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In Defense of Boards*

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Abstract

It is often assumed that bad corporate performance means a bad CEO. The task of a board of directors is then simple: dismiss the executive. If it fails to do so, the board is said to be indolent. We take a kinder approach to observed

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board behaviour and point to the problems even well-intended boards would encounter. They face the twin task of disciplining and screening executives. We analyse the nature of the retention contract a board uses to discipline and screen executives. Consistent with empirical observation, we find that executives may become overly active to show their credentials, and that the link between bad performance and dismissal is weak.

Key words: board of directors, turnover, retention contracts, selection, moral hazard, empire building

JEL Classification: G30, G34

1 Introduction

The literature on CEO turnover often rests on an important assumption: bad performance means a bad CEO. As a consequence, the problem a board of directors faces seems relatively simple: in case of bad performance, the CEO should be replaced.¹ It is, however, a recurrent finding that substantially worse performance hardly leads to an increase in the chances of dismissal.² To explain this tenuous relation between weak performance and turnover, boards are often characterized as “indolent” and as “ineffective rubber stampers” of top management’s decisions.³ Such characterizations typically invoke descriptions of cases and interviews with top management and board members. We do not doubt the validity and accuracy of these case de-

¹The assumption usually remains implicit by using phrases like “dismising a CEO after poor performance” and “firing an incompetent CEO” interchangeably, see e.g., Borokhovich et al. (1996, p. 340), and Weisbach (1988, p. 431). In other parts of the literature, the gist seems to be that dismissal following bad performance is an unproblematic implication, see, e.g., Warner et al. (1988) and Kaplan (1994).

²See, e.g., Brickley’s (2003) discussion of the empirical research on turnover and performance.

³See Tirole (2006) for a survey of complaints.

criptions. Rather, we want to argue that they point to a reality in which even well-intended board members face thorny dilemmas rather than a simple problem due to the need to balance the attainment of various goals and the availability of scant information. As we will show, one important implication is that the inference from bad performance to bad CEO becomes questionable. Also, the relationship between bad performance and dismissal becomes tenuous. Finally, our analysis sheds light on the question to what extent ‘excessive growth’ of an organization is a moral hazard problem hurting shareholders or a signalling device helping the board.

Mace (1971) provides a classic account of what the relationship between a board of directors and top executives is about in reality.⁴ Directors lack time, knowledge and information to have an active involvement in decision-making.⁵ As a result, the board performs two functions. First, a board “serves as some sort of discipline” (p. 13). When making decisions, top executives take into account what they feel the board would consider acceptable actions, solutions and explanations. The second function a board performs is to decide whether to retain or replace a top executive. However, it is a very difficult task for a board to find out whether the top executive is doing a good job. The board often does not know the problems the company is facing, nor the possible actions it can take or the results it may expect, and by and large it depends on the company for information on these matters. Moreover, directors seem to dislike upsetting amiable relations with the top executives. As a

⁴Mace (1971) is based on interviews with executives and directors of American companies. Lorsch and MacIver (1989), basing themselves on interviews held with directors of American companies in the second half of the 1980s, and Stiles and Taylor (2001), using interviews with directors of British companies conducted in the late 1990s, report findings that are by and large consistent with those of Mace (1971).

⁵Directors refers to outside directors. Mace (1971, pp. 125-127) argues that inside directors depend too much on the CEO to perform a critical role.

result, the board only decides to replace an executive if bad (financial) performance has been apparent for a considerable time (pp. 27–33).

In this paper we focus on the use of retention strategies as a means to discipline and screen executives.⁶ Our analysis sheds light on observed empire building; on the tenuous relationship between performance and dismissal; and casts doubt on the assumption that bad performance results from bad CEOs.

It has become one of the mainstays of the literature on corporate governance that executives will turn into empire builders if not reined in by some tight form of governance. Excessive growth or excessive investment are two forms empire building may take on. It is invariably argued that the construction of such empires reflects executives' hunger for status, power and prestige, see, e.g., Baumol (1959), Marris (1964), Williamson (1974), and Jensen (1986). Empire building, then, stems from differences in preferences between board and executives in conjunction with lack of observability, a typical moral hazard problem. Marris (1964, p. 102) adds that there is a further reason for growth: "When a man takes decisions leading to successful expansion,...he has demonstrated his powers as a manager and deserves his reward. So personal ability also becomes judged by achieved growth". Such signalling can be useful to a board possessing only limited information on an executive's ability. How, then, does a board deal with a possible conflict between soliciting information

⁶The board uses a retention contract to deal with the moral hazard problem of the executive, analogous to the electorate using its re-election strategy to discipline politicians in political agency models [see e.g. Persson and Tabellini (2000)]. Barro (1973) and Ferejohn (1986) were the first to argue that the power to replace agents disciplines agents who are inclined to use office as a means of pursuing their own goals. As far as we know, it is the first time that this analogy is exploited in the literature on corporate governance. A retention strategy stipulates under which conditions an executive is retained or replaced by another one. Much of our analysis amounts to the determination of the optimal contract.

and thwarting empire building? What is the nature of possible retention strategies? How do they differ in the way they trade-off the attainment of the goals of the board?

To answer these questions, we use a simple two-period model, in which on behalf of a board, in each period an executive designs a ‘project’ and decides whether or not to implement it. A project can be anything that is meant to have a substantial impact on the company, e.g., restructuring, diversification, acquisition. The quality of the project depends on the competence of the executive and on exogenous circumstances. The executive knows his competence, but the board does not. When making the implementation decision, the executive observes the exogenous circumstances, but the board does not. The board observes the implementation decision and it learns the quality of the project only when it is implemented. Once the executive has made the implementation decision in the first period, the board can choose between keeping the executive and replacing him.

An important feature of our model is that a highly competent executive is more likely to implement a project than a less competent one.⁷ The reason is that on average a highly competent executive designs better projects, i.e. projects that are profitable in more adverse circumstances. Activism signals competence. The implication of this feature is that activism can be used as a screening device. As a result, the board sometimes wants a highly competent executive to implement projects that are not desirable per se. Moreover, the board wants less competent executives some-

⁷In this respect, our model differs from Holmström (1999, p. 178-179) in which career concerns discourage risk-averse managers to invest. Holmström assumes that managers do not know their abilities. Investing provides information on abilities and consequently makes a manager’s income more risky.

times to abstain from implementing desirable projects. The consequence is that the relationship between bad performance and low quality executive is weakened.

Having established the screening function of the implementation decision, we then show that an executive's desire to keep his job (because of prestige, power, remuneration, etc.) may lead him to exploit this function, and to distort the implementation decision. The executive may partially base the implementation decision on the consequences this decision has for his career. The more the executive is moved by prestige and power, the more he is willing to distort the implementation decision—to build an empire. That is, by using the implementation decision as a screening device, the board *creates* a moral-hazard problem. The board may reduce this problem by dismissing an executive who has been found to have implemented too bad a project. This paper analyzes the trade-off the board faces between discouraging executives from empire building (disciplining) on the one hand, and maximizing the probability that the executive is highly competent (selection) on the other.

Our analysis contributes to the literature on boards of directors. In their survey article, Hermalin and Weisbach (2003, p. 8) observe that “the empirical literature on boards in public corporations is fairly well developed, while theory is still in its infancy”. Stiles and Taylor (2001), when surveying the literature on boards, reach the same conclusion as to the dearth of theory. The paper most closely related to ours is Hermalin (2005). He models how a board selects a candidate for an executive position, forms an impression of the executive's ability, and decides whether to retain or replace him. Two important differences with our paper should be mentioned. First, Hermalin focuses on a single role of the board, screening executives' abilities.

Second, the impression of the executive's ability is based on, say, presentations and interactions in board meetings, but not on observed organizational performance. As a result, the board does not have to reconcile conflicting goals. Graziano and Luporini (2003) model the same selection and retention-dismissal decision. As a board may erroneously hire a less competent executive at the selection stage, it may be hesitant in the evaluation stage to dismiss the executive as this would signal its own lack of competence and possibly trigger its own replacement due to a takeover.

The remainder of this paper is organized as follows. Section 2 introduces the model. In Section 3 and 4, we establish the trade-off the board faces between disciplining and selecting executives. Section 5 discusses how the board shapes the behaviour of the executive given that the board bases its retention decision on the observed project value. Section 6 concludes.

2 The model

We consider a two-period principal-agent model. There is a pool of agents ('executives'), a fraction ρ of which is 'highly competent', h , while the other executives are 'less competent', l . At the beginning of period $t = 1$, an executive is randomly drawn from this pool and becomes the incumbent. At the end of period $t = 1$, the principal ('board') can dismiss the incumbent. If he is dismissed, an executive is randomly drawn from the pool of executives⁸ and enters office in period $t = 2$. If the incumbent is not dismissed, he will also hold office in period $t = 2$.

⁸We assume that a dismissed period 1 incumbent has no chance of becoming the period 2 incumbent.

Once the incumbent has been determined for period $t \in \{1, 2\}$, he designs a project that, if implemented, yields a value v_t . We view this value as the addition to the organization's long term value, relative to business as usual. An incumbent observes v_t . Once he knows the value of the project, he can either decide to implement the project ('change'), $X_t = 1$, or to maintain the status quo ('business as usual'), $X_t = 0$. The competence of an executive determines his ability to design valuable projects - the distribution over projects (payoffs really) is type dependent. Let $F(\cdot|\tau) : [\underline{v}, \bar{v}] \rightarrow [0, 1]$ be the strictly increasing cumulative distribution function, where $\tau \in \{l, h\}$ denotes the type of incumbent and $[\underline{v}, \bar{v}]$ the set of possible payoffs. We assume that $\underline{v} < 0 < \bar{v}$, such that both types of incumbent may design projects that, if implemented, would either hurt the company or benefit it. Furthermore, we assume that $F(\cdot|h)$ first-order stochastically dominates $F(\cdot|l)$, i.e., for all v , $F(v|h) \leq F(v|l)$. This implies in particular that a highly competent executive is more likely to design profitable projects than a less competent executive.

Information

We assume that the incumbent knows his competence, and that when making the decision on X_t , he also knows v_t . The board has limited information on which it can base its decision to retain or dismiss the incumbent. It knows the prior probability that a randomly drawn executive is highly competent, ρ , but it does not know his actual level of competence.⁹ The board observes the decision on X_t . If $X_t = 1$, the board also observes v_t . On the basis of X_t and v_t , the board can update its belief

⁹What is essential in our model is that the incumbent is better informed about his level of competence than the board.

about the level of competence of the incumbent.

Preferences

We model the board as a unitary actor. Its per period payoff is $X_t v_t$, and its goal is to maximize the total (two-period) payoff by using a retention contract. The possible retention strategies are discussed in the following sections. The executive in our model represents a top executive of an organization. He derives utility from holding office—power, prestige, visibility, remuneration etc.—to which we refer as benefits from holding office, λ . Besides caring about these benefits, the executive also cares to some degree about the value of the implemented project. We assume that an executive’s per period payoff equals

$$\begin{cases} X_t v_t + \lambda & \text{if in office in period } t \\ 0 & \text{otherwise.} \end{cases} \quad (1)$$

As we show below, our analysis carries through if prestige and remuneration rise with tenure.¹⁰ The goal of the incumbent in period $t = 1$ is to maximize his total (two-period) payoff using his implementation decision and given the retention strategy of the board; the goal of the incumbent in period $t = 2$ is to maximize period 2 payoff. There is no discounting.

Following the principal-agent literature, we assume that first the principal sets the terms of the contract – the conditions under which an executive is retained or dismissed– and next the agent determines his behaviour given those terms.¹¹

¹⁰Note that by setting the executive’s payoff to zero in case he is dismissed, we assume that his outside option is worth zero.

¹¹Performance related pay is also used to direct executives’ attention and effort. There is no

Timing

Period 1

- The board determines the contract for the two periods. Nature determines the type of incumbent τ , draws the value of project v_1 using the type-dependent distribution function, and reveals τ and v_1 to the incumbent, but not to the board.
- The incumbent takes a decision on the project, $X_1 \in \{0, 1\}$.
- The board observes the decision on X_1 . If $X_1 = 1$, the board also observes v_1 .
- The board chooses either to keep the incumbent or to replace him.

Period 2

- If the incumbent was replaced in period 1, nature draws a type and reveals it to the new incumbent, but not to the board.
- Nature draws v_2 and reveals it to the incumbent, but not to the board.
- The incumbent takes a decision on the project, $X_2 \in \{0, 1\}$, and, in case of $X_2 = 1$, v_2 is observed by the board

denying that incentive pay may work well. There is, however, some evidence that observed incentive pay schemes do not provide a strong relationship between firm performance and pay. In a recent study, Dittmann and Maug (2007, p. 1) conclude that the “standard principal agent model typically used in the literature cannot rationalize observed contracts”. One of the reasons may be that, in the words of Bebchuk and Fried (2003, p. 72), “managerial power and rent extraction ... have an important influence on the design of compensation packages”. This would imply that incentive pay is not a remedy to an agency problem, but part of the problem itself.

3 The Need for Selection

Suppose that the board does not select an executive on the basis of first-period outcomes, but keeps the first-period incumbent no matter what.¹² In that case, strategic considerations stemming from the desire to hold office play no role in the first period¹³. As a result, a project is implemented in period t if and only if its value is positive, $v_t \geq 0$. The ex ante expected per period payoff equals $V_\tau^{\max} := \int_0^{\bar{v}} v dF(v|\tau)$. This retention rule guarantees the maximum per period expected payoff for a given level of competence. It has the drawback that the board may get stuck with a less competent executive, as $V_l^{\max} < V_h^{\max}$. As a result, the board may wish to use information obtained in the first period to condition its retention decision. The board has two pieces of useful information: whether a project was implemented or not, and, conditional on implementation, the value of the project. Using either piece of information is not without its problems.

4 Selection on the basis of activism

The previous section shows that when the board always keeps the executive, a highly competent executive is more likely to implement a project than a less competent one. As a result, executive activism signals competence. In this section we assume that the board rewards activism by retention, whereas an inactive executive is sent home. We show that this influences the behaviour of the incumbent in period 1.

¹²Alternatively, the principal could always dismiss the agent.

¹³Of course, strategic considerations are absent from the last period. Therefore, $X_2 = 1$ if and only if $v_2 > 0$.

Rewarding activism *induces* moral hazard by giving way to ‘empire building’¹⁴.

Consider an incumbent of type τ who has observed v_1 in period $t = 1$. He will implement the project (rather than reject it) if and only if $v_1 + \lambda + [V_\tau^{\max} + \lambda] \geq \lambda$, where the terms in square brackets denote second period payoff. This inequality determines a cut-off value v_τ^* such that the first-period project is implemented if and only if

$$v_1 \geq v_\tau^* := -V_\tau^{\max} - \lambda \quad (2)$$

Equation (2) says that in period 1 an incumbent of type τ is willing to make a loss on a project in order to remain in office. The larger are the benefits from holding office λ , the larger is the loss in value he is willing to accept in the current period. Also, for a given value of λ , a highly competent incumbent is willing to implement projects that destroy more value than the projects a less competent one is willing to implement. Implementation is therefore more likely with a highly competent than with a less competent executive. The more competent an incumbent is, the more he becomes an empire builder to signal his quality. Also note that if prestige and remuneration would rise with tenure, larger empires would be built.

How active does a board want an incumbent to be? That is, how much project value is the board willing to sacrifice in period 1 to find out the level of competence of an incumbent? If the incumbent does not implement a project, he will be replaced by an executive of unknown or ‘average’ quality. The expected payoff this replacement generates is $V_\rho^{\max} := \rho V_h^{\max} + (1 - \rho) V_l^{\max}$. To keep a highly competent incumbent

¹⁴In our paper the term empire building is loosely used to refer to the situation in which the executive chooses "action for action's sake".

the board is willing to pay a price equal to the difference in expected profit $V_h^{\max} - V_\rho^{\max} > 0$. Let $v_h^B := -(V_h^{\max} - V_\rho^{\max}) < 0$ denote the maximal first-period loss the board is willing to accept. Therefore, the board accepts that a highly competent incumbent implements some loss generating projects, but also finds that a highly competent incumbent becomes overly active, as $v_h^* < v_h^B$. That is, only part of the incumbent's empire building is beneficial to the board. Analogously, the board is willing to pay a price to find out that an incumbent is less competent. The board is willing to give up profit in period one if this leads to the incumbent's replacement by an executive of average quality. Ideally a board wants a less competent incumbent to implement a project if and only if $v_1 \geq v_l^B := V_\rho^{\max} - V_l^{\max} > 0$. Of course, $v_l^* < v_l^B$, implying that a less competent incumbent also becomes too active.

Figure 1 illustrates our analysis so far. Panel A (C) corresponds to the implementation decision of a highly competent (less competent) executive ideally wanted by the board. Panels B and D show the range of values of v_1 for which the project is implemented or the status quo is maintained by a highly competent executive and a less competent executive, respectively. The desire to hold office widens the range of parameters for which $X_1 = 1$. The board does not want (i) a highly competent executive to choose $X_1 = 1$ if $v_1 \in [v_h^*, v_h^B)$; nor (ii) a less competent executive to choose $X_1 = 1$ if $v_1 \in [v_l^*, v_l^B)$. Figure 1 depicts the situation for $v_h^B < v_h^*$. This requires that λ is 'small', $\lambda < \lambda^* := V_h^{\max} - V_l^{\max} - V_\rho^{\max}$.¹⁵

¹⁵Note that for $\lambda^* < 0$, $v_h^B > v_h^*$ holds as all relevant values of λ satisfy $\lambda > 0$.

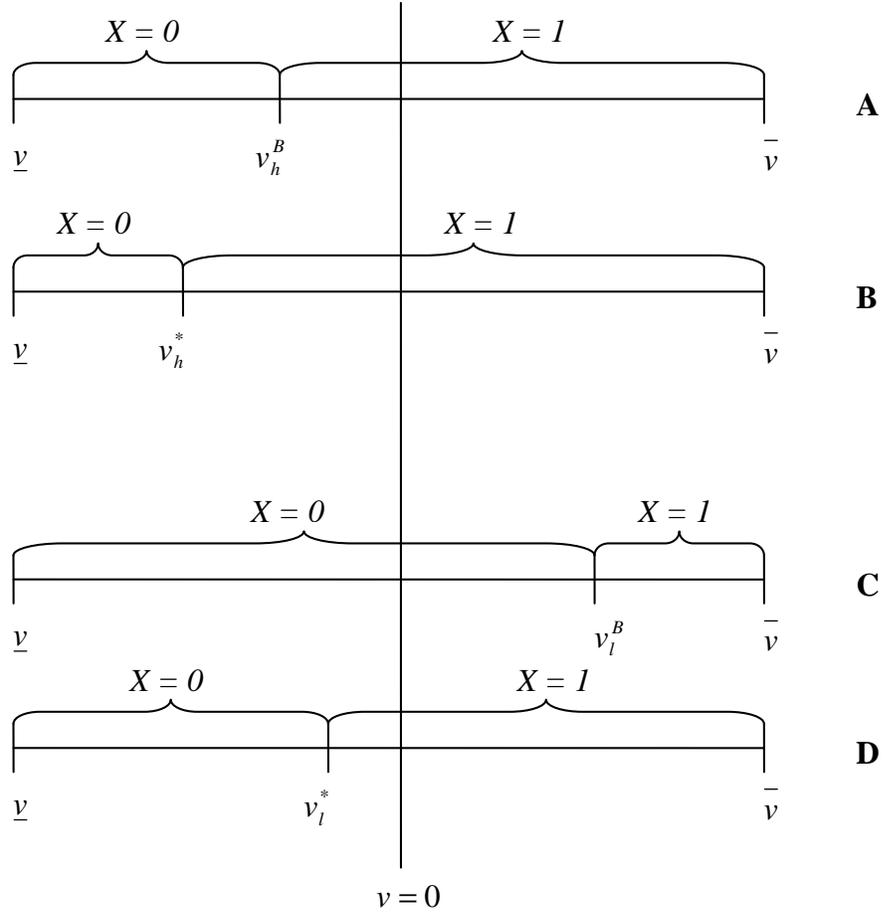


Figure 1

In comparison with *always* keeping the executive, the benefit of keeping the executive *only if* he has implemented a project is an increase in expected payoff in the second period. This stems from the signalling function of the first-period implementation decision. In practice, the quality of executives improves. The downside of keeping the executive only if he has implemented a project, however, is that he distorts the implementation decision. Selecting on the basis of outcomes leads to a moral hazard problem. In practice, executives become empire builders. Moreover, the implementation of value-destroying projects may result from both less competent and highly competent executives. The often assumed tie between bad performance

and less competent management is broken.

Proposition 1 *By selecting executives on the basis of their activism, boards create empire builders. Especially highly competent executives will implement loss generating projects.*

5 Selection on the basis of project value

Rather than focusing on the incumbent's decision on the project, the board could base its retention decision on the observed project value in case of implementation. Of course, if the incumbent maintains the status quo, the incumbent is dismissed. Ex post, i.e., once the incumbent has implemented a project and its value v_1 is known to the board, it will want to keep the incumbent if and only if its updated belief about his quality is at least equal to the population average, $\Pr(\tau = h|v_1) \geq \rho$. Let v_ρ satisfy $\Pr(\tau = h|v_\rho) = \rho$.¹⁶

Two cases can be distinguished based on the sign of v_ρ . We will call the project environment easy for $v_\rho \geq 0$. A positive value of v_ρ implies that mere profitability is not sufficiently strong evidence for high competence. It is relatively easy to design a profitable project: a highly competent executive can reveal his qualities only if he generates a project that is sufficiently profitable. The project environment will be called hard for $v_\rho < 0$. In this case, it is hard to design a profitable project. A project that breaks even is already a sign that the board is facing an incumbent who is at least as likely as a random replacement to be highly competent.

¹⁶Note that v_ρ exists, and satisfies $f(v_\rho|h) = f(v_\rho|l)$.

5.1 Case 1: Easy environment ($v_\rho \geq 0$)

We focus on retention strategies characterized by a threshold value \bar{v}^B : an incumbent is retained if and only if $v_1 \geq \bar{v}^B$.¹⁷ In an easy environment the board can guarantee that only profitably projects are implemented, and that the quality of the incumbent improves over time. In this case, there is no trade-off between value creation in period 1 on the one hand and value creation in period 2 on the other. The ex post threshold value is also ex ante optimal.

Proposition 2 *In an easy project environment, $v_\rho \geq 0$, the ex ante optimal threshold value of the board equals $\bar{v}^B = v_\rho$. This guarantees that the incumbent implements a project if and only if $v_1 \geq 0$, and that an incumbent is kept if and only if it is ex post optimal to do so.*

That $\bar{v}^B = v_\rho$ is the ex post (time-consistent) optimal threshold value is clear (by definition of v_ρ). To see that the incumbent implements if and only if $v_1 \geq 0$, note that for $v_1 \geq 0$, the incumbent benefits at least in period 1 from implementation (because he cares about v_1), and for $v_1 \geq v_\rho$ he is also retained (which he enjoys). On the other hand, for $v_1 < 0$, implementation would be directly costly and not lead to retention. Maintaining the status quo is then best. Clearly, then, $\bar{v}^B = v_\rho$ is also best from an ex ante point of view.

¹⁷Such a threshold retention strategy is optimal if we assume that $F(\cdot|h)$ dominates $F(\cdot|l)$ in terms of the likelihood ratio. $F(\cdot|h)$ dominates $F(\cdot|l)$ in terms of the likelihood ratio if for all $x < y$, $f(x|h)/f(x|l) \leq f(y|h)/f(y|l)$. It is then straightforward to show that dominance in this sense implies that $\Pr(\tau = h|y) \geq \Pr(\tau = h|x)$ for $y > x$.

5.2 Case 2: Hard environment ($v_\rho < 0$)

In a hard project environment, with $v_\rho < 0$, matters are different. In such a situation, the board may face a trade-off between project payoff in period one on the one hand, and expected project payoff in period 2 on the other. This trade-off exists if $v_1 \in (v_\rho, 0)$.

As it will turn out below, to pinpoint the optimal retention contract in this environment, it is convenient to distinguish between the cases $v_h^B < v_l^*$ and $v_h^B \geq v_l^*$. Recall that $v_h^B \geq v_l^*$ requires that λ is sufficiently high.

5.2.1 λ is high ($v_h^B \geq v_l^*$)

This case describes a situation where a less competent executive may implement a project the board is not even willing to accept from a highly competent executive (see Figure 2). For this reason, the retention contract should discourage executives from empire building. The need for disciplining is urgent.

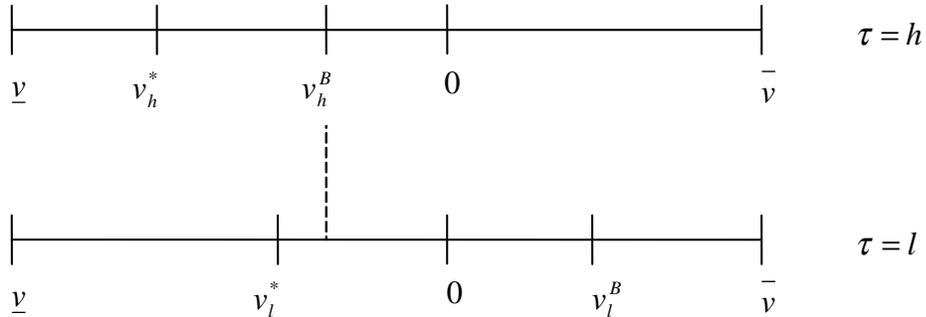


Figure 2

Clearly, in this environment setting $\bar{v}^B < v_h^B$ cannot be optimal. The board would permit both types of executives to implement projects it does not want to be implemented. Does it make sense to set $\bar{v}^B = v_\rho$, the ex post optimal threshold

value? The answer is no. To see this, note that for $v_1 = v_\rho$ retaining or dismissing the executive yields the same expected payoff in the second period. However, it pays for this information in the form of substantial empire building in the first period. Therefore, the board would rather use a stricter retention rule. Specifically, the board sets \bar{v}^B at a value, \hat{v} , such that the cost of a bad project in the first period is equal to the expected benefit of a higher probability of a highly competent executive in period 2. This implies that \hat{v} solves:

$$\hat{v} + [\Pr(\tau = h|\hat{v}) V_h^{\max} + \Pr(\tau = l|\hat{v}) V_l^{\max} - V_\rho^{\max}] = 0. \quad (3)$$

That is, in a hard environment the board must balance two goals. On the one hand, it wants \hat{v} to be close to v_ρ to increase the probability of a highly competent executive in period 2. On the other hand, it wants \hat{v} to be close to zero to reduce the probability and cost of the implementation of a bad project. The next Lemma summarises.

Lemma 1 *Suppose λ is high, such that $v_h^B \geq v_l^*$. Then, it is optimal for the board to set $\bar{v}^B = \hat{v}$, with $\hat{v} > v_h^B$, and where \hat{v} solves (3).*

Our result that for high values of λ , \bar{v}^B equals \hat{v} implies that, as $\hat{v} > v_h^B$, the retention contract of the board disciplines executives. It prevents both less competent and highly competent executives from implementing too bad projects. Furthermore, as $\hat{v} \in (v_\rho, 0)$, it illustrates the need for selection. By allowing the executive to implement bad projects (but not too bad), it increases the likelihood that in period 2 the executive is highly competent.

5.2.2 λ is small ($v_h^B < v_l^*$)

Now suppose that the benefits from holding office are low, such that $v_h^B < v_l^*$. Figure 3 depicts this situation.

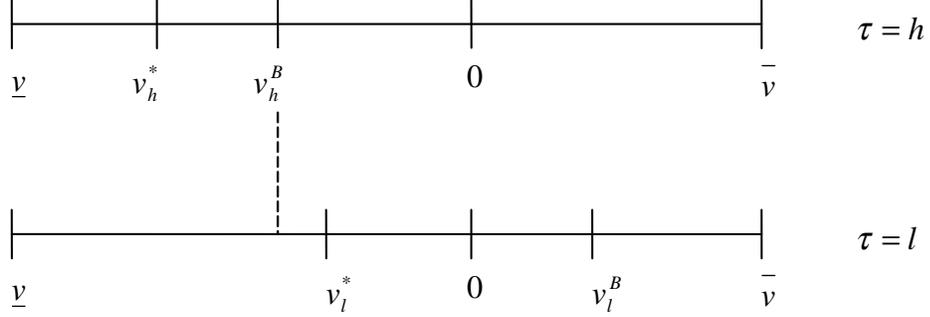


Figure 3

This case deviates from the one described in Figure 2 in that for some values of v_1 , $v_1 \in [v_h^B, v_l^*)$, a less competent incumbent does not implement a project while the board wants highly competent executives to implement it. Of course, the board wants to exploit this. The retention contract should incorporate a line that stipulates that the executive is maintained if $v_1 \in [v_h^B, v_l^*)$.

For values of $v_1 \geq v_l^*$ both a less competent incumbent and a highly competent incumbent want to implement a project, while the board only wants highly competent executives to implement it. When both types of executives want to implement a bad project, it is optimal for the board to retain an executive if $v_1 > \hat{v}$. Recall that for $v_1 = \hat{v}$, the cost of a bad project in the first period is equal to the expected benefit of a higher probability of a highly competent executive in period 2. What the retention rule looks like exactly depends on how \hat{v} [see (3)] relates to v_l^* . If $\hat{v} \leq v_l^*$, then the retention contract is very simple: maintain the executive if $v_1 \geq v_h^B$, and dismiss him otherwise. If $\hat{v} > v_l^*$, then the retention contract consists of two parts:

maintain the executive if $v_1 \in [v_h^B, v_l^*]$ or if $v_1 \geq \hat{v}$, and dismiss him otherwise.

Proposition 3 *In a hard environment, $v_\rho < 0$, it is ex ante optimal for the board to retain an executive if $v_1 \geq \hat{v}$, where \hat{v} solves (3). If $v_h^B < v_l^*$, then the board should also retain the executive if $v_1 \in [v_h^B, v_l^*]$.*

Let us now identify the features that determine the emphasis a board puts on disciplining, that is discouraging executives from empire building in the first period, on the one hand, and selection, that is maximizing the probability that the executive is highly competent in the second period, on the other hand. A crucial feature is the sign of v_ρ . We have argued that when it is relatively easy to design a profitable project ($v_\rho \geq 0$), there is no trade-off between disciplining and selection. A trade-off only emerges when it is hard to design profitable projects. In a hard environment, a board may be willing to retain an executive who has implemented an unprofitable project. Another important feature is how much utility executives derive from holding office, λ . For high values of λ , the need for disciplining is high¹⁸. For small values of λ , the board can rely to some extent on self-selection.

The location of \hat{v} is also essential for understanding the trade-off between disciplining and selection. A value of \hat{v} closer to zero means more emphasis on disciplining. One can verify that if $\rho = 1$, or $V_l^{\max} = V_h^{\max}$, \hat{v} equals zero. The reason is straightforward. In such an environment selecting an executive is not an important matter. More generally, the more important is selecting the proper executive (e.g. because the difference between V_h^{\max} and V_l^{\max} is large), the more the board tolerates the implementation of bad projects. Finally, how hard it is to design a good project

¹⁸Again, if prestige and pay increases with tenure, disciplining would be even more important.

also determines the value of \hat{v} . Loosely speaking, if less competent executives are likely to design very bad projects, then \hat{v} is rather low. In such an environment, selection plays an important role.

6 Conclusion

Boards of directors perform two functions, disciplining the incumbent top executive and establishing his competence. In this paper we have analysed the dilemmas the board may encounter if it uses retention strategies to attain these goals. By basing its retention decision on executive activism the board encourages empire building. By basing that decision on the observed value of implemented projects, the disciplining function may induce the board to demand higher performance than would be best *ex post*.

In our modelling approach we see the executive as the agent, and the board as its principal. There have been other approaches to model the interaction between the executive and the board. Hermalin and Weisbach (1998) argue that it may be better to replace the principal-agent approach by one in which an executive influences the composition of the board and negotiates about its pay. The better the executive performed in the past, the more leeway he will have. Bebchuk and Fried (2003) argue that a managerial power approach to the relation between a board and an executive should complement the standard principal-agent approach. Board members who are selected by the top executive and who enjoy substantial pay and prestige because of their position are unlikely to “rock the boat” and come into action unless some egregious and obvious problem cannot be denied any longer. Future research that

aims at integrating retention strategies as used in the current paper and a bargaining or managerial power approach seems to be a worthwhile undertaking.

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