Waseda University
Institute of Finance

Working Paper Series

WIF-03-006

Corporate Survival without Governance
A Control Mechanism of Managers inside the Firm

Shinichi Hirota, Kohei Kawamura

早稲田大学
ファイナンス総合研究所
http://www.waseda.jp/wnfs/nif/index.html

Corporate Survival without Governance*

A Control Mechanism of Managers inside the Firm

Shinichi Hirota

School of Commerce, Institute of Financial Studies

Waseda University

1-6-1 Nishiwaseda, Shinjuku

Tokyo, 169-8050 JAPAN

Tel +81-3-5286-2088 Fax +81-3-3203-7067

shirota@waseda.jp

and

Kohei Kawamura

Nuffield College, University of Oxford

Oxford, OX1 1NF, UK

Tel +44-1865-278600 Fax +44-1865-278621

kohei.kawamura@nuffield.oxford.ac.uk

May 2003

* We appreciate the helpful comments and suggestions from Franklin Allen, Masahiko Aoki, Tomio Arai, Yasuhiro Arikawa, Hideshi Itoh, Shyam Sunder, Misa Tanaka, Yasuhiko Tanigawa, Noriyuki Yanagawa, and seminar participants at Hitotsubashi, Waseda, Finance Research Workshop, JUTC (Rengo) Research Institute, Ministry of Economy, Trade and Industry, and Ministry of Finance.

Abstract

We argue that even without any external governance, corporate managers are disciplined to seek for long-run viability of the firm. We propose a model consisting of a manager, workers, and shareholders and show that there exists a control mechanism of managers *inside* the firm. This insider control prevents managers' moral hazard and makes it possible that the firm continues to survive for a long period of time. The degree of the manager's survival motive depends on the firm's internal (such as information sharing between the manager and workers) and external (such as labor market rigidity) factors. We also show that the survival motive has either a positive or negative effect on the shareholders' wealth, depending on whether they prefer continuation or liquidation. Our model also provides some important insights into the cross-country and cross-industry difference in the form of corporate governance.

JEL classification: G34; J41

"[The CEO's] goal has been to perpetuate the company, not himself". (Donaldson and Lorsch (1983, p.29)

I. Introduction

In modern corporations, how to control self-interest managers is crucial in ensuring the efficient operation of the firm. Since Berle and Means (1932), a great deal of effort has been made on this topic and it has been the central issue in corporate governance debate for the last decade. Most of the literature argues that some governance mechanisms by outside investors (in particular shareholders) are necessary to discipline the management behavior.

This paper shows that this standard view is unsatisfactory, since it ignores an implicit control mechanism of managers inside the firm. We claim that the interaction with employees makes managers seek for the long-run viability of the firm, that is, corporate survival. We suggest that if this mechanism works well, it is possible that firms continue to be run fairly efficiently and shareholders get sufficient returns even without any governance mechanisms.

The standard view of corporate governance has its theoretical basis in agency theory, which considers the firm in terms of a simple principal-agent relationship; the shareholders are the principals and the manager is the agent. Several corporate governance mechanisms, such as the board of directors, executive equity-based compensation, takeovers, monitoring by large or institutional shareholders, the use of debt, have been seen as devices for shareholders to discipline the manager. Along this agency paradigm there have been a significant number of theoretical and empirical studies on how these mechanisms work and in which way they should be improved for attaining better corporate performance.[1]

Recently, however, Allen and Gale (2000a, 2000b) cast doubt on the validity of this standard view. They claim that although the above governance mechanisms do not appear to work very efficiently in reality (and they seem very weak in some economies such as the U.S and U.K.

[1] See Shliefer and Vishny (1997) for an excellent survey.

before 1960s, Japan, Germany, and France), many firms seem to perform fairly well. Xives (2000), Core, Guay and Larcker (2002), Hermalin and Weisbach (2002), and Holderness (2002) also argue that there is little evidence showing that such corporate governance mechanisms are effective and have positive effects on corporate performance. From these studies, we can consider that the external governance may not be a necessary condition for controlling managers and that there should exist some other factors that discipline the management and ensure the efficient operation of the firm.

Outside the standard agency paradigm, some researchers suggest that managers are controlled more or less inside the firm. For example, in his managerial accounting textbook, Sunder (1997) states that "In a modern corporation, even the chief executive officer does not control the rest of the organization because CEO also is subject to the control system of the firm"(p.6); "Managers' choices affect other agents, and the latter's reactions affect managers themselves. Therefore, manager must take into account the effect of their choices on other agents" (p.49). In addition, based on in-depth interview with top executives at leading U.S. industries enterprises, Donaldson and Lorsch (1983) argue that "Contrary to popular myth, these top executives do not have great latitude in their strategic choices" (p.7). We wish to explore the control mechanism of managers inside the firm, which has attracted little attention in the economic literature.

We focus on a managerial motive that appears to be dominant in the real world—corporate survival. Donaldson and Lorsch (1983, p. 8) suggest that "corporate executives are primary concerned with long-term corporate survival". We examine theoretically why managers pursue corporate survival even if his interest is limited only to his tenure. We also argue that this survival motive may prevent managers' moral hazard and explore how it affects the value of the firm.

We present a model of the firm consisting of a manager, workers (young and old) with long-term employment, and shareholders. The manager has two tasks: one is to decide the project and the other is to monitor the workers. The manager has three types of project: survival project (S-project), bad project (B-project), and liquidation project (L-project). The choice of the project

determines whether the firm survives in the future. We show that even if the manager could enjoy private benefits from the B-project, he may nonetheless choose the S-project (i.e., the manager seeks for corporate survival). The reason is that the more likely the firm is to continue, young workers have more incentive to work, and the manager can run the firm with less monitoring costs. We also suggest that the degree of the manager's survival motive is determined not only by firm's internal factors (such as business information sharing) but also by external environments (such as retention rate and labor market rigidity).

We then examine how this insider control mechanism of the manager via the survival motive affects the shareholders' wealth. It can easily be shown that the effect of the mechanism crucially depends on whether the firm's continuation value firm is larger than its liquidation value. When the former is larger than the latter, the survival motive has a positive effect on the shareholders' wealth; it may be optimal for shareholders to leave the firm autonomous. In contrast, the latter is larger than the former, the insider control mechanism deteriorates the shareholders' wealth and external governance is more likely to be necessary.

In sum, our model explores (i) why corporate managers tend to pursue the survival of the firm, (ii) what factors affect the manager's survival motive, (iii) how the survival motive affects shareholders' wealth. In addition, the model provides some important insights into the cross-country and cross-industry difference in the form of corporate governance.

This paper proceeds as follows. In Section II, we describe the setting of the model. In Section III, we analyze the worker incentives and manager's project choice and show that the manager tends to seek for corporate survival. In Section IV, we examine the effect of the survival motive on shareholders' wealth and discuss the implications on corporate governance.

II. The Model

II. A. Setting

We assume that each identical firm in the economy consists of a manager, young worker, old

worker, and shareholders. A risk-neutral manager works only for 1 period and is replaced by another in the next period. A risk neutral worker's career lasts for 2 periods. In each period he is either be employed or unemployed. His utility when unemployed is normalized to 0. The workers employed by a firm are represented by the OLG (overlapping generations) structure. A young worker stays at the same firm for two periods unless he leaves at the end of the first period. Shareholders consist of many investors and have infinite time horizons.

The manager in charge can choose among three types of the project. Each project earn the same revenue a in the current period if both young and old workers provide effort and 0 if any of them shirks. With one of the projects, called S-project (survival project), the firm continues to operate in the next period although the manager does not get any private benefit. If the S-project is implemented in every period, the firm will be in operation forever.[2]

On the other hand, if the manager chooses the second project, called B-project (bad project), the manager himself enjoys private benefit Z,[3] but the firm goes out of business after the end of the current period with probability p ($0 < p \leq 1$). When the firm discontinues, it is liquidated immediately and its liquidation value is zero. As it seems natural to suppose that the manager's private benefits with projects are unobservable to others and different among different managers, let us assume that Z is a random variable and have differentiable probability distribution $F(Z)$ with support $[0, Z_{max}]$. We also assume that $F(Z) \geq 0$ for all $Z \in [0, Z_{max}]$.

The other project is called L-project (liquidation project). If the manager chooses this project, the firm is certainly liquidated in the next period and the shareholders get the liquidation value of K. The manager does not get any private benefit from the L-project.

The above information about three projects is summarized in Table 1. Two points are worth mentioning about Table 1. First, the manager's project choice (S, B or L) does not affect the current revenue but does affect the future of the firm. This assumption captures the situation where

[2] None of the qualitative results are affected when a firm with the S-project is liquidated with some probability if the probability of the liquidation is smaller with the S-project than with the B- and L-projects.

[3] Alternatively, we can assume that the manager must make an effort and incurs disutility Z to implement the S-project or L-project and he does not need any effort and hence does not incur any disutility to implement the B-project.

managers' investment decisions usually have essential effects on firms' future performance beyond their tenure. Second, *p* can be interpreted as the degree of product market competition the firm is facing. When the product market is more competitive, a firm that implements a bad project is more likely to go out of business.

We assume that while the shareholders cannot observe the manager's project choice, it is correctly observed by the workers with probability θ ($0 < \theta \leq 1$). This assumption reflects the situation where workers are usually in a better position to know the management decision than shareholders as a by-product of their day-to-day operations.[4] The value of θ has some possible interpretations. It can be thought of as the degree of business information sharing between management and workers,[5] or the workers' ability to understand how the firm is managed. In this paper we simply treat it as an exogenous variable.

II. B. Manager

The manager has utility function:

$$U_m = z + \gamma\pi - \Omega(m_y + m_o) \qquad (1)$$

The first term *z* is the manager's private benefit: $z = 0$ if the manager chooses S-project or L-project and $z = Z$ if the manager chooses the B-project. The second term γπ is the manager's compensation. The manager receives a fraction γ of the firm's gross profit $\pi = a - w_y - w_o$, where w_y, w_o are wages for young and old workers, respectively. We consider that the manager's compensation depends only on the current profit π and we treat γ as a constant. We assume that it is impossible to give the manager monetary incentives with respect to the project choice, due to the asymmetric information about the project choice between the manager and shareholders. In addition, we consider that the manager does not have the company's equity and does not receive equity-based-compensation (stock option, etc.). We aim to explore the possibility that the manager takes the right decision for the shareholders even without any standard corporate governance

[4] See Hansmann (1996, p.77)
[5] Kleiner and Bouillon (1988), Morishima (1991a) (1991b).

mechanisms. Moreover, to simplify the analysis, we assume that the manager obtains rents in the sense that his participation constraint is not binding. This eliminates the effects of marginal changes of other parameters on γ.

Besides the project choice, the manager monitors the workers in order to induce them to exert effort. The monitoring intensity for young and old workers is represented by m_y and m_o, respectively. $\Omega(m_y + m_o)$ is the monitoring costs incurred by the manager. We interpret Ω (>0) as a parameter representing difficulty of monitoring workers. We assume that a or γ is large enough so that the manager determines the monitoring intensities to induce the workers' effort.

Note that the manager's utility function (1) implies that the manager's interest in the firm is limited to the current profit during his tenure (π), not related to the future profits of the firm. Given this manager's short time horizon, at first glance, it seems that he would choose the B-Project, that is, he pursues his private benefit (Z) at the sacrifice of the future of the firm. This type of a manager's moral hazard is often observed in the standard agency theory literature. We argue, however, that the manager does not necessarily choose the B-project in our model; the interaction between the manager and the workers may affect the manager's project choice and make him seek for the corporate survival (choose the S-project). We will examine this mechanism in detail in Section III.

II. C. Workers

The workers in each period decide whether to provide two levels of effort 0 or $e > 0$. The utility of the old worker is given by

$$U_o = w_o - e_o, \qquad (2)$$

where w_o is his wage and e_o is the effort level which is 0 or e. If the old worker shirks (e_o=0), there is probability m_o that he will be caught. As we saw earlier, m_o is the manager's monitoring intensity for old workers. If an old worker is caught shirking, he is dismissed immediately and becomes unemployed without being paid (w_o=0).

The utility of the young worker is

$$U_y = w_y - e_y + \beta(w_o - e_o - \eta_o), \qquad (3)$$

where w_y , e_y is his wage and effort level (0 or e) in the current period, respectively. β is the discount factor and η_o is a turnover cost. η_o equals to η (>0) when he works in the different firm in the next period. We can interpret η as search costs to find a new job or could reflect the loss of the worker's firm-specific human capital. On the other hand, η_o equals 0 when the young worker continues to work as an old worker in the same firm in the next period.

As in the case of the old worker, if the young worker shirks (e_y = 0), he will be caught with probability m_y. If caught, he is dismissed immediately without being paid (w_y= 0) and he is not hired by the same firm in the next period. Also, we introduce an exogenous retention rate λ (> 0), with which the young worker remains in the firm if he is *not* dismissed for shirking. λ can be considered as the degree of long-term employment of the firm, which is determined exogenously by workers' preference (besides turnover costs), corporate culture, social convention, etc. We assume that if the young worker leaves the firm, it replaces him with another old worker in the next period.

II. D. Shareholders

The shareholders merely own the firm and receive dividend $(1-\gamma)\pi$ each period as long as the firm survives.[6] If the firm is dissolved, the dividend from the next period onward is 0 and the liquidation value (0 with the B-project and K with the L-project) is paid to the shareholders. We assume that, due to the free-rider problem, there exists no effective way for the shareholders to intervene into the management. Hence the project choice is completely delegated to the manager.

II. E. Timing of Events

The timing of the model is summarized in Figure 1. At the beginning of each period the manger observes his private benefit Z of the B-project. The manager then decides whether to choose the G-, B-, or L-project. After choosing the project, the manager determines the intensity of

[6] We assume that no retained earnings are left in the firm.

monitoring workers. The workers cannot see the value of *Z*, but they correctly observe the manager's project choice (G, B, or L) with probability θ. Also, the workers certainly know the manager's monitoring intensity. Given the information, the workers decide on their effort. At the end of the period, the revenue is realized and the wage, the manager's compensation, and dividends are paid.

III. Corporate Survival under Autonomous Management

In this section, we explore the possibility that even without any explicit corporate governance mechanisms the manager is induced to choose the survival project (S-project) through the interaction with the workers. To show this implicit control mechanism, we examine the manager's and the workers' decisions backward. First, we examine the worker's incentive to provide their effort. Second, we derive the manager's optimal monitoring intensity. Lastly, we consider the manager's project choice.

III. A. Worker Incentives

The manager needs both young and old workers' effort to raise the positive revenue *a* in the current period. We first consider the old worker's incentive for their effort. The incentive compatibility (IC) constraint of the old worker can be written as

$$w - e \geq 0 \cdot m_o + w(1 - m_o). \qquad (4)$$

We assume that it is too costly to fully induce the workers' effort by means of "efficiency wage". Therefore, the manager has to elicit the workers' effort by monitoring them. The wage is determined in the labor market or collective bargaining, and the manager takes it as given.[7] For notational simplicity we assume that the young and old worker receive the same wage *w* and that $w - e - \eta \geq 0$.[8] The monitoring intensity that ensures the old worker's effort is given by

[7] We may consider other wage determination mechanisms. What is necessary to our results is that a young worker who leaves the firm incurs some utility loss (as in η) compared with those who do not.

[8] This assumption is not essential. Any results of this paper hold as long as $w_y > \eta$, which we believe is

$$m_o \geq \frac{e}{w}. \qquad (5)$$

Utility maximization (monitoring cost minimization) of the manager implies that (5) holds with equality, that is, $m_o = e/w$. Note that the manager's project choice (S, B, or L) is irrelevant to the old worker's IC, since he retires at the end of the period.

The incentive compatibility of the young worker is not as simple as that of the old worker. The reason is that the young worker's expected utility depends on whether the firm continues to operate in the next period, which is affected by the manager's project choice. We have four possible cases: the young worker observes the (i) S-project, (ii) B-project, (iii) L-project, or (iv) does not observe the manager's project choice. First let us consider the case where he observes S-project being implemented. The incentive compatibility constraint in this case is

$$\begin{aligned} &w - e + \beta\left[\lambda(w-e) + (1-\lambda)(w-e-\eta)\right] \geq \\ &(1-m_y)\left[w + \beta\left[\lambda(w-e) + (1-\lambda)(w-e-\eta)\right]\right] + m_y\left[0 + \beta(w-e-\eta)\right]. \end{aligned} \qquad (6)$$

As described earlier, if the young worker is caught shirking or leaves the firm, he incurs search cost η. Rearranging the IC constraint we have the non-shirking monitoring intensity

$$m_y^s = \frac{e}{w + \beta\lambda\eta}. \qquad (7)$$

It is easy to see that the manager's monitoring intensity for inducing the young worker's effort is lower than that of the old worker. The reason is as follows. Having observed the S-project, the young worker is certain that the firm will still continue to operate in the next period. Then he has more incentive to provide effort, expecting that he will be employed by the same firm in the next period as well (, which means he does not have to incur search cost η). Therefore, the manager does not have to monitor the young worker intensively and this reduces his monitoring cost. This is the manager's monitoring-cost-saving effect of choosing the S-project.

Next is the case in which the young worker sees the manager choosing the B-project. Having observed the B-project, the young worker realizes that the firm will not exist in the next

---

plausible.

period with the probability of p. Then, he predicts that the probability of continuing to work in the same firm in the next period is λ (1 - p). In this case, the IC constraint of the young worker is given by

$$\begin{aligned} &w-e+\beta\left[\lambda(1-p)(w-e)+(1-\lambda(1-p))(w-e-\eta)\right]\geq \\ &(1-m_y)\left[w+\beta\left[\lambda(1-p)(w-e)+(1-\lambda(1-p))(w-e-\eta)\right]\right]+m_y\left[0+\beta(w-e-\eta)\right]. \end{aligned} \tag{8}$$

Hence we have the monitoring intensity

$$m_y^B=\frac{e}{w+\beta(1-p)\lambda\eta}. \tag{9}$$

Note that $m_y^B > m_y^S$. That is, when his choice of the B-project has been observed, the manager has to monitor the young worker more intensively (incurs more monitoring cost) than he does with the S-project. The reason for this is following. With the B-project, the young worker considers that the firm may not exist in the next period, and making effort in the current firm does not guarantee his employment in the next period. Hence the young worker has less incentive to work.

In the case where the young worker has observed the L-project, he knows that the firm will never exist in the next period and that he will incur the search cost η. The IC constraint of the young worker in this case is given by

$$\begin{aligned} &w-e+\beta(w-e-\eta)\geq \\ &(1-m_y)\left[w+\beta(w-e-\eta)\right]+m_y\left[0+\beta(w-e-\eta)\right]. \end{aligned} \tag{10}$$

Thus we have the monitoring intensity that ensures the young worker's effort

$$m_y^L=\frac{e}{w}=m_o. \tag{11}$$

Finally let us see the case in which the young worker does not observe the manager's project choice. We assume that even when he does not know which project the manager has implemented, he has rational expectation about the probability that the manager implements each project. Let δ_S, δ_B, and δ_L the probabilities of the S-, B-, and L-projects being implemented, respectively. We will see later how these probabilities are determined. Taking δ_S, δ_B, δ_L as given, we have the IC of the young worker:

$$w-e+\beta\left[(\delta_S+\delta_B(1-p))\lambda(w-e)+(1-(\delta_S+\delta_B(1-p))\lambda)(w-e-\eta)\right]\geq$$
$$(1-m_y)\left[w+\beta\left[(\delta_S+\delta_B(1-p))\lambda(w-e)+(1-(\delta_S+\delta_B(1-p))\lambda)(w-e-\eta)\right]\right]+m_y\left[0+\beta(w-e-\eta)\right]. \quad (12)$$

As in the previous cases utility maximization of the manager implies

$$m_y^N=\frac{e}{w+\beta(\delta_S+\delta_B(1-p))\lambda\eta}. \quad (13)$$

All these things make it clear that the S-project gives the young worker the largest incentive to provide effort and therefore the manager's monitoring cost is smaller with the S-project than the B- or L-project. As a result, it may be of the manager's interest to choose the S-project, although he can enjoy private benefit *Z* with the B-project. We will see the details of this mechanism by examining manager's project choice in the following subsection.

III. B. Manager's Project Choice

Let us consider a manager's project choice. We begin with the comparison of the three projects in terms of the manager's expected utility. His expected utility when he implements the S-project is given by

$$U_m^S=\gamma\pi-\left[\theta\Omega(m_y^S+m_o)+(1-\theta)\Omega(m_y^N+m_o)\right]. \quad (14)$$

The first term ($\gamma\pi$) represents managerial compensation, and the second term denotes the manager's expected cost of monitoring workers. Similarly, when he implements the B-project, his expected utility is

$$U_m^B=Z+\gamma\pi-\left[\theta\Omega(m_y^B+m_o)+(1-\theta)\Omega(m_y^N+m_o)\right]. \quad (15)$$

Lastly, with the L-project,

$$U_m^L=\gamma\pi-\left[\theta\Omega(m_y^L+m_o)+(1-\theta)\Omega(m_y^N+m_o)\right]. \quad (16)$$

The manager chooses one of three projects to maximize his expected utility. Remember that the probabilities of the S-, B-, and L-projects being implemented are δ_S, δ_B, δ_L, respectively. First we have the following result.

Lemma 1

Autonomous management never chooses the L-project. That is, $\delta_L = 0$.

Proof.

Comparing (16) with (14), we find that $U_m^L < U_m^S$ always holds, since $m_y^L > m_y^S$. (Q.E.D.)

Lemma 1 implies that the manager always prefers the B-project to the L-project. This is because not only does liquidation (L-project) give no private benefits to the manager, but it also requires more effort for the manager to discipline the workers (m_y is high) than the survival (S-) project.

Since $\delta_L = 0$, $\delta_G + \delta_B = 1$. Hence we can examine the manager's project choice only by comparing the S-project and the B-project. The manager will opt for S-project if $U_m^S \geq U_m^B$. We can rewrite this condition as

$$\theta\Omega(m_y^B - m_y^S) \geq Z . \qquad (17)$$

The left hand side is the monitoring-cost-saving effect of the S-project (compared with B-project), and the right hand side is the private benefit with the B-project.

Proposition 1

The manager autonomously chooses the S-project with positive probability ($\delta_S > 0$).

Proof.

As we saw earlier, Z follows the probability distribution function $F(Z)$. Thus, the probability that the manager chooses G-project, δ_S, is $F\left(\theta\Omega(m_y^B - m_y^S)\right)$. This implies that,

$$\delta_S = F\left[\theta\Omega\left(\frac{e}{w+\beta(1-p)\lambda\eta} - \frac{e}{w+\beta\lambda\eta}\right)\right] \qquad (18)$$

Note that the right hand side of (18) is strictly positive. Together with the assumption that $F(Z) \geq 0$ for all $Z \in [0, Z_{\max}]$, we have $\delta_S > 0$. (Q.E.D.)

δ_S is the variable that plays the central role in our model, which is the probability that the manager autonomously implements the S- (survival) project for the company's future although he would get private benefit from the B- (moral hazard) project.

In the standard corporate finance literature, managers are assumed to choose projects (make investment decisions), but they do not interact with the firms' stakeholders other than

shareholders. This world can be described as the special case in our model by setting $\Omega \approx 0$ in the manager's utility function (1). In this case, the manager's utility become independent of the monitoring activity, he can ignore the effect of his project choice on workers' incentives. Then, he definitely chooses the B-project to enjoy private benefit Z ((18) suggests that when $\Omega \approx 0$, $\delta_S \approx 0$). Therefore, the standard agency theory suggests that some corporate governance mechanisms (the board of directors, executive compensation, takeovers, proxy fights, etc.) are necessary to prevent managers' moral hazard.

However, when the manager is in contact with workers, the manager's moral hazard (B-project) can be restrained thorough the manager-employee relationship. In our model, the manager's project choice affects the worker's incentives, which in turn affect the manager's monitoring cost. Therefore, it is possible that the manager does not take moral hazard behavior but chooses the survival project (S-project) to lower the monitoring cost. That is, the manager's project choice can be implicitly controlled inside the firm. We call this the "control mechanism of managers inside the firm" or "insider control mechanism".[9] When δ_S is large, this mechanism works well; the manager is highly likely to pursue corporate survival even without any outside governance mechanisms.

Proposition 2

δ_S increases with θ, Ω, λ, η, and p.

Proof.

From (18), it is clear that the partial derivatives of δ_S with respect to θ, Ω, λ, η, and p are positive. (Q.E.D.)

Proposition 2 indicates that the probability that the manager chooses the S-project (δ_S), that is, the efficacy of the insider control mechanism, depends on the internal (θ, Ω,) and external

[9] Interestingly, Sunder's (1997) managerial accounting textbook presents the similar idea on the control mechanism of managers in more general contexts. As cited in the introduction, he suggests that managers' behavior is implicitly disciplined by self-enforcing contracts with other agents in the firm.

(λ, η, and p) environments the firm faces. First, δ_S is increasing in θ. This suggests that when the worker observes the manager's project choice with higher probability, the manager is more likely to pursue corporate survival. In other words, high business information sharing between the management and workers disciplines the manager. Second, δ is also increasing in Ω. As it becomes difficult to monitor the workers' effort (Ω becomes greater), the monitoring-cost-saving effect of the S-project increases and it makes the S-project more attractive.

Among variables that concern external environments, we find that the worker's retention rate λ has a positive effect on δ_S. This suggests that the higher degree of the long-term employment is observed, the more the manager is likely to seek for the perpetuity of the firm. In addition, a labor market variable also affects δ: there is a positive relation between η and δ. The more it becomes difficult to find a job (higher η), the more likely the manager is to implement the S-project.

More remarkable is that δ_S is increasing in p. In other words, δ_B (= 1-δ_S), the probability of B-project being implemented, is decreasing in p. This suggests that when the firm is involved in more competitive product market (higher p), the manager is more unlikely to choose B-project (lower δ_B). It corresponds to what Schmidt (1997) calls "threat of liquidation effect", which states that the product market competition disciplines managerial behavior because competition increases the probability of liquidation when he shirks. While Schmidt (1997) assumes that the manager incurs disutility (loses rents or his firm specific human capital, etc.) when the firm is liquidated, we are able to show that even without such disutility "thereat of liquidation effect" can work through the manager's recognition that the future liquidation reduces the workers' current effort.

Observing (18), we notice that when θ, Ω, λ, η, and p are sufficiently large and

$$\theta\Omega\left(\frac{e}{w+\beta(1-p)\lambda\eta}-\frac{e}{w+\beta\lambda\eta}\right)\geq Z_{\max} \qquad (19)$$

holds, $\delta_S = 1$; the manager chooses the survival project with probability one. In this case, the insider control mechanism perfectly prevents the manager's moral hazard and ensures that the manager seeks perpetuity of the corporation. In contrast, when at least one of the variables, θ, Ω, λ, η, or p is

extremely small and close to zero, we see that $\delta_S \approx 0$. In this case, the manager definitely chooses the moral hazard (B-) project; the insider control mechanism fails to discipline the management.

While Donaldson and Lorsch (1983) repeatedly argue that the primary goal of managers is the survival of the corporation, they do not necessarily make it clear why managers aim for it. They simply attribute the survival motive comes to managers' psychology or emotions toward thier corporation and employees. Our model is an attempt to unveil the managers' inclination for corporate survival. We have shown that (i) even if the manager pursues his self-interest, he is implicitly induced to seek for long-run viability beyond his tenure thorough the interaction with employees[10] and that (ii) the efficacy of this insider control mechanism depends on the internal and external environments faced by the firm.

IV. Survival Motive and Shareholders' Wealth

In this section, we explore how the managerial objective of corporate survival affects shareholders' wealth. In particular, we examine to the extent to which the manager's project choice under autonomy leads to the shareholders' value maximization. We define shareholders' value of the firm as the net present value of the dividend stream under the operation plus the liquidation value when dissolved.

IV. A. Shareholders' Value under Autonomy

Since the autonomous management implements the S-, B-, and L-project with probability δ_S, $1-\delta_S$, and 0 respectively, the (ex-ante) probability of survival of the firm is $\delta_S + (1-\delta_S)(1-p)$. Thus the shareholders' value at the beginning of each period is given by

[10] From his interviews to the CEOs of the leading companies around the world, Garten (2001) states that "Creating value today rests on establishing strong links with a wide range of constituencies, which requires taking a long-term view." (p. 170). This Garten's intuitive viewpoint looks similar to the insider control mechanism in our model.

$$V = \frac{(1-\gamma)\pi}{1-(\delta_S + (1-\delta_S)(1-p))\beta}. \qquad (20)$$

It is easy to see that $\partial V / \partial \delta_S > 0$.

Corollary 1

V is increasing in θ, Ω, λ, and η.

Proof.

From (20), together with Proposition 2, we have

$$\frac{\partial V}{\partial \theta} > 0, \frac{\partial V}{\partial \Omega} > 0, \frac{\partial V}{\partial \lambda} > 0, \frac{\partial V}{\partial \eta} > 0. \qquad (21)$$

(Q.E.D.)

This corollary suggests that the workers' ability to observe managerial behavior (business information sharing), difficulty of monitoring workers, long-term employment, and labor market rigidity increases the shareholders' value of the firm under autonomy. This is because they enhance the insider control mechanism that forces the manager to choose the S-project. [11]

On the other hand, the effect of product market competition *p* on the shareholders' value is ambiguous. From (23) and Proposition 2 we obtain

$$\frac{\partial V}{\partial p} = \frac{\left[-(1-\delta_S) + \frac{\partial \delta_S}{\partial p} p\right]\beta(1-\gamma)\pi}{\left[1-(\delta_S + (1-\delta_S)(1-p))\beta\right]^2} \qquad (22)$$

The sign of $\frac{\partial V}{\partial p}$ depends on the sign of the sum of the two terms in the bracket in the numerator. The first term, $-(1-\delta_S)$, is negative. It corresponds to the direct effect of competition on the firm value; as the degree of the competition increases, the firm is more difficult to survive (the

[11] We should note that these results are subject to simplifying assumptions in our model. If we assume that the labor market rigidity makes the firm incur larger hiring costs, which we do not take account of, the effect of labor market rigidity η on the value of the firm is ambiguous. In addition, if the manager's participation constraint is binding a marginal change in Ω may increase γ, which makes also the effect of Ω ambiguous.

probability of liquidation rises) in case the manager choose the moral hazard decision (B-project) and as a result the firm value decreases. On the contrary, the second term ($\frac{\partial \delta_S}{\partial p} p$) is positive. It corresponds to the "threat of liquidation effect" as we saw in Session III. B. That is, increasing competition rises the probability of liquidation with B-project and this makes the manager more likely to opt for the S-project and increases the firm value. Unless we specify the value of exogenous variables and the form of the distribution function F(·) that determines δ_S in (18), we cannot say whether the net effect of increasing competition on shareholders' value (V) is positive or negative.

IV. B. The Possibility of Shareholders' Value Maximization

In the previous subsection, we have seen that the shareholders' value increases as the effectiveness of the insider control mechanism rises. The next question is whether this control mechanism leads to shareholders' value maximization. Recall that K is the liquidation value, and from (20) the shareholders' value when $\delta_S = 1$ is given by $\frac{(1-\gamma)\pi}{1-\beta}$.

Proposition 3

3-1. The shareholders' value is maximized by autonomous management if $\frac{(1-\gamma)\pi}{1-\beta} \geq K$, and

3-2. The shareholders' value is not maximized by autonomous management if $\frac{(1-\gamma)\pi}{1-\beta} < K$.

Proof.

The shareholders' value when the S-project is chosen with probability 1 is given by

$$V^S = \frac{(1-\gamma)\pi}{1-\beta}. \qquad (23)$$

Likewise, if the B-project is chosen for certain,

$$V^B = \frac{(1-\gamma)\pi}{1-(1-p)\beta}. \qquad (24)$$

If the firm is liquidated in the current period with probability 1, the sharehoders' value is given by

$$V^L = (1-\gamma)\pi + \beta K. \qquad (25)$$

Let V_{max} = max [V^S, V^B, V^L]. Since V^B is always smaller than V^S, V_{max} = max [V^S, V^L]. We know that $V_{max} = V^S$ if $\frac{(1-\gamma)\pi}{1-\beta} \geq K$ and $V_{max} = V^L$ if $\frac{(1-\gamma)\pi}{1-\beta} < K$.

When $\delta_S = 1$, the manager implements the S-project and the shareholders' value is V^S. This means that the shareholders' value is maximized if $\frac{(1-\gamma)\pi}{1-\beta} \geq K$ and is not maximized if $\frac{(1-\gamma)\pi}{1-\beta} < K$. (Q.E.D.)

Proposition 3-1 suggests that when the firm's continuation value at the end of period 1 ($\frac{(1-\gamma)}{1-\beta}\pi$) is larger than or equal to the liquidation value (K), the manager's survival motive caused by the insider influence mechanism can lead to the shareholders' value maximization. In the case where $\delta_S = 1$, the manager chooses the S-project with probability one and this managerial decision is turn out to be optimal for the shareholders' value. Together with (20) and Corollary 1, we can draw Figure 2 which represents the relationship between δ_S and the shareholders' value when $\frac{(1-\gamma)\pi}{1-\beta} \geq K$. We find that as δ_S rises, the shareholders' value (V) approaches to the maximum value (V^S). At higher δ_S, the firm is more likely to continue to operate and pay the dividend to the shareholders for a long time, which increases the shareholders' value.

In contrast, Proposition 3-2 shows that when the firm's continuation value is less than the liquidation value, the internal control mechanism fails to maximize the shareholders' value even with $\delta_S = 1$. Figure 3 depicts the relationship between δ_S and the shareholders' value when

$\frac{(1-\gamma)\pi}{1-\beta} < K$. Note that although the shareholder value increases with δ_S, it cannot reach its maximum V^L. This indicates that when V^S is less than V^L, there exists a fundamental conflict between the manager and the shareholders: the manager wants the firm to survive (prefers the S-project), but the shareholders want it to be liquidated (prefers the L-project). Therefore, the shareholder wealth maximization (liquidation) can never be realized by autonomous management. The external governance mechanisms are necessary to protect shareholders' wealth in this case.

IV. C. Implications for Corporate Governance

The results in this section have several implications for corporate governance. First, we suggest that the management autonomy can be consistent with good performance as evidence by high stock returns. Allen and Gale (2000, p.120) observe that "…despite (the) lack of outside discipline and monitoring, most firms seem to operate fairly efficiently…and their shareholders have historically received high rates of return". This observation, which contradicts with the standard agency theory, is explained by our model: Corollary 1 and Proposition 3-1 indicate the possibility that the autonomous manager seeking for corporate survival maximizes the shareholders' wealth as well.[12]This implies that the external governance is not a necessary condition for attaining good corporate performance. Given that exercising external governance is costly,[13] it can be optimal for shareholders to be passive and leave the firm autonomous, expecting that the manager runs the firm effectively.

Second, our model suggests that the necessity of the external governance mechanism differs among firms, depending on their characteristics. Corollary 1 shows that the insider control mechanism works more effectively for the firms that (i) have higher business information sharing,

[12] In Donaldson and Lorch's (1983) interview, one senior executive explained, "You can grow for growth's sake and that takes care of the shareholders."

[13] In reality, it seems reasonable to suppose that corporate shareholders have some difficulties to monitor and discipline the managerial decisions. Hansmann (1996, p. 77) states that "Investors of capital are often widely dispersed, have no sources of information about the firm beyond publications, and hold the firm's securities as only one of a number of investments. As a result they are in a poor position to police the firm's management".

(ii) more difficulty in monitoring workers, (iii) higher degree of long-term employment, and (iv) face more rigid labor markets. For these firms, decisions by autonomous management become more consistent with shareholders' wealth maximization and therefore the external governance mechanisms are less necessary. This result offers an insight into cross-country differences in the corporate governance systems. For example, we can say that in the countries with the higher degree of long-term employment, such as Germany, France, and Japan, the insider control mechanism is more likely to be effective and able to substitute for the external governance mechanisms than in the U.S.[14] In addition, in these three countries, it seems that unions and other types of internal worker organizations play more active roles in the firm, and through them more information sharing between management and workers may have been encouraged than in the U.S. (Allen and Gale, 2000; Aoki, 1988). These may explain why shareholder intervention and governance appear to have been relatively weak in Germany, France, and Japan compared to the U.S.

In addition, Proposition 3 suggests that the necessity of corporate governance mechanisms also depends on the industry or economic growth. In growing industries or economies where the firm's continuation value is generally larger than the liquidation value, the autonomous manager's inclination for corporate survival is likely to lead to the shareholder wealth maximization; the external governance is less necessary. On the contrary, in declining industries or low-growth economies, the insider control mechanism may bias managerial decision towards survival and prevent him from implementing efficient liquidation or restructuring. In this case, the external governance is necessary for shareholder to get a sufficient rate of stock returns. This seems to be consistent with the fact that hostile takeover was especially active in 1980s in the U.S. (Jensen, 1993)

[14] According to OECD's (1993) report, Germany, France, and Japan have the higher degree of long-term employment (measure by tenure and retention rates) than the U.S.

References

Aoki, Masahiko (1988) *Information, Incentives, and Bargaining in the Japanese Economy*, Cambridge: Cambridge University Press.

Allen, Franklin and Douglas Gale (2000a) *Comparing Financial Systems*. Cambridge, MA: MIT Press.

Allen, Franklin and Douglas Gale (2000b) "Corporate Governance and Competition," in *Corporate Governance*, X. Vives (ed.) Cambridge, UK: Cambridge University Press.

Core, John E., Wayne R. Guay and David F. Larcker (2002) "Executive Equity Compensation and Incentives: A Survey," *Federal Reserve Bank of New York Policy Review*, Forthcoming.

Donaldson, Gordon and Jay W. Lorch (1983) *Decision Making at the Top*, New York, Basic Books.

Garten, Jeffrey, E. (2001), *The Mind of the CEO*, New York, NY: Basic Books.

Hansmann, Henry (1996) *The Ownership of Enterprise*. Cambridge, MA: Belknap Press.

Hermalin, Benjamin E. and Michael S. Weisbach (2002), "Board of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature," *Federal Reserve Bank of New York Policy Review*, Forthcoming.

Holderness, Clifford G. (2002) "A Survey of Blockholders and Corporate Control," *Federal Reserve Bank of New York Policy Review*, Forthcoming.

Jensen, Michael, C. (1993), "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems," *Journal of Finance*, 48, 831-880.

Kleiner, Morris M. and Marvin L. Bouillon (1988) "Providing Business Information to Production Workers: Correlates of Compensation and Profitability," *Industrial and Labor Relations Review*, 41, 605-17.

Morishima, Motohiro (1991a) "Information Sharing and Collective Bargaining in Japan: Effects on Wage Negotiation," *Industrial and Labor Relations Review* 44, 469-487.

Morishima, Motohiro (1991b) "Information Sharing and Firm Performance in Japan," *Industrial Relations* 30, 37-61.

OECD (1993), *Employment Outlook*, Paris.

Schmidt, M. Klaus (1997) “Managerial Incentives and Product Market Competition”, *Review of Economic Studies* 64: 191-213.

Shleifer, Andrei and Robert W. Vishny (1997) “A Survey of Corporate Governance,” *Journal of Finance*, 52 (2): 737-783.

Sunder, Shyam (1997), *Theory of Accounting and Control*, Cincinnati, Ohio, South-Western Publishing.

Vives, Xavier (2000), “Corporate Governance: Does It Matter?” in *Corporate Governance: Theoretical and Empirical Perspectives*, X. Vives (ed.) Cambridge, UK: Cambridge University Press.

	S-project (Survival)	B-project (Bad)	L-project (Liquidation)
Revenue (with e)	a	a	a
Private Benefit	0	B	0
Next Period	Operation	Operation with Prob 1- p	Liquidation (Value: K)

Table 1

Timing

Figure 1

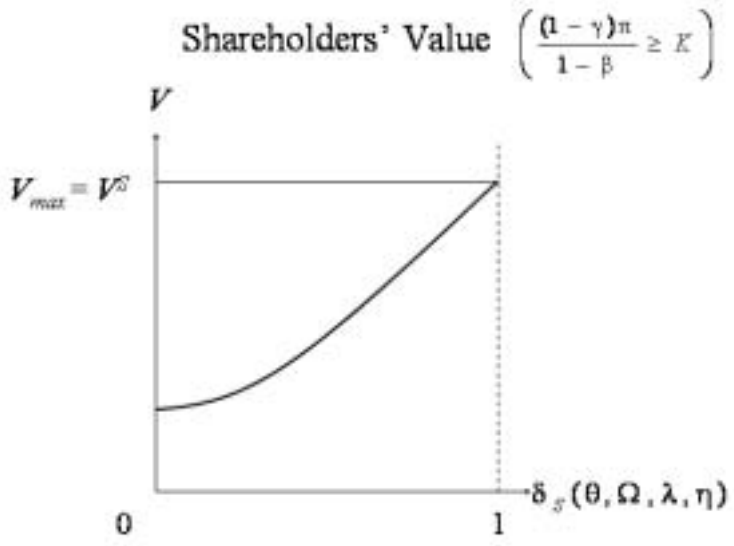

Figure 2

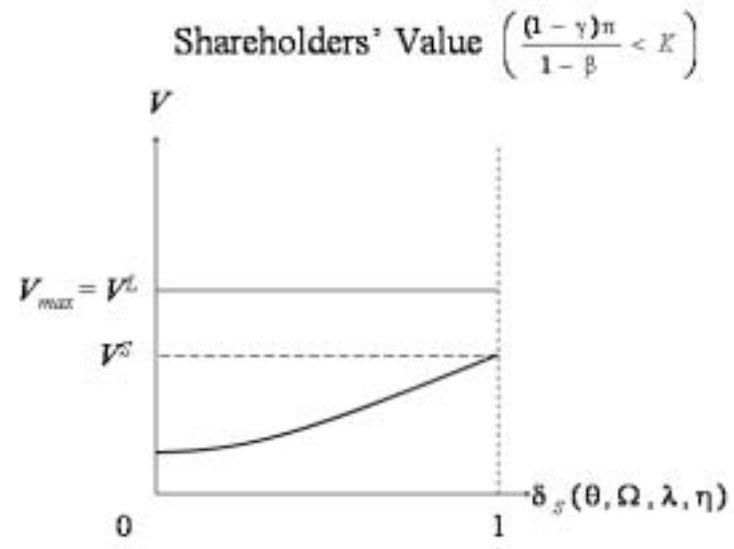

Figure 3