappropriation of cash flow by a controlling shareholder.

VI. Conclusions

The paper develops a model in which takeovers cannot discipline opportunistic managers without simultaneously impairing the firm's ability to sustain valuable implicit contracts with stakeholders. The problem arises when the outcomes on implicit contracts made with stakeholders are only imperfectly observed by outsiders. Under those circumstances the manager has an incentive to falsely claim that the outcome on the implicit contract is unfavorable to the firm and misappropriate the cash flows associated with the true outcome.

Takeovers occur to prevent managers who report losses on implicit contracts from withdrawing funds from the firm. However, because outsiders cannot observe the true outcome, takeovers occur even when the manager truthfully reports an unfavorable outcome. These misguided takeovers reduce the ex-ante value of transactions to stakeholders. In equilibrium, implicit contracts are sustained only if the frequency of misguided takeovers is not too high.

When takeovers cannot be targeted accurately to opportunistic managers firms need a controlling shareholder who is an insider to the firm's management to be able to write valuable implicit contracts with stakeholders. Although such governance and ownership structure sustains implicit contracts it raises problems of its own. For example, controlling shareholders will have trouble financing growth and diversifying their wealth. We suggest a number of ways to mitigate these problems.

The paper does not address at least two important issues. First, since we assumed that there are no non-pecuniary benefits of control, the manager has no incentive to manipulate outcomes upward in order to avoid a takeover. That assumption allowed us to focus on the role of implicit contract as a vehicle for managerial self-dealing but limited the scope of the model. Second, we didn't investigate how managerial compensation could be used to mitigate the incentive to report unfavorable outcomes. In theory a contingent compensation contract could be designed linking managerial pay to reporting policy that would achieve such a goal. These are two related issues left for further research.

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