Delegated Monitoring: When Can Boards Rely on Outside Experts?

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Abstract

This paper provides a theoretical model to examine when and how boards of directors can utilize outside experts who provide second opinions to assist them in 1) monitoring managers with career concerns, and 2) approving firm investments. Because an agreeable second opinion serves as a signaling mechanism, when such opinions are credible, policies mandating the use of experts are unnecessary as managers will choose to seek out second opinions on their own. When Mandates can be counterproductive however when second opinions are not credible, unduly elevating the status of costly second opinions that always agree with management recommendations. In the absence of incentives for truthful disclosure, it is better for boards to forego efforts to monitor and require management and experts to pool their recommendations.

Keywords: Board of Directors, Experts, Monitor, Reputation, Corporate Governance

JEL Classifications: D02, D82, G34, K22
1 Introduction

The provision of expert services to corporations is a large and growing business. Lawyers, accountants, auditors, analysts, investment bankers, management consultants, compensation consultants, and rating agencies are hired by corporations for several reasons. First, outside experts can provide expertise presently unavailable in-house. Second, outside experts can provide second opinions about the value of corporate activities. Investors rely on these second opinions in determining whether or not to invest in a company. Boards rely on these second opinions in determining corporate strategy, that is, what investments the company should make.

In this paper, I investigate theoretically how boards and investors can best utilize outside experts who provide second opinions. In particular, I examine the usefulness of second opinions for investment decisions when those opinions can also be used to evaluate the competence of management. I demonstrate how in certain circumstances, using experts as a check against management recommendations can give rise to agency costs, and lead to worse investment decisions than if the expert was unavailable. The design of rules governing the use of experts (for example: should second opinions be mandated, who should decide when a second opinion is needed, when should an expert make her recommendation) should take into account the possibility of such agency costs and the desire of managers to protect their reputations.

Second opinions from experts about management proposals are useful because boards and investors know less about the company and the competence of management than managers themselves. The authority and responsibility to run the corporation is vested in boards of
directors. Concerns about potential conflicts of interest for inside board members, leading them to favor the interests of managers over the interests of shareholders, has resulted in increased independence requirements for board members. These requirements mean that board members of publicly traded corporations are more likely to be outsiders and hence will have less information about the company than managers who are charged with running the company on a day to day basis. Because of this lack of knowledge and in an effort to demonstrate objective decision making, to satisfy their fiduciary obligations to act diligently and fairly, boards very often rely on third-party experts such as investment bankers, lawyers, and consultants to provide a second opinion certifying that the considered action is fair or in the best interests of the shareholders. Investors of the company are privy to even less information than directors. Third party opinions from stock analysts, auditors and ratings agencies can assist investors in valuing a security.

The source of independent expert credibility can be traced to theories about reputational capital. Independent experts can be credible purveyors of impartial advice, because in advising their clients they place their own reputation for expertise on the line. Longer-term concerns about one’s reputation for expertise should be sufficient to overcome any short-term benefits from knowingly giving incorrect or bad advice (Kreps and Wilson (1982), Milgrom and Roberts (1982), Fudenberg and Levine (1989)). By certifying management disclosures and recommendations, experts can thus credibly communicate that management is acting in the best interests of the firm (Kraakman (1985)).

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1 See for example, Section 141(a) of the Delaware General Corporations Law which states that "The business and affairs of every corporation....shall be managed by or under the direction of a board of directors."

2 Under the Sarbanes-Oxley Act of 2002 and NYSE and NASDAQ listing rules, a majority of board members of publicly listed companies must be independent. In addition, audit, nominating and compensation committees must be comprised entirely of independent directors.
In accordance with this theory, delegated monitoring and certification by experts has become a central component in the corporate governance toolbox. To protect investors, audits of public company disclosures by a registered independent accounting firm is mandated under the Securities Exchange Act of 1934.\footnote{See Section 10A Securities and Exchange Act of 1934.} In addition, debt securities require a certain rating from a ratings agency in order to be considered investment grade and therefore marketable to many institutional investors (insert reference). Boards frequently use experts as a shield against liability: to protect themselves from accusations of fiduciary violations, boards hire investment banks to provide fairness opinions in a merger or acquisition, and compensation consultants in determining CEO compensation.\footnote{See section 141(e) of the Delaware General Corporations Law.} Experts are also used when not required or encouraged by law: boards and managers regularly hire management consultants to assist in evaluating investment opportunities.

In spite of the elegance of theories about expert incentives, there are obvious problems with the widespread reliance on experts. Many have argued that the corporate scandals of the early 2000s (Enron, WorldCom, Global Crossing and others) as well as the financial crisis of 2008, could not have occurred without the participation of outside experts such as auditors and ratings agencies (Coffee (2006), Healy & Palepu (2003), Demski (2003)).\footnote{See also the Congressional Committee on Oversight and Governmental Reform Hearing, “Credit Rating Agencies and the Financial Crisis”, October 22, 2008 (http://oversight.house.gov/story.asp?id=2250).} To help explain their failure, scholars have noted that experts experience their own conflicts of interest which may lead them to collude with management (Coffee (2006), MORE REFERENCES?). Alternatively, experts may not enjoy access to all relevant internal information about a company due to their otherwise desirable outsider status. Instead, they must rely
on management to give them the information they need to reach an informed and accurate opinion about a given proposal.

The emphasis placed on expert opinion by the law, as well as boards and investors therefore presents us with a dilemma. On the one hand, independent experts are supposed to assist principals in lowering agency costs through better decision making. On the other hand, it appears that the use of experts can also serve to exacerbate informational problems between outsiders and insiders rather than ameliorate them. In particular, experts can increase agency costs by legitimizing poor managerial decisions.

In this paper, I ask when and how can principals (in this case, shareholders and boards of directors) use experts to make better decisions while acknowledging the problems with collusion and informational deficiencies. In addition, I investigate the trade-offs principals face between monitoring their agents, and incentivizing agents to give proper access to third party experts. To answer these questions, I use the following framework - boards are independent, experts are both independent, honest and competent, and CEOs care primarily about their reputation for being good stewards of the firm.

I show that in the absence of rules requiring second opinions, CEOs who want to impress their boards (who in turn, determine CEO compensation) will internalize the weight boards give to the second opinion in deciding whether or not to hire an expert. When experts are fully informed, boards will give weight to their opinions.\(^6\) Competent CEOs will then use experts as a matter of course, since outside certification serves as a powerful signaling

\(^6\)I assume throughout the paper that experts are honest. CEOs can manipulate experts only through the information they provide to them. Of course, it is well known that experts may have incentives to collude with management, not acting independently. Although the interpretation changes, the results are identical whether one assumes that experts act without information or are corrupted.
mechanism to the board of CEO skill. Importantly, under a discretionary policy, expert utilization will look identical to a mandatory regime where an expert opinion is sought as a matter of course. Boards benefit from the second opinion because it enables learning about the CEO and increases confidence in investment decisions. Therefore, to the extent that experts enjoy access to all relevant information about an investment, obtaining a second opinion can be an effective means of improving decision making within corporations, assisting boards to make better investments and more accurately while also allowing them to more quickly evaluate the CEO.

On the other hand, when CEOs can easily manipulate experts, a second opinion will give little or no information to the board about the appropriateness of a CEO’s decision. When this is the case, relying on such opinions may be detrimental for the firm, since experts will always validate the proposed course of action. Second opinions based on inaccurate information therefore give undue credence to management claims, and mandating certifications in these circumstances, or requiring boards to follow outside recommendations only exacerbates principal-agent issues. In the absence of rules to the contrary, the board will place no weight on the certification, and CEOs can then more effectively signal their competence by not using an expert. In fact, relying on a second opinion in these circumstances can be detrimental for shareholders, because the firm will make more bad investments than if the board simply disregarded the existence of that opinion. In this case, a discretionary regime strictly dominates a mandatory regime where the use of experts is required - the company saves on wasteful advisory fees, and the board is not locked in to following second opinions that yield no useful information.\footnote{This result is a function of the fact that reputational concerns are paramount in CEO payoffs. In the}
The equilibrium results demonstrate that any efforts to limit management’s ability to manipulate experts help to ensure that policies mandating expert use achieve their desired ends, while reducing the need for such rules in the first place. Credible second opinions enable principals to more effectively evaluate their agents, but a principal’s effort to evaluate can create agent incentives to manipulate the experts. Recognizing the potential adverse consequences in using outside experts to monitor is crucial, because in doing so, boards can implement a set of institutional rules regarding the use of experts in an effort to at least partially restore their value to the firm.

Boards have two options. First, they could attempt to increase the credibility of expert opinion. For example, the board can invest in a technology which increases the likelihood that experts are informed and honest. The much maligned section 404 of the Sarbanes-Oxley Act of 2002 is an example of one such effort to improve the credibility of information disclosures by management to outsiders. Another effort, provisions limiting the ability of outside experts to provide both certification and other services will have an ambiguous effect: reducing the incentives for collusion between managers and experts increase the likelihood of experts behaving honestly, but more independence makes it easier for management to hide information from experts.

Second, boards could tie their own hands in using the second opinion to evaluate man-

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8Section 404 of the Sarbanes-Oxley Act requires managers to assess the adequacy of a corporation’s internal controls.

9For example, auditing and consulting; investment banking fairness opinions and M&A advice; compensation consulting for CEO and benefits consulting for the company, internal investigations and other legal services.
agement ability. When credible, expert second opinions can be used for the dual purpose of evaluating CEO ability and the investment. On the other hand, when the technology to ensure the integrity of second opinions is very costly (the main criticism of section 404), it may be better for the board to effectively renounce its intent to use the recommendation to evaluate the CEO. In this way the board can reduce the CEO’s incentive to manipulate the expert in an effort to improve his own reputation. Insisting that experts work directly with management to come up with a joint (or pooled) recommendation, such that the board cannot distinguish between the CEO’s view and that of the expert, means that the board cannot use the recommendation to evaluate the CEO’s ability. Since the board can’t compare CEO and expert recommendations, there is no benefit to manipulating the expert in an effort to induce agreement. The joint recommendation will be valuable therefore in the investment decision but of no use in evaluating CEO ability. Giving up the capacity to evaluate management can thus result in better disclosure of inside information due to the fact that low ability CEOs no longer fear exposure. In these circumstances, a rule requiring joint recommendations clearly dominates both a mandatory regime where recommendations are kept separate and a discretionary regime where experts will not be used.

This paper fits into a burgeoning theoretical literature which examines why the presence of independent boards does not result in better performance (Hermalin and Weisbach (1998), Warther (1998), Almazan and Suarez (1993), Adams and Ferreira (2006), Song and Thakor (2006), Harris and Raviv (2008)). My results closely mirror the conclusion of Adams and Ferreira (2006): boards who monitor managers too closely may deter managers from revealing important information. The trade-off there results from the board’s dual function as an advisor and as a monitor. Harris and Raviv (2008) demonstrate that sometimes shareholders
are better off with insider-controlled boards than outsider-controlled boards when insiders have better information. I extend this literature by providing a positive account of how independent boards attempt to overcome their informational deficiencies. In my paper, boards hire experts to assist them in making better decisions, but in doing so, create conditions that facilitate monitoring of managers, resulting in worse outcomes as bad managers work to avoid type revelation. Only in circumstances where the expert is not corruptible, and information systems ensure full access will the trade-off described in these papers between agency costs and information not exist.

The structure of my model is somewhat analogous to papers that investigate reputational herding. Scharfstein and Stein (1990) provide a model where an investment manager (who does not know his own ability type but has access to private information) sees another manager’s investment recommendation before making his own. Trueman (1994) also provides a model investigating how analysts (who do know their ability type) predict corporate earnings to protect their reputations.¹⁰ Both of these models demonstrate that agents who are concerned about their reputations will ignore their own private information (even when they have high ability), preferring to recommend in a way that mimics recommendations by others already made. In my model, while high types will not ignore their own private information about likely investment outcomes when making their recommendation, their reputation depends on a concurring recommendation. Just as in the herding models where a concurring prior recommendation protects analysts in the event investments are bad, so too does a concurring second opinion that is obtained after the CEO makes his own recom-

¹⁰See Ottaviani and Sørensen (2000) for additional commentary on the relationship between correlation of private signals and private knowledge about one’s type.
mendation. In reputational herding models, the manager is not given a choice about the presence of additional recommendations. I show below, that if given a choice, high types will do better with additional recommendations, than without. The second opinion certifying the CEO’s recommendation to invest or not, gives more credibility to that recommendation, and provides the CEO with protection in the event that the investment performs poorly.\textsuperscript{11}

Finally, this paper extends formal models showing how career concerns impact investment recommendations (Holmström (1999), Holmström and Ricart i Costa (1986)), by introducing the possibility of third party certification. Auditing has been considered in the literature on optimal contracting between principals and agents where principals are concerned with the effort level of their agents (Baron and Besanko (1984), Kofman and Lawarrée (1993), Khalil (1997)). Kofman and Lawarrée make a distinction between internal and external auditors, noting that internal auditors are costless, well informed but are likely to collude with agents, while external auditors are costly, not informed but will not engage in collusion. Baron and Besanko (1984) and Khalil (1997) do not have mandated audits, but instead describe the optimal audit policy when agents have private information about costs, or production levels respectively. Similar to these models, agents have private information, and auditing (or certification) is one mechanism that can be used by the principal to uncover it. By contrast, these models all focus on the incentives to audit agent activities \textit{ex-post}, while I examine certification for management recommendations \textit{ex-ante}, where the certification itself can be distorted by the private information transmitted by the agent. In addition, these hierarchical agency models (with a principal, agent and auditor) tend to assume that at a cost, auditors

\textsuperscript{11}Of course, this result depends on the high type knowing that the additional recommendation is coming from another high ability type. A second opinion is only credible (and therefore desirable), when the expert’s type is known.
can access all relevant information. In reality, agents are often better informed than both principals and supervisors, and moreover, control access to information relevant to their own performance. While some information will no doubt be verifiable, there may be other relevant information which is "soft" and unverifiable. Information about future rather than past performance may be particularly difficult to verify, especially when even talented CEOs can be wrong.

The remainder of the paper proceeds as follows. Section 2 presents the model. Section 3 describes equilibrium results under different disclosure and regulatory regimes. Section 4 compares different regulatory regimes. Section 5 describes how the results change if CEO payoffs are dominated by private benefits or profit sharing instead of reputational concerns. Section 6 concludes.

2 The Model

Consider an environment in which there is a single firm with many shareholders, a CEO who runs the firm, an independent board of directors to whom the CEO reports\textsuperscript{12}, and an outside expert who is available to provide a second opinion to the firm for a fee. To grow the firm’s business, the CEO must make new investments, which must ultimately be approved by the board of directors. Although the board is independent, it relies on the CEO to make recommendations about investment opportunities since it has neither the resources

\textsuperscript{12}For the purposes of the model, I assume the entire board consists of independent directors. In reality, some insiders usually sit on the board, however insiders are not allowed to sit on key governance committees (such as nomination, compensation or auditing), or on investment committees where there is some potential conflict of interest between managers and director decisions. Outside experts are particularly relevant in these contexts. Alternatively, one can imagine the CEO serving as a proxy for all inside board members.
nor the capability to come to a view on its own. In addition to approving non-routine large investments, the board evaluates CEO performance. This entails setting CEO compensation to reflect his ability at increasing firm value through making investments, and replacing the CEO if the board loses confidence in his abilities. Of course, CEOs carry out other important tasks such as managing the firm’s existing business. Many of these tasks however, require decisions about investments (such as investing in R&D to bring out a next-generation product) or divestments (whether to sell or shut down an existing business).  

At the beginning of each period, an investment opportunity becomes available to the firm, of which both the board and the CEO are aware. If approved, the investment costs the firm \( c \in (0, 1) \). A good investment \( G \) is profitable for the firm, yielding a return of 1, while a bad investment \( B \) has a return of 0, resulting in a net loss. If the board does not approve the investment, it is not made, although the outcome is known. Both the CEO and the board know that the \textit{ex-ante} unconditional probability that the investment outcome is good is \( \frac{1}{2} \).  

Before making his recommendation, the CEO draws a signal \( s_i \in \{ s_i^G, s_i^B \} \) using all available internal and external information indicating whether the investment is good or bad. Based on this signal, the CEO makes a recommendation to the board about whether or not to make the investment. The CEO has an ability type \( i \in \{ H, L \} \) in evaluating the desirability of making a certain investment. CEOs with type \( H \) have high ability in making investment decisions, while type \( L \) has low investment ability.

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13 The model focuses on board oversight of CEOs, but the framework is equally applicable to managers overseeing their employees.

14 An earlier version of this model (available at request from the author) treats the probability of a given investment state as a variable. None of the key results change, although there is more fine-tuning of the low type's recommendation strategy.
I assume that the high type draws an accurate signal with probability $p \in \left( \frac{1}{2}, 1 \right)$. The probability $p$ represents the probability the CEO has a good (bad) signal when the true investment outcome is good (bad). While signals may be informative, they will not always be correct. Since unpredictable events can sour even the most promising of investment opportunities, investment outcomes are inherently uncertain. Therefore, the most accurate inference will only be imperfectly correlated with the true investment state, and high types cannot be absolutely confident that they will be correct. On the other hand, the low type draws an uninformative signal, that is, the signal is independent of the true investment state. The low ability CEO knows the unconditional probability that the investment is good or bad, but does not have the skill to use the available information to make a more informed recommendation. Given the assumption of maximum uncertainty about outcomes, the low ability CEO will be right at least half of the time.\(^\text{15}\)

The board is uncertain about the CEO’s type. It maintains a prior belief that the CEO has high ability with probability $\alpha \in (0, 1)$. The board derives its belief from all that it knows about the CEO’s performance in this and in other positions. The CEO however, is aware of his own ability type. One might alternatively think that there is an initial move by nature determining the probability distribution over CEO types in the population. The board knows these probabilities, but the actual type is known only to the CEO.

In addition to the CEO’s recommendation, the board can rely upon a recommendation from a third party expert $s_e$, who charges the firm a fixed fee $z$. The expert is known to have high ability. A key assumption is that high ability types all draw identical signals. This

\(^{15}\)One interpretation of this assumption is that the CEO’s signal is based on available information about the investment. The high ability CEO has the skill to interpret ambiguous information to reach an informed investment decision, while the low ability CEO does not.
assumption implies that uncertainty is systematic: high ability CEOs and experts will be incorrect about exactly the same factors when presented with exactly the same information.\textsuperscript{16} Low types do not know what recommendation the expert will make; however, they do know the probability that the expert makes a good or bad recommendation.

There are two reasons why paying for an additional recommendation may be valuable to the board: 1) the expert provides an additional recommendation, providing reassurance to the board that an investment is worth making (or not); and 2) the second opinion increases the board’s capacity to evaluate the CEO by allowing the board to compare CEO and expert recommendations. Initially, I assume the expert is non-manipulable. That is, the expert will come to a conclusion independent of the actions of the CEO. Later we will adjust this assumption to allow the CEO to manipulate the expert into providing a particular recommendation.

\textbf{2.1 Timing of the Game}

In order to examine the necessity and value of regulations requiring a second opinion by an outside expert, I examine several different regulatory regimes, each of which reflects the different use of experts in corporate practice today. I first consider an unregulated environment where the CEO makes all decisions and the board is passive, only seeing recommendations and making final approval decisions. Frequently the CEO has discretion over whether or

\textsuperscript{16}Scharfstein and Stein (1990) make a similar assumption. Perfect correlation of high ability signals provides a simple structure in which to examine the demand for second opinions. The equilibrium results below will follow through so long as inferences between experts and high types have some degree of positive correlation. This is not the case when inferences are independent. Then, the expert’s recommendation does not give the board additional information about CEO type and so the signaling value of the second opinion is no longer present. With independent signals, the second opinion will, however, give the board additional information about the investment outcome, and therefore assists it in determining whether to approve the investment, even when the CEO has high ability.
not to seek outside assistance. Against this unregulated discretionary regime, I compare an environment in which certifications are mandated either by law, contract or board policy. A regulated environment is equivalent to one in which boards have their own set of experts, who report directly to them.\footnote{Several commentators have suggested that boards should have their own set of advisors permanently on call as a way to overcome informational asymmetries between boards and managers. See for example Goldberg (1972), Hazard and Rock (2004) and Cox (2003).}

In the unregulated game where the CEO has control over the use of experts, before play begins, at time $t = 0$, the board forms its belief about the likelihood that the CEO has high ability. At time $t = 1$, an investment opportunity becomes available and the CEO draws his signal. At this point the CEO decides whether or not to hire an expert. Let $e_i \in \{ e_i^h, e_i^n \}$ denote the hiring decision where $e_i^h$ represents the decision by a CEO with type $i$ to hire, and $e_i^n$ is the decision not to hire. Note that with mandates, the expert is always hired.

If he decides to hire an expert, the CEO must also determine the timing of recommendations, in particular, whether CEO and expert recommendations should be \textit{pooled} or \textit{separated}. The notion of pooled and separated recommendations, not to be confused with pooling and separating strategies, is designed to capture the idea of certification – that is, whether the board can compare recommendations to evaluate the CEO. With pooled reports, the CEO sees the expert’s recommendation before making his own. Since high types and experts will always draw the same inference (because their signals are perfectly correlated), recommending differently to the expert will always lead the board to believe the CEO has low ability. Therefore in equilibrium low types will never disagree with the expert. The reports are "pooled" because the board cannot distinguish the CEO’s recommendation from that of the expert since they will always be in agreement.
Alternatively, with separated reporting the CEO makes his recommendation to the board prior to knowing what the expert’s recommendation will be. Boards can only compare CEO and expert recommendations if the reports are separated in this sense. Separating recommendations by time – that is, hiring the expert only after the CEO makes a recommendation – would be one credible method of providing separated reports. Let \( r_i \in \{ r_i^s, r_i^p \} \) denote the reporting strategy where \( r_i^s \) represents a decision to separate reports while \( r_i^p \) represents pooled reports. With no regulation, the CEO can determine whether to have pooled or separated reporting. With mandated use of an expert, boards can require either pooled or separated reporting.

At time \( t = 2 \) the CEO makes his recommendation to the Board. After seeing the recommendation(s), the board decides whether to approve the investment or not. The board is risk neutral and approves investments with the goal of maximizing expected profits for the firm, which is just the expected benefit of the investment, minus the cost of investing \( c \).\(^{18}\)

At time \( t = 3 \), the investment outcome is realized. At this point, the board updates its prior belief about CEO ability using Bayes rule. The posterior belief, denoted by \( \hat{\alpha} \), is equivalent to the CEO’s compensation going into the next period. The model focuses on the reputational concerns of CEOs, rather than the private benefits CEOs stand to gain upon certain events transpiring, or upon profit sharing in the event the investment goes well.\(^{19}\)

\(^{18}\)At the time the board makes their final investment decision, the expert fee \( z \) is a sunk cost, and so the board should not take this into account. This is not to say however, that the board should never take into account the extent of the fees. If the fee is too large, the additional benefit from the second opinion (more confidence about the likely investment outcome, and better knowledge about CEO type) will be outweighed by the cost. Boards should therefore take expert fees into account when deciding whether to hire, or allow the CEO to hire an expert in the first place.

\(^{19}\)Examples of private benefits include large payouts or “golden parachutes” that become payable upon a change of control transaction, and stock in the private company that accrues to management in the event of a management buyout (MBO) of a publicly traded company. Examples of profit sharing include grants of company stock and stock options.
While in some cases, private benefits and profit sharing will be large enough to overcome concerns about reputation, it is legitimate to think that in general, efforts to influence standing with the board and with the corporate community at large will be a guiding motivation of many CEOs. In any event, in Section 4 below I discuss the optimal institutional rules around the use of third-party experts when alternative forms of compensation are large enough to swamp reputational concerns.

Given the structure of the game described above, the CEO’s actions in the first period only affect his objective function through his continuation payoff $\hat{\alpha}$. Therefore his choices in equilibrium must maximize the expectation of the continuation payoff over all possible realizations of investment outcomes. The CEO makes choices to maximize the expected posterior belief of the board. This structure is analogous to a game in which there are two periods and play ends after the second period.
The timing of the regulated game is similar to that of the unregulated game, except that an expert’s second opinion is mandated, either because of law, as a liability shield, or because of board policy. Below I compare mandated regimes where CEO and expert reports are required to be separated (akin to certification), with a mandate requiring the CEO and expert to recommend jointly. The analysis is divided into mandated use and discretionary use of outside experts to reflect heterogeneity of use in practice. Companies are frequently required to obtain second opinions from independent experts for investment decisions. For example, publicly traded corporations are required to have their financial disclosures independently audited by outside auditors.\footnote{SOX requires external auditors to report directly to the audit committee (section 301). The Securities}
closures will depend on views about likely investment outcomes (NEED REFERENCE). In addition, not required by regulation, but employed as a liability shield against breach of their fiduciary duty of care and loyalty, boards regularly obtain independent fairness opinions from investment banks in major corporate transactions such as mergers or acquisitions.\(^{21}\) In securities offerings, companies and underwriters employ attorneys to perform due diligence on management disclosures about financial performance and operating risks.\(^{22}\) Companies seeking to issue debt seek a credit rating from a ratings agency. Finally, companies do not have a choice over whether they are covered by investment analysts who issue buy, hold and sell ratings on stocks based on their opinion of investment strategy and growth potential.

On the other hand, management often has discretion over the use of outside experts. For example, management consultants are hired by, and work directly with management to form a recommendation on a given strategy; investment banks bring investment opportunities to firms, or will work with management to assess potential acquisitions or merger targets; and attorneys and accountants work with in-house counsel and finance department on legal and accounting issues respectively. I assume that when the use of experts is mandated (either because of law or internal board policy), the Board must follow the recommendation of the

\(^{21}\) Smith vs. Van Gorkum (488 A. 2d. 875-878 (1985)) is the seminal case establishing that second opinions, known as “fairness opinions”, serve as a liability shield for boards from shareholder lawsuits. In Van Gorkum, the Delaware Supreme Court stated that while the obtainment of an independent fairness opinion in a change of control transaction is not required, it is evidence that directors have met the enhanced fiduciary burden that arises when transactions are not conducted at arms length. Cases subsequent to Van Gorkum have confirmed that fairness opinions issued by investment banks, consulting firms, accounting firms or other independent advisor, are sufficient to effectively remove legal risk for gross negligence for board directors.

\(^{22}\) The Securities Act of 1933 imposed strict liability on any issuer of securities that makes a material misstatement or omission in the disclosure document. As a defense, officers and directors need to show that they conducted a “reasonable investigation” verifying the accuracy of claims made in the issuing document. The obligation to conduct a reasonable investigation has essentially been delegated to the company’s corporate attorneys. See Coffee (2006).
3 Equilibrium Results

3.1 CEO Discretion and Honest Experts

Throughout the analysis, I utilize the equilibrium solution concept of Perfect Bayesian Nash Equilibrium. To obtain uniqueness, I impose the intuitive criterion (Cho and Kreps (1987)). The intuitive criterion eliminates equilibria that can only be sustained by imposing unreasonable beliefs about out-of-equilibrium behavior. The unique equilibrium for the unregulated game (where the CEO has discretion over the use of experts) is first defined then described below.

Definition 1 (Perfect Bayesian Nash Equilibrium with CEO discretion): i) Knowing his own ability type and after drawing his signal, the CEO makes a hiring decision \( e \in \{e^h, e^n\} \), reporting decision \( r \in \{r^s, r^p\} \) that maximizes his expected continuation payoff \( E[\alpha] \); ii) after observing the CEO’s recommendation, the CEO’s reporting decision, the expert’s recommendation (if hired) and the investment outcome, the board updates its prior belief about CEO ability using Bayes law; iii) the board approves investments after a positive recommendation and when the expected profits are positive; iv) board beliefs are consistent with CEO strategy and CEO strategy is optimal given board beliefs; and v) board beliefs about off-equilibrium path strategies satisfy the intuitive criterion.

\[23\] In signaling games, the intuitive criterion requires that if the information set following a certain action \( a_j \) by a given type \( t_i \) is off the equilibrium path, and that action is equilibrium-dominated for that type, then the receiver’s belief \( \Pr(t_i | a_j) \) should place zero probability on the player being type \( t_i \). In a perfect Bayesian equilibrium in a signaling game, the action \( a_j \) is equilibrium-dominated for type \( t_i \) if \( t_i \)’s equilibrium payoff is greater than \( t_i \)’s highest possible payoff from playing \( a_j \). See Cho and Kreps (1987).
Proposition 2 (CEO discretion): There exists a unique Perfect Bayesian Nash equilibrium in which (i) both high and low ability CEOs always hire an expert, choose a separated reporting structure and make recommendations in accordance with their signals; (ii) the board believes the CEO has low ability if he chooses not to hire an expert, or if he chooses a pooled reporting structure; and (iii) the board approves investments when the expert makes a good recommendation, and when the expected payoff is positive \( p - c > 0 \).

Proposition 2 states that when CEOs have full discretion over the use of experts, they will always choose to hire one even when not required by the board, and they will make their recommendations separate to the expert even if risky. Ironically, high types are always better off using an expert, even though the high type already knows what the expert will say. Low types are strictly worse off hiring an expert, even though the expert adds valuable new information. Because of board beliefs about off-equilibrium path behavior, low types will still prefer to imitate high types.

The proof for the existence of this equilibrium is straightforward. All we need to show is that neither the high type nor the low type have any incentive to deviate from their hiring and reporting strategies given board beliefs. This is clearly the case here. By deviating, both types have an expected payoff of 0. By hiring and reporting separately, expected payoffs are strictly positive (described more fully in equations (4) and (6) below). Thus neither party will deviate, and CEO strategies and board beliefs constitute an equilibrium. The remainder of this discussion will focus on demonstrating why this equilibrium is unique.

To understand why high types prefer to hire experts even when they add no new information about an investment, it is helpful to examine the high type’s payoffs if no expert is
Without a second opinion, the board uses its observation of the recommendation and the investment outcome to update its priors. Using Bayes’ law, the board’s posterior belief when the CEO is proven correct (that is, he makes a good (bad) recommendation and good (bad) outcome ensues) and no expert is hired is,

$$\tilde{\alpha} \left( G \mid s^G, e^n \right) = \tilde{\alpha} \left( B \mid s^B, e^n \right) = \frac{\alpha p}{\alpha p + (1 - \alpha) \frac{1}{2}} \quad (1)$$

The posterior when the CEO is wrong is,

$$\tilde{\alpha} \left( B \mid s^G, e^n \right) = \tilde{\alpha} \left( G \mid s^B, e^n \right) = \frac{\alpha (1 - p)}{\alpha (1 - p) + (1 - \alpha) \frac{1}{2}} \quad (2)$$

Since $p > \frac{1}{2}$, low ability CEOs are more likely to be wrong about the likely investment outcome than high ability CEOs. This means that the board’s posterior increases relative to the prior when the CEO is right (that is $\tilde{\alpha} \left( G \mid s^G, e^n \right) > \alpha$ and $\tilde{\alpha} \left( B \mid s^B, e^n \right) > \alpha$), while the posterior when the CEO is wrong decreases relative to the prior ( $\tilde{\alpha} \left( B \mid s^G, e^n \right) < \alpha$ and $\tilde{\alpha} \left( G \mid s^B, e^n \right) < \alpha$). Thus, while the high type is rewarded when investment outcomes are as predicted, he is punished when he is wrong about the investment outcome even though he did the best possible job in making his recommendation. The expected payoff for the high type when no expert is hired is:

$$E_H [\alpha \mid e^n] = p \frac{\alpha p}{\alpha p + (1 - \alpha) \frac{1}{2}} + (1 - p) \frac{\alpha (1 - p)}{\alpha (1 - p) + (1 - \alpha) \frac{1}{2}} \quad (3)$$

An equilibrium where no experts are hired can be sustained if the board believes that only low types seek second opinions, then in equilibrium no type will hire an expert. The question we are interested in is whether such beliefs are reasonable.
Even though high types will be punished if they are wrong, their expected payoff $E_H [\hat{\alpha} | e^n] > \alpha$: that is, their reputation is expected to improve over time.\(^{25}\)

Contrast equation I3) with the high type’s payoff after using an expert and reporting separately. Instead of looking to investment outcomes, the board now updates its prior based on whether the recommendations between the CEO and expert match. There is no point in punishing a CEO for being wrong when the expert is also wrong: it is not because of incompetence, but because of systematic uncertainty that the investment did not perform as predicted. Therefore, when recommendations match, the board updates its’ posterior belief about CEO ability as follows:

$$
\hat{\alpha} \left( s^G_c | s^G, e^h \right) = \hat{\alpha} \left( s^B_c | s^B, e^h \right) = \frac{\alpha}{\alpha + (1 - \alpha) \left( \frac{p}{2} + \frac{(1-p)}{2} \right)} = \frac{2\alpha}{1 + \alpha}
$$

where $\frac{p}{2} + \frac{(1-p)}{2}$ is the likelihood that both the expert and the low type make the same recommendation.

A few points are worth noting. First, the posterior increases even if the investment does not perform as expected. Since the board recognizes the skill of the advisor, and knows that outcomes are uncertain even for the best of abilities, the existence of agreement between the CEO and the expert protects the CEO from adverse inferences. Second, the posterior with an expert is greater than without even if the investment performs as planned: that is, 

\(^{25}\)We can see that this inequality must hold because $E_H [\hat{\alpha} | e^n] = \alpha$, for $p = \frac{1}{2}$: $E_H [\hat{\alpha} | e^n]$ is strictly increasing in $p$, and by assumption $p \in (\frac{1}{2}, 1)$. 

http://law.bepress.com/usclwps-lewps/art115
\( \hat{\alpha} \left( s^G_e \mid s^G, e^h, r^s \right) > \hat{\alpha} \left( G \mid s^G, e^n \right) \). This means that regardless of the investment outcome, the high type always does better with an expert.

If the recommendations disagree, the board’s posterior is:

\[
\hat{\alpha} \left( s^G_e \mid s^B, e^h \right) = \hat{\alpha} \left( s^B_e \mid s^G, e^h \right) = 0
\]  

(5)

It is this very possibility that the expert’s second opinion will fully reveal the low type as such that enhances the high type’s reputation. Using an expert provides a mechanism for high types to separate themselves from low types, as will happen when the expert disagrees with the low type.

Given that the high type always agrees with the expert, the expected return for the high type from using an expert with separated reporting, \( E_L \left[ \hat{\alpha} \mid e^h, r^s \right] \), is just equation (4). Clearly, using an expert with separated reports is always better for high types than using no expert (that is, \( E_H \left[ \hat{\alpha} \mid e^h, r^s \right] > E_H \left[ \hat{\alpha} \mid e^n \right] \)). On the other hand, low types are strictly worse off under this kind of regime. Half of the time, the recommendations will match, and the other half there will be disagreement. When there is disagreement, the low type receives a payoff of 0. Formally,

\[
E_L \left[ \hat{\alpha} \mid e^h, r^s \right] = \frac{\alpha}{1 + \alpha} < \frac{1}{2} \left( \frac{\alpha p}{\alpha p + (1 - \alpha)} \right)^{1/2} + \frac{1}{2} \left( \frac{\alpha (1 - p)}{\alpha (1 - p) + (1 - \alpha)} \right)^{1/2}
\]

\[= E_L \left[ \hat{\alpha} \mid e^n \right]
\]  

(6)
The expected payoff for the low type with an expert is strictly lower than if no expert was available.\(^{26}\) Although low types would prefer not to hire an expert and report separately, given the structure of board beliefs, they cannot deviate or else they will receive a payoff of 0 - worse than taking on the risk of disagreement.

In addition to the equilibrium where no expert is used, there exists one where an expert is used but reports are pooled. Like the no expert equilibrium, an equilibrium where there is pooled reporting can be eliminated because board beliefs regarding off-equilibrium path behavior do not satisfy the intuitive criterion. To see this, consider the payoffs under a pooled reporting regime. It must be the case that the board’s posterior following an observation of a pooled report with an expert is simply the same as the prior. That is,

\[
\hat{\alpha}(s, s_e, e^h, r^p) = \alpha
\]

Because there is never any disagreement between the expert and the CEO (since the low type has an opportunity to see the expert’s recommendation before making his own), the board cannot use the expert’s recommendation to evaluate the CEO. Because experts can be wrong about investment outcomes, the board cannot use the recommendation itself to evaluate the CEO. Thus pooled reporting benefits only low ability types - high ability types are worse off under this regime because they cannot distinguish themselves at all. In general, the less likely it is that the expert and low type agree, the more the high type benefits from obtaining an expert opinion. The opposite is also true, the benefit to the high type from

\(^{26}\)The inequality is strict because \(p \in (\frac{1}{2}, 1)\). If \(p = \frac{1}{2}\), \(E_L[\hat{\alpha} | e^n] = \alpha > E_L[\hat{\alpha} | e^h, r^p]\). If \(p = 1\), \(E_L[\hat{\alpha} | e^n] = \frac{\alpha}{1 + \alpha} = E_L[\hat{\alpha} | e^h, r^p]\). Since \(E_L[\hat{\alpha} | e^n]\) is strictly decreasing in \(p\), it must be that for all \(p\), \(E_L[\hat{\alpha} | e^h, r^p] < E_L[\hat{\alpha} | e^n]\).
obtaining a second opinion diminishes the more likely it is that the low type and expert agree. In addition to protection in the event investments don’t perform as predicted, it is the possibility of disagreement makes the expert’s recommendation of use to the high type, a point we return to below when discussing equilibrium outcomes when advisors are corruptible or manipulable.

To summarize, in the absence of regulation, when CEO reputational concerns are paramount and when experts are non-manipulable, the only reasonable equilibrium outcome is one where both high and low ability CEOs hire experts to provide a separate report to the board about the desirability of a given investment. This is due to several reasons. First, high ability CEOs wish to protect themselves in the event that investments turn sour or they pass on what turn out to be good investments. Second, because there is perfect correlation between high type and expert signals, disagreement between experts and CEO recommendations has the potential to fully reveal a low ability CEO. The possibility of such revelation enhances the CEO’s reputation when recommendations do match. Third, even though the possibility of full revelation of type means that low types would prefer not to hire an outside expert or pool reports with the expert, deviation from their equilibrium strategy leaves them still worse off given board beliefs: better to take their chances with the expert than to stray off-equilibrium path.

This analysis has implications for the usefulness of regulation or policies encouraging the use of experts. I have demonstrated that a certification regime will arise naturally when CEOs have reputational concerns, and advisors are honest, informed and competent. In these circumstances, policies mandating an independent second opinion are not necessary. To support this result, we have evidence that there was strong demand for external audit-
ing in the United States in the 1920’s, prior to the institution of auditing mandates. By 1933, 85% of all publicly traded corporations already sought outside audits as a signal to investors of disclosure quality.\textsuperscript{27} More recently, there is evidence that such signaling occurred with Section 302 of Sarbanes-Oxley Act requiring that CEOs certify the company’s audited statements. Executives at several public companies (including among others, Fannie Mae, Gannett Co, Marriott, Corning, Delphi Corp) certified their financial disclosures before the signing deadline as a way to demonstrate their confidence in their statements. J.T. Battenberg, CEO of Delphi Corp and one of the first executives to certify, stated, “Some CEOs said I put them on the defensive.” Similarly Corning Inc stated that it wanted to certify when it was not yet required to do so, because it would underscore its differences with other firms in the telecommunications sector.\textsuperscript{28}

3.2 CEO Discretion and Uninformed Experts

The analysis has thus far assumed that experts enjoy full access to all information about the investment before making their recommendation. The board can then rely on expert opinion in both updating their belief regarding CEO type, and in determining whether or not to make an investment. Frequently however, as is well known, outsiders experts will not have access to all relevant information and must instead rely upon insiders such as the CEO to provide them with such information. The possibility that experts can be manipulated by

\textsuperscript{27}Colonel A.H. Carter, President of New York Society of Certified Public Accountants in testimony to the Senate Committee on Banking and Currency, 73rd Cong. 56-62 (1933). In these same hearings Senator Gore pointed out that pervasive auditing failed to prevent the 1929 Crash. See Previts and Merino (1998).

\textsuperscript{28}Downey Grimsley, “Signing the Bottom Line; Top Executives at 16 Companies Certify Their Books”, Washington Post, August 1, 2002. Easterbrook and Fischel (1991) use a similar signaling argument to explain why mandatory disclosure regimes may not be necessary when there is adverse selection among firms.
the CEO greatly reduces the value of the expert’s recommendation to both the CEO and the board. Whereas before, when experts were informed, a second opinion assisted the board in both monitoring the CEO and making better investments, now a second opinion helps to further neither of these goals. Further, policies that fail to recognize the possibility of expert manipulation run the risk of generating worse outcomes than if they never existed.

Assume now that the CEO can provide the expert with information he knows will lead the expert to a certain conclusion, withholding relevant information that may lead to a different conclusion. When reputational concerns are paramount, the high type has no incentive to withhold information since he always knows what the expert will recommend, and thus will be assured of a match. With separated reporting, the low type however, has a strong incentive to sway the expert’s opinion to ensure a match. Proposition 3 describes the unique equilibrium that arises when the CEO can withhold information to manipulate the expert’s recommendation to match his own signal.

**Proposition 3 (CEO discretion with uninformed expert):** When the CEO has discretion about the use of an expert and experts are manipulable, the following strategies and beliefs constitute a unique equilibrium: i) no expert is ever hired; ii) the board believes that the CEO has low ability if he hires an expert; (iii) the board approves the investment when the CEO makes a good recommendation and $\alpha p + (1 - \alpha) \frac{1}{2} - c > 0$.

Notice that without a credible second opinion, the expected payoff from making the investment declines. The choice to use an outside expert is undesirable for the high type, even when that second opinion can convey useful information about an investment through pooled reporting. The choice to *not hire* becomes a signal since low types would prefer to
pool their recommendations with the expert, and allow no learning about type. This result is analogous to anti-herding described by Levy (2004), where high ability managers with career concerns deliberately act unilaterally and not seek advice, even though that advice is costless to them.

As above, showing the existence of the equilibrium described in Proposition 3 is simple: given board beliefs, neither type would want to deviate and hire an expert. Assume that the board knows the incentives of the low type, but is unable to detect the manipulation of information. Since the low type always lies to the expert when detection of the lie is unlikely\(^{29}\), the board knows that recommendations will always match. This means that if the CEO decides to hire an expert and report his recommendation separately to the expert, the board will rationally ignore the existence of the second opinion completely in assessing CEO type. It is simply not possible to update priors or expectations about investment outcomes based on the second opinion. This is because second opinions will always agree with CEO recommendations and will no longer contain useful information about the investment. Instead, the board will pay attention only to the CEO recommendation and the investment outcome. Board posteriors are then captured fully by equations (1) and (2).

To demonstrate uniqueness, consider equilibrium payoffs under other hiring and reporting regimes. When reporting is separated and the expert is manipulable, the board ignores the existence of the additional opinion because it knows that the low type has incentives to distort the expert’s opinion to match his own. This is not the case when reporting is pooled. Because the low type sees the expert’s recommendation before making his own,\(^{29}\) An earlier version of this paper (available from the author upon request) contains a proof demonstrating that if the probability of detection is low enough, low types utilize a pure strategy of always lying to the expert.
he no longer has an incentive to manipulate the expert to ensure a match. Therefore *with pooled recommendations, the integrity of the expert’s recommendation is maintained*. The low ability CEO has no fear that his type will be revealed. With pooled recommendations, the board cannot use the investment outcome in updating its prior belief as to CEO ability because informed experts can still be wrong. In fact, as explained above (see equation (7)), no updating at all is possible.

In light of the above analysis, the only equilibrium candidate that is based on reasonable beliefs as to out-of-equilibrium behavior, is one in which neither type ever hires an expert. Low types would prefer always to use an expert and pool reports: by doing so, their type never becomes revealed, and they are never held accountable for incorrect predictions about investment outcomes. On the other hand, high types, who experience discounted payoffs because the board does not know their true type, always want to distinguish themselves from low types. Since using the expert will not improve investment predictions nor assist in signaling type, experts provide no value whatsoever (and in fact reduce profits because of their fee).³⁰

Therefore, high types will never choose to hire an expert: as shown above, their payoff when no expert is available - even running the risk that they are wrong about the investment outcome - is strictly greater than α. Low types would always prefer to hire an expert (and pool reports) since the agreement provides cover. An equilibrium with board beliefs that only low types don’t hire or hire and don’t pool reports is therefore unreasonable since high

³⁰Payoffs to the low and high type are identical under a hiring with separated reporting regime, and a no-hiring regime. Because of the expert fee and the lack of information conveyed by a match, there is a loss associated with the use of the expert. Implicit in the description of the unique equilibrium (essentially a tie-breaking rule) is an assumption that high types who are indifferent between these regimes will not make a hiring decision that is purely wasteful.
types would always want to deviate from such a hiring and reporting strategy, while low
types are strictly better off.

4 The Value of Mandates

Above I showed that the choice whether or not to mandate an outside second opinion is
redundant when experts are informed. A unique equilibrium arises where CEOs institute a
hiring and reporting structure which maximizes the usefulness of the expert’s recommenda-
tion to the board. No mandates are necessary because reputational concerns alone lead to
the same result. The value of mandates is more complex and subtle when considering an
environment where CEOs can use experts to further their own ends at the possible expense
of the firm. In these circumstances, a policy mandating an independent second opinion (that
is, one where reports are separated) will be wasteful or harmful. The policy will be wasteful
when the board is able to disregard the expert’s opinion due to a recognition that it will
not assist in making better investment decisions. Waste exists because the company must
pay the expert’s fee, even when their recommendation is not useful. The policy will will
be harmful when the board cannot simply ignore the second opinion, for example, due to
liability concerns. Then mandating a second opinion is harmful - the board must follow
the expert’s recommendation without being able to discount for possibility of manipulation.
Such a policy can lead to the firm making suboptimal investments. Where the board cannot
discount expected profits to account for the fact that the expert is no longer providing high
quality recommendations (because of the bad information they are based upon), boards will
make more bad investments.
Mandates can be useful however, with the right reporting structure. If reports are pooled, the low type matches his recommendation with that of the expert, rather than the other way around. The expert’s recommendation is therefore still reliable, and useful for the board in deciding whether to approve investments. There is a trade-off however because pooled reporting limits a board’s capacity to use the expert’s opinion to evaluate CEO ability. This result demonstrates that boards may not be able to carry out both monitoring and approval functions when CEOs have career concerns. In an effort to monitor CEO type, boards create incentives for CEOs to lie to experts, making it harder for boards to effectively discharge other responsibilities. By giving up their ability to monitor CEO type, boards can improve investment performance. A policy where experts are used but reports are pooled must be mandated because such a policy leaves high types worse off and low types better off.

The board’s trade-off between monitoring CEOs and approving investments is similar to one described by Adams and Ferreira (2006), who come to the conclusion that firms with friendly boards (who do not monitor CEOs too intensely) may have better investment outcomes than firms with independent boards. In their model, the CEO faces the option of presenting good information and being held accountable for poor recommendations. The possibility of later being held to account means that the CEO is not inclined to present useful information to the board. This paper takes into account the role of third parties in assisting boards, and leads one to a similar conclusion. Boards that monitor too closely may be given inferior investment advice.

Table 2 summarizes the equilibrium results under different regulatory regimes and different levels of expert credibility. When experts are informed, expert use is always good for investors (provided the fees are not too high)—better investment decisions are reached, and
fast learning about CEO type is possible. Note the problem of false positives however: a low type who happens to match with the expert increases his reputation with the board. There is no difference between mandates with separated reporting and equilibrium behavior under CEO discretion. Pooled reporting is clearly inferior because no learning about CEO type is possible.

Contrast these outcomes with the results when the expert is uninformed (and ensuring full information transmission is too costly for the firm). Clearly mandates with separated reports is inferior to other regimes: expensive fees are incurred unnecessarily and boards who can’t easily disregard expert opinions will make investments when they should not. Whether or not a board wants to mandate pooled reports or leave the use of experts up to CEO discretion will depend on their preferences. Boards who are anxious to learn about CEO type should allow CEOs to make investment recommendations on their own and deduce type from investment outcomes over time. Note however, that while learning is possible, there are now false positives and false negatives in the updating process - that is, low types can be lucky (and their reputation can go up), while high types can be unlucky (and their reputations can go down) depending on the investment outcome. Boards who are more anxious about making good investments should prefer a pooled reporting regime.
Table 2: Comparing Different Regimes

<table>
<thead>
<tr>
<th></th>
<th>Informed/Honest Expert</th>
<th>Uninformed/Dishonest Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CEO Discretion</strong></td>
<td>Hire expert always; report separately;</td>
<td>Never hire expert</td>
</tr>
<tr>
<td></td>
<td>Higher expected investment returns;</td>
<td>Lower expected investment returns;</td>
</tr>
<tr>
<td></td>
<td>Fast learning about CEO type</td>
<td>Some learning about CEO type</td>
</tr>
<tr>
<td></td>
<td>(but false positives)</td>
<td>(but false positives and negatives)</td>
</tr>
<tr>
<td><strong>Expert Mandated</strong></td>
<td>Higher expected investment returns;</td>
<td>Lower expected investment returns;</td>
</tr>
<tr>
<td><strong>Separated Reports</strong></td>
<td>Fast learning about CEO type</td>
<td>Some learning about CEO type</td>
</tr>
<tr>
<td></td>
<td>(but false positives)</td>
<td>(but false positives and negatives)</td>
</tr>
<tr>
<td><strong>Expert Mandated</strong></td>
<td>Higher expected investment returns;</td>
<td>Higher expected investment returns;</td>
</tr>
<tr>
<td><strong>Pooled Reports</strong></td>
<td>No learning about CEO type</td>
<td>No learning about CEO type</td>
</tr>
</tbody>
</table>

5 CEO Payoffs

The model above assumes that CEOs care about their reputation for competence above all else. Frequently however, CEOs will have compensation packages that tie CEO fortunes to the success of an investment if made (profit sharing), or whether an investment is made at all (private benefits). While it is fair to assume that reputational concerns will always be present, there may be situations where the size of private benefits or profit sharing are so large as to swamp other considerations. The framework laid out above can easily be adjusted to account for different CEO payoffs. Equilibrium hiring and reporting behavior are described below.
5.1 Profit Sharing

If the CEO has enough equity such that the outcome of the investment assumes paramount importance in his payoff structure, then not only will a low type use an expert always, never manipulating her to achieve a certain recommendation, but in addition, high types will demur from hiring to save the firm from incurring unnecessary fees. There will be a separating equilibrium where CEO type is fully revealed in the hiring decision. The board follows the recommendation of the expert if hired, and the CEO if no expert is hired, and will make the investment when \( p - c > 0 \). Mandates are never necessary: CEOs will only hire if they believe they need advice, not otherwise. The reason they hire is to improve decision-making about the investment rather than to burnish their own reputation. Through these hiring decisions, the board learns CEO type. Because reputation assumes secondary importance in their objective functions, low types are willing to reveal their type.

5.2 Private Benefits

When the CEO has a strong interest in an investment taking place regardless of the outcome of the investment, the CEO’s payoff includes a private benefit. Examples of private benefits include golden parachutes in the event of a sale or merger, a large cash bonus on consummation of a deal, and increased power through corporate acquisitions. Outside experts are most likely to be used by boards as a liability shield in these situations where there is a potential conflict of interest - that is, when the CEO stands to gain personally from a given investment. Relying on expert advice as to the wisdom of a proposed course of action can help to cleanse an investment of the taint of disloyalty, and to demonstrate that it is entirely...
fair to shareholders (insert case references).

When experts are informed, mandates to use an expert now become vital: without mandates, CEOs who simply want to make the investment with no regard to the likely outcome will not exercise their discretion to hire an expert who may disagree with them. Instead they will simply recommend in favor of their preferred choice. It is important to note however, that this is the *only* circumstance when mandates to use an independent expert are useful.

If experts are manipulable, both high types and low types will simply give the expert information to ensure the desired recommendation. Mandates with pooled and separated reporting will lead to identical outcomes. Using an expert who is manipulable will not assist boards make better investments. Boards who understand that expert opinion is not independent may or may not be able to disregard the second opinion. When boards cannot easily disregard the second opinion in their investment decisions (because of liability concerns), both CEO types would strictly prefer to hire an expert. If the board can disregard the opinion, CEOs are indifferent between hiring and not (because the board will rationally discount the expert’s opinion).

### 6 Conclusion

In this paper, I argue that increased scrutiny of the CEO by the board may not lead to better investment outcomes for two main reasons. First, provisions that mandate increased board oversight ignore the incentives for managers to protect their reputations. Good managers do not need oversight but would like to be evaluated, and so are willing to comply with rules and act honestly. Bad managers, who do need oversight, would rather not reveal relevant infor-
mation since they may be penalized for doing so. Second, provisions strengthening the role and independence of experts who assist boards by certifying management recommendations, fail to appreciate that the quality of outside certifications is only as good as the quality of the information they are based on and that management can often manipulate this information without being detected. Put together, these reasons imply that provisions intensifying board oversight through an external certification mechanism will only be successful if management has enough of an incentive to act honestly. I demonstrate that when such incentives exist, policies that mandate the use of experts are unnecessary since managers will choose to institute certification mechanisms on their own. In the absence of disclosure incentives, such mandates may be counterproductive. The only time when mandates may be necessary is when the CEO stands to gain a private benefit that swamps all reputational concerns. It is crucial for boards to actively evaluate the underlying reliability of the expert’s opinion. Otherwise, the board may be unduly confident in an investment, leading to a higher rate of bad investments (or missing out on good ones).

In this paper, I have examined the circumstances in which experts can assist boards in carrying out their fiduciary duties to shareholders to maximize firm profits, and to monitor management. The ability to monitor depends squarely on the expert’s ability to gain unfettered access to internal information, and to be able to exercise independent judgment in the face of management pressure. Rules that increase the incentives for management to fully disclose all that it knows, or that reduce the reliance of experts on management largesse directly facilitate monitoring. On the other hand, rules that require certification without taking into account these incentives will be redundant at best, and detrimental at worst.

To ensure the credibility of expert reports, boards can invest in technologies that make it
harder for managers to manipulate experts (such as section 404 of Sarbanes Oxley Act which improves internal control systems); or can require experts to work directly with managers, so that the board cannot use the expert to monitor management. In this way, less oversight can result in better corporate outcomes.
References


