

<p>Large Shareholders: Monitoring, Managerial Initiative, Collusion with Management</p>
--

Overview of the lecture

- Ownership Structure and Optimal Allocation of “Effective” Control
 - Tradeoff:
 - * Monitoring gives real control to shareholders, which reduces managerial private benefit extraction
 - * However, monitoring reduces managerial initiative, which is ultimately bad for shareholders
 - Optimal ownership concentration solves this tradeoff
 - Collusion between Manager and Large Shareholder
 - * Raises monitoring incentives of the large shareholder
 - * Is not purely detrimental for minority shareholders

Monitoring and the allocation of “effective” (“real”) control. Main idea

- If the manager has control, he will expropriate shareholders → they will not provide finance
- Why then not give all control rights to the shareholders?
 - Formally, they do have control rights (votes)
 - But if they are dispersed, a collective action problem arises
 - nobody has an incentive to use his control rights
 - \implies Solution: concentration of ownership in the hands of an (outside) blockholder (or several blockholders)

Note: In most countries outside US and UK firms have concentrated ownership structures.

- By virtue of their large stake, blockholders have both incentive and (voting) power to become informed and supervise managerial decisions. Hence, they obtain *effective* or *real* control, as opposed to formal control, and can restrict managerial opportunism.

- Above considerations imply that fully concentrated ownership structure is optimal. But there are costs. Already mentioned:
 - lack of diversification
 - decreased market liquidity
 - overmonitoring in the the sense of Pagano and Röell
- Here we will discuss another problem: excessive monitoring can kill managerial initiative ex ante (Burkart et al. (1997)).
- We will aslo allow for the conflict of interest between large and small shareholders.

OWNERSHIP STRUCTURE & EFFECTIVE CONTROL: EX-ANTE INEFFICIENT MONITORING

Burkart, Gromb and Panunzi (1997) (idea similar to Aghion and Tirole (1997))

Main Ideas:

- (1) Control rights are only part (prerequisite) of effective control. Incentives to exercise control are given by ownership concentration**
- (2) Managerial discretion favors firm-specific investment (initiative) and thereby contributes to firm value.**
- (3) Shareholders' effective control reduces managerial expropriation ex-post but creates a hold-up problem. Hence a trade-off between the gains from monitoring and gains from managerial initiative**
- (4) Limited ownership concentration acts as a commitment device to delegate some control to managers.**

Model

Consider firm run by risk-neutral manager (M) with no equity.

Its ownership structure:

- α shares held by a risk-neutral large shareholder (L)
- $(1 - \alpha)$ dispersed among small risk-neutral investors

Note: L and M are distinct parties, irrespective of the size of α .

- Formal control belongs to the shareholders (voting rights). Formal control = right to choose a project and make resource allocation decision at $t = 3$.
- There always exists a "status-quo" project that the party in control can implement. It yields zero return and zero private benefit for the manager
- At $t = 1$: M chooses non-verifiable effort $e \in \{0, 1\}$ at cost ce .
 - For $e = 1$, M identifies with prob. $\theta < 1$ new project with (expected) return $X > 0$.
 - For $e = 0$, M never identifies a new project.
- At $t = 2$: Having *observed* M's choice of e , shareholders can exert non-verifiable monitoring effort. Provided M finds new project,
 - Each shareholder can at cost $\frac{E^2}{2}$ also identify it with probability $E \in [0, 1]$.
 - Dispersed shareholders remain passive (due to some small fixed cost of monitoring).
 - Monitoring is not contractible

- At $t = 3$: **Non-verifiable** decision which project to undertake and **non-verifiable** resource allocation decision.
 - Shareholders (they have formal control) decide whether to do a "status-quo" project, do "something else", or delegate the choice of action to the manager
 - Doing "something else" means
 - * Selecting the new project if the shareholders have identified it. Then they obtain X , manager gets no private benefit
 - * Selecting a "random project", if the shareholders have not identified the new project.
 - Assumption:** "random project" yields negative expected payoff
 - If the choice of action is delegated to the manager, he has a choice between "status-quo" and "something else".
 - If he has not identified the new project, "something else" means "random project"
 - If he has identified the new project, he can select it AND make a **non-verifiable** resource allocation decision:
 - * Prior to payoff realization, manager makes choice of $\phi \in [0, 1]$ such that
 - * Verifiable security benefits: $(1 - \phi)X$ (expected value)
 - * Non-verifiable private benefits: $[\phi - \rho(\phi)]X$

NOTE: Alternatively you can merge the project selection and resource allocation decisions. You can think of a continuum of possible projects, each yielding certain security and private benefits. M learns either all of them (becomes informed) or nothing. If M becomes informed, a shareholder can become informed with prob. E at cost $\frac{E^2}{2}$. There is always a status quo project with $X = 0$ and zero private benefits. The payoffs from projects are such, that random selection of a non-status quo project (i.e. without being informed), yields negative expected security and private benefits.

Quick implication of the setup: Shareholders prefer delegation if they are uninformed. Delegation is (weakly) preferred to the status-quo and strictly preferred to a random project.

Assumption: $\rho'(\cdot) > 0$, $\rho''(\cdot) > 0$, $\rho'(0) = 0$ and $\rho'(1) \geq 1$.

$\rho'(0) = 0$ and $\rho'(1) \geq 1$ ensure interior solution of ϕ

Assumption for now: Private benefits are not transferable.

Introduces conflict of interest between M and shareholders, while it ensures congruent shareholder interests, i.e., no conflict between L and minority shareholders.

Assumption: M does not respond to monetary incentives (basic result does not change if we allow for monetary incentives)

Assumption: $1 > \theta X \geq \frac{c}{[\phi^0 - \rho(\phi^0)]}$

Ensures $E < 1$ and $e = 1$ are feasible

Solve by backward induction

Resource Allocation: ($t = 3$)

Suppose firm undertakes the project:

- If L is informed, he imposes $\phi = 0$, and the resulting security benefits are X .
- Otherwise, M chooses ϕ to maximize $\phi - \rho(\phi)$

$$\text{FOC: } \rho'(\phi^0) = 1$$

The resulting security benefits are $(1 - \phi^0)X$

Monitoring Incentives: ($t = 2$)

Recall that L observes effort choice by M

- If M chooses $e = 0$, $E = 0$
- Given M chooses $e = 1$, L chooses E to maximize

$$[E\alpha + (1 - E)\alpha(1 - \phi^0)] \theta X - \frac{E^2}{2}$$

By Assumption 1 $1 > \theta X$, the FOC gives

$$E(\alpha) = \alpha \phi^0 \theta X < 1$$

- $\partial E / \partial \alpha > 0$: L reaps larger part of improvement in security benefits.
- $\partial E / \partial \phi^0 > 0$: Monitoring becomes more valuable because it prevents larger expropriation by M
Note: greater ϕ^0 can be interpreted as weaker legal protection of shareholders.

Managerial Incentives: ($t = 1$)

- Given E , M chooses $e = 1$ iff

$$[E \cdot 0 + (1 - E) \cdot [\phi^0 - \rho(\phi^0)]] \theta X \geq c$$

or

$$E \leq E^{NC} \equiv 1 - \frac{c}{[\phi^0 - \rho(\phi^0)]\theta X}$$

- Excessive monitoring kills managerial incentives, $E^{NC} < 1$.
- Assumption $\theta X \geq \frac{c}{[\phi^0 - \rho(\phi^0)]}$ ensures that $E^{NC} \geq 0$ (otherwise $e = 0$ always).

Equilibrium:

For a given ownership structure, i.e., block size α , two possible outcomes

- i) For $E(\alpha) > E^{NC}$, $e = E = 0$.
- ii) For $E(\alpha) \leq E^{NC}$, $e = 1$ and $E(\alpha) = \alpha\phi^0\theta X$

What is the optimal α ? Control vs. Initiative:

- Benefit of ownership concentration: Monitoring reduces the risk of expropriation which is beneficial (control effect).
- Cost of ownership concentration: More shareholder control deprives manager of private benefits, thereby reducing his incentives to exert effort (initiative effect).

- Recall $E(\alpha) = \alpha\phi^0\theta X$. Hence:
 - If $E^{NC} \geq \phi^0\theta X$, M exerts effort for any α
 - Otherwise, M exerts effort only if $\alpha \leq \alpha^{NC} \equiv \frac{E^{NC}}{\phi^0\theta X} < 1$

Optimal Allocation of Effective Control:

- Optimality criterium: maximize the total shareholder return net of monitoring cost (maximizing aggregate welfare yields qualitatively similar main result)
- Total shareholder return net of monitoring costs is $V^{NC} = 0$ if $e = 0$, and

$$V^{NC} = [E + (1 - E)(1 - \phi^0)] \theta X - \frac{E^2}{2}$$

if $e = 1$, with

$$\frac{dV^{NC}}{d\alpha} \Big|_{e=1} = \frac{dE}{d\alpha} [\phi^0\theta X - E(\alpha)] = \frac{dE}{d\alpha} (1 - \alpha) \phi^0\theta X > 0.$$

- \implies Optimal ownership structure solves:

$$\max \alpha \text{ subject to } E(\alpha) \leq E^{NC}$$

Result (Optimal Ownership Structure): There is a unique optimal α^* .

- If $\phi^0\theta X > E^{NC}$, $\alpha^* = \alpha^{NC} \equiv \frac{E^{NC}}{\phi^0\theta X} < 1$.
- Otherwise, $\alpha^* = 1$.

Conclusions:

- Managerial discretion comes with costs and benefits
 - It promotes initiative and firm-specific investment, but allows the pursuit of private interests at the shareholders' expense.
- Outside shareholders face the difficulty to commit not to exercise their control rights.
 - Optimal ownership structure can alleviate this problem by limiting the shareholders' incentives to exercise these rights.
 - It balances control and initiative effect.
 - * Inducing managerial initiative may require $\alpha^* < 1$.
- In more general terms, the control-initiative trade-off argues that leaving rents to agents may be an effective way to induce value-enhancing actions.

Implications for the effects of legal shareholder protection:

- Better shareholder protection can be modelled via an increase in $\rho(\phi)$ for all ϕ . Let $\rho'(\phi)$ also increase for all ϕ .
- Then better legal protection implies lower ϕ^0 and lower $\phi^0 - \rho(\phi^0) \implies$ lower E^{NC}
- Does lower E^{NC} imply lower α^{NC} ? Unambiguous: $\alpha^{NC} \equiv \frac{E^{NC}}{\phi^0 \theta_X}$, E^{NC} decreases, but ϕ^0 decreases too. In general:
 - If better legal protection has a small negative or zero (or even positive) effect on $E(\alpha)$ at α^{NC} , α^{NC} goes down (Burkart, Panunzi and Shleifer (2003))
 - Otherwise it may go up (see Burkart and Panunzi (2006))
- Empirically, ownership concentration is smaller in countries with strong shareholder protection.

EXTENSION: MANAGER-LARGE SHAREHOLDER COLLUSION

In most countries most firms have a dominant large shareholder, the conflict between large and small shareholders is likely to be at least as relevant as the manager-shareholder conflict (La Porta et al (1999)).

Model

Same model as before with some modifications:

Assumption: Private benefits are transferable.

Thus, L and M can agree to extract private benefits and share them. Formally, when L is also informed, M and L jointly decide (bargain over) ϕ .

As a result of the possibility to collude with M,

- — L cares about both private benefits and security benefits
- His interests are partially aligned with both those of M and those of dispersed shareholders

Note:

- M is key to extracting private benefits.
- L can always impose $\phi = 0$.

Resource Allocation: ($t = 3$)

Suppose the firm undertakes the project.

- If L uninformed (prob. $1 - E$), M sets $\phi = \phi^0$
- If L informed, there is bargaining with M.

Bargaining:

Let ψ be the manager's bargaining power.

- The coalition of M and L maximizes joint payoff:

$$\alpha(1 - \phi)X + [\phi - \rho(\phi)]X$$

- The FOC gives

$$\rho'(\phi^\alpha) = 1 - \alpha$$

- M's outside option is 0; L's outside option is αX .

Thus, surplus from collusion is:

$$\alpha(1 - \phi^\alpha)X + [\phi^\alpha - \rho(\phi^\alpha)]X - \alpha X = [(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] X$$

- Expected payoffs from collusion

- M obtains $\psi [(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] X$
- L obtains $[\alpha + (1 - \psi)][(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] X$
- Small shareholders get $(1 - \alpha)(1 - \phi^\alpha)X$

Features of L-M Collusion:

- L-M coalition diverts resources at the expense of dispersed shareholders
- M obtains less when L has a larger share $((1 - \alpha)\phi^\alpha - \rho(\phi^\alpha))$ decreases with α
- L's stake affects level of private benefit extraction:

$$\frac{d\phi^\alpha}{d\alpha} < 0: \text{Larger } \alpha \text{ induces less private benefit extraction}$$

- * Extraction of private benefits is inefficient
- * Hence, larger α reduces the moral hazard problem

Monitoring Incentives: ($t = 2$)

- If $e = 0$, L chooses $E = 0$.
- If $e = 1$, L maximizes

$$\max E [\alpha + (1 - \psi)[(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] \theta X \\ + (1 - E)\alpha(1 - \phi^0)\theta X - \frac{E^2}{2}$$

By Assumption $1 > \theta X$, the FOC gives:

$$E = [\alpha\phi^0 + (1 - \psi)[(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] \theta X < 1$$

Note:

$$\bullet \frac{\partial E}{\partial \alpha} = \left[\phi^0 + (1 - \psi)[(-\phi^\alpha + (1 - \alpha)\frac{d\phi^\alpha}{d\alpha} - (1 - \alpha)\frac{d\phi^\alpha}{d\alpha}) \right] \theta X = \\ = [\phi^0 - (1 - \psi)\phi^\alpha] \theta X > 0$$

$$\bullet \frac{\partial E}{\partial \psi} < 0$$

- $E(\alpha = 0) = (1 - \psi)[\phi^0 - \rho(\phi^0)]\theta X > 0$ in contrast to the no-collusion case!

In general, for given α , E is bigger when collusion is possible.

Managerial Incentives: ($t = 1$)

- Given E , M chooses $e = 1$ iff:

$$\left[(1 - E)(\phi^0 - \rho(\phi^0)) + E\psi[(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] \right] \theta X \geq c$$

or

$$E \leq E^C \equiv \frac{\theta X(\phi^0 - \rho(\phi^0)) - c}{\theta X[(\phi^0 - \rho(\phi^0)) - \psi((1 - \alpha)\phi^\alpha - \rho(\phi^\alpha))]}$$

- Collusion promotes managerial initiative: $E^C \geq E^{NC}$
 - Indeed, even if monitoring is successful, M receives

$$\psi[(1 - \alpha)\phi^\alpha - \rho(\phi^\alpha)] > 0$$

- Monitoring discourages managerial effort less.

Note:

- $\frac{\partial E^C}{\partial \psi} > 0$ because M receives larger share of private benefits due to his greater bargaining power.
- $\frac{\partial E^C}{\partial \alpha} < 0$ because M receives smaller share of private benefits due to L's better outside option

Equilibrium:

Recall $\frac{\partial E^C}{\partial \alpha} < 0$ and $\frac{\partial E}{\partial \alpha} > 0$.

For given ownership concentration, three outcomes possible:

- i) If $E(\alpha = 0) > E^C(\alpha = 0)$, $e = 0$ for any α .
- ii) If $E(\alpha = 1) < E^C(\alpha = 1)$, $e = 1$ for any α
- iii) Otherwise, $e = 1$ only if $\alpha \leq \alpha^C$ where α^C is defined by $E(\alpha) = E^C$

Optimal Allocation of Effective Control:

- Total shareholder return net of monitoring costs but including L's private benefits is $V^C = 0$ if $e = 0$, and $V^C =$

$$E[(1 - \alpha)(1 - \phi^\alpha) + \alpha + (1 - \psi)((1 - \alpha)\phi^\alpha - \rho(\phi^\alpha))]\theta X \\ + [(1 - E)(1 - \phi^0)]\theta X - \frac{E^2}{2}$$

if $e = 1$, with $\frac{dV^C}{d\alpha} =$

$$\theta X \left\{ \frac{dE}{d\alpha} [(1 - \alpha)(\phi^0 - \phi^\alpha)] + E \left[\psi \phi^\alpha - (1 - \alpha) \frac{d\phi^\alpha}{d\alpha} \right] \right\} > 0$$

- Optimal ownership structure solves:

$$\max \alpha \text{ subject to } E(\alpha) \leq E^C$$

Result: (Optimal Ownership Concentration):

- i) If $E(\alpha = 0) > E^C(\alpha = 0)$, α indeterminate and $V = 0$.
- ii) If $E(\alpha = 1) < E^C(\alpha = 1)$, $\alpha^* = 1$
- iii) Otherwise, $\alpha^* = \alpha^C$ (i.e. $E(\alpha) = E^C(\alpha)$)

Conclusions:

- The large shareholder simultaneously protects and hurts minority shareholders
 - Compared to a completely dispersed ownership structure, minority shareholders clearly gain. Expected security benefits increase by $E^C(\phi^0 - \phi^\alpha)\theta X$
 - Compared to congruent shareholder interests, collusion between the manager and the large shareholder is not purely detrimental.
 - * On the one hand, it reduces security benefits following successful monitoring by $\phi^\alpha X$
 - * On the other hand, it allows for a higher level of monitoring which in turn reduces expected diversion by $(E^C - E^{NC})(\phi^0 - \phi^\alpha)X$.

- NOTE: it is ambiguous whether the possibility of collusion leads to higher or lower outside ownership concentration in equilibrium
 - On the one hand, $E(\alpha)$ is greater under collusion for given α
 - On the other hand $E^C \geq E^{NC}$. Hence, the optimal level of monitoring is greater under collusion

Some empirical evidence on the role of large outside shareholders

- Lins (JFQA 2003). Study of 1433 companies in 18 emerging markets. Greater control rights of a large non-management blockholder are associated with higher Tobin's Q, especially when his control rights are bigger than those of the management.
 - The effect is stronger in countries with weaker shareholder protection
- Denis, Denis, and Sarin (JF 1997). US companies. Large outside shareholders reduce value-reducing corporate diversification
- Denis, Denis, and Sarin (JFE 1997). US companies. Large outside shareholders are associated with higher managerial turnover
- Hartzell and Starks (JF 2003). US companies. Higher institutional ownership concentration is associated with greater pay-to-performance sensitivity and lower level of executive compensation.
- Several studies on the effect of second largest blockholder in various countries: generally positive effect, provided his control rights are not much smaller than those of the largest blockholder.