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DISSERTATION

Private Firms Working in the Public Interest

Is the Financial Statement Audit Broken?

Abigail Bugbee Brown

This document was submitted as a dissertation in October 2006 in partial fulfillment of the requirements of the doctoral degree in public policy analysis at the Pardee RAND Graduate School. The faculty committee that supervised and approved the dissertation consisted of Jim Hosek (Chair), Steve Bankes, and Molly Selvin.

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Abstract

The Big Four accounting firms have become the object of much scrutiny following the string of financial statement fraud scandals at the beginning of this century. The apparent involvement of the large auditing firms in the accounting misdeeds comes as a surprise, since the academic literature on auditor incentives predicts that large, reputable firms will not engage in collusion with their clients. The lace of a consensus economic framework to understand the incentives facing the audit firms that reflects the historical reality has hindered consensus building in the policy response to the scandals. This dissertation develops a principal-auditor-agent model that suggests there may well be socially sub-optimal levels of audit intensity, even among the best audit firms. It explores archival historical evidence to identify examples of how these incentives have shaped the profession and develops a more nuanced reading of the root causes of the recent scandals. This work also identifies the gaps in our understanding of the cost and occurrence of fraud that hinders a proper cost-benefit analysis of policy options designed to improve the quality of information available to the market.

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Chapter 1

Introduction

Public policy involvement in the securities markets is motivated by the desire to ensure high levels of accurate and useful information are made available to as wide a group of potential market participants as possible. Accurate public information improves liquidity and helps investors assess the risk they face. These benefits in turn lower the cost of capital and improve the productivity and stability of the economy as a whole. Public policy intervention may have a role in promoting these benefits because those who must bear the costs of producing the high quality information are not the sole beneficiaries of that information. As with all public goods, they may not produce enough of it without intervention.

Federally-imposed securities regulation has been in place in the United States since the Great Depression. This country has enjoyed enormous prosperity and economic stability since the introduction of these regulations. While the causal links are hard to prove and are certainly complex, it is plausible that our high quality financial regulation system has played some role in this country's success.[1]

However, the collapse of Enron in 2001 and the continuing revelations of fraud and lesser misrepresentations by many corporate executives have shaken the confidence of the public and policy makers in the reliability of our corporate governance system. A longer look at the history of corporate

[1]Bushman & Smith (2003) have a good review of the research done into the relationship between financial accounting information quality and economic growth and efficiency as well as a discussion of the limitations of current research.

financial fraud—particularly that committed by top level management—will show that the recent scandals are just one episode of a problem that has surfaced with regularity since there has been mandated financial reporting. It therefore behooves policy makers to ask the question, can we do better?

Even if major instances of financial statement fraud are relatively rare occurrences, their costs to society are potentially very large. While our understanding of the effects of fraud on the economy is limited, a country able to further reduce the incidence of fraud may capture significant economic advantages. Finding efficient ways to further limit the incidence of fraud, however, is a challenge, given that any fraud reduction approach needs to limit its burden on the large number of honestly run companies.

While financial fraud, particularly the kind that has a material effect on the financial position of a company, originates almost exclusively with individuals within the company in question, there are a series of so-called external "gatekeepers" who are charged with helping ensure honest dealing on the part of company insiders. The presence of these gatekeepers makes the prevention of fraud a joint production process with both management and the gatekeepers playing important roles in ensuring that accurate financial information reaches the market.

This country has historically—and wisely—shied away from being too prescriptive and interfering in business decision-making. While corporate executives are held responsible for committing fraud, both through corporate and market disciplining mechanisms and through civil and criminal actions, public policy efforts have not tried to dictate too completely the actions executives take or the incentives they face. Instead, the U.S. has focused a large part of its anti-fraud regulatory efforts on gatekeepers, since the perception is that public policy may be effective in reducing fraud without hampering too much the private sector's innovations by targeting the actions and motivations of the gatekeepers.

One important gatekeeper in the corporate governance system is the external financial statement auditor. Auditors have been the focus of particular scrutiny in part because one of the largest accounting firms, Arthur Andersen, collapsed in 2002 as a result of its indictment on charges of obstruction of justice in the investigation of Enron's fraud. The Andersen collapse put auditors in the headlines and the profession has remained a particular magnet for blame ever since.

Does the auditing profession merit such attention and blame? Do the events that led to the collapse of Arthur Andersen offer insight into a systematic cause of corporate malfeasance or was Andersen's failings idiosyncratic and therefore not representative of poor functioning? There has been to date no consensus on the answers to these questions.

The regulatory community in 2002 certainly thought that the auditing profession contributed to the high rate of financial scandals. The Securities and Exchange Commission (SEC) had been critical of external auditors even before the frauds were discovered. They saw the subsequent scandals as vindication for their position. Lynn Turner, the chief accountant at the SEC in 1998-2001, reflected this view in testimony before the Senate Banking Committee in 2002:

> Enron has brought to light many of the shortcomings the SEC staff had identified with various facets of the accounting profession such as peer review, the lack of an effective and timely self disciplinary process, the need for more effective auditing standards and concerns about financial conflicts that impaired the independence of auditors. (Turner, 2002)

SEC commissioners have made similar points about the institutional failures in the audit profession that facilitated the scandals (see, for example, Glassman, 2002; Goldschmidt, 2002).

Many in the profession have strongly disagreed, however. They have seen each scandal as an isolated incident that is the confluence of the failings of individual managers and the mistakes of individual auditors, with the auditor often unfairly vilified and targeted as a scapegoat. One letter-writer to the profession's official organ, *The Journal of Accountancy*, voiced their views succinctly this way:

> The failure of companies such as Enron and WorldCom is attributed to the CPAs' improper auditing of the books.... Our profession is being blamed because of Congress's own failure to provide the resources to the SEC to review the reports public companies submitted.
>
> The unfortunate conclusion being drawn from the vast decline in stock values these days is that the CPA is the culprit. But it is management

> that perpetrates these major frauds.... What I saw was that one Andersen partner didn't do his job, and now the public blames the whole accounting profession. That is wrong. (Baurmash, 2002, 15)

Rightly or wrongly, the profession was a major focus of the legislation, the Sarbanes-Oxley Act of 2002, passed to improve the corporate reporting system. However, the lack of consensus over the root causes of the scandals has put intense political pressure on lawmakers and regulators to revise the Act, particularly now that the public is paying less attention to the issue. Navigating the conflicting claims will be a challenge for those who wish to find the most effective public policy.

Determining whether particular auditors have failed in their responsibilities in the major fraud cases, such as Enron, is challenging in part because their responsibilities are poorly defined. This is despite the volumes of standards, principles and procedures that are so integral to the profession's practice. The profession seems to encourage confusion through the mixed messages it sends about its concept of auditors' responsibilities. (The nature and purpose of their mixed messages will be discussed in great detail later.) Furthermore, it is not clear who should have the power to determine auditor responsibilities. Auditors have vigorously defended their professional prerogative to set their own standards. However, since the profession has been granted a franchise for the provision of financial statement audits, there is a role for public policy makers to ensure that the audit profession meets the "public good" goals that merit the granting of the franchise.

Even if we can determine that auditors failed in their responsibilities at Enron, WorldCom, and Parmalat, and at other companies that have been fraudulently misrepresented, it is still difficult to determine whether blame belongs to an institution—a firm, a profession—or to individuals. Individuals should behave ethically whether or not they are encouraged to do so by their superiors or the institution in which they reside. Neither justice nor pragmatic policy interests are fully served, however, if the individuals are prosecuted but the institution that encouraged their actions remains unchanged. Individual responsibility does not absolve institutions for the role they play in shaping individuals' decisions.

Some have argued that Andersen should not have been charged with criminal behavior since there were many innocent, well-intentioned individuals who were a part of the firm. But if Andersen, through its policies and

incentive systems, created an environment in which individuals felt pressured to obstruct justice (or to conspire to commit fraud), prosecuting only those who operated the shredding machines, or those who gave the order to shred, or the partner in charge of the engagement will not punish all those responsible. Perhaps more importantly, it would do little to prevent further, similar crimes.

It is similarly a worthwhile question to ask whether the institutions that structure the auditing profession as a whole—the other accounting firms, the professional organizations, etc.—have played a role in any malfeasance in which individual auditors have been complicit. If they have, it may be far more cost-effective to reform the institutions so that they do not exert the same sorts of pressures on the individuals than it is to police and pursue individual law-breakers.

Even more important than assigning of blame, however, is understanding and trying to correct as much as possible the incentives that drive the malfeasance at whatever level it occurs. Therefore, this dissertation investigates what auditors' responsibilities *should* be, from society's perspective, and how well aligned the profession's institutions and incentives are to achieving those goals. While neither question can be answered conclusively at this point, I intend to illustrate the dynamics involved in auditors' decision-making processes, so that current and new evidence can be more effectively interpreted. Specifically, it addresses the following questions:

- What are the possible sources of social cost due to fraud and what are the costs of fraud prevention? What are the barriers to determining the optimal level of fraud prevention?
- What are the incentives an auditor faces in the course of an audit either to audit rigorously or to collude with managers in the commission of fraud?
- How have the incentives played out over time and how have they shaped the institutions of the audit profession?
- How does the Sarbanes-Oxley Act of 2002 fit into the historical context of audit reform? How well is it likely to address incentive problems in the industry? Is there more we can do?

In this study, I focus narrowly on the auditor's incentives to search for top-level executive fraud. Auditors perform other important tasks in the course of their audit, but only the role of monitoring the quality of the information transmission from executive management to shareholder suffers from peculiar incentive problems. The other responsibilities of auditors, such as finding accounting mistakes and performing cost-effective audits of information transmission through lower levels of the corporate hierarchy, appear to have sufficient private incentives that allow for efficient contracting and therefore require less public policy involvement. As such, they are outside the scope of this study.

My approach to these questions is somewhat unusual for the field in that I use a game theory framework to interpret historical evidence—largely internal audit firm communications from the mid twentieth century—to establish a more sound foundation on which to base our understanding of how the auditing profession serves the public interest. Game theory and analysis of historical artifacts are not methods frequently applied in tandem, but the field of research into auditor behavior is ripe for a reassessment of commonly-held assumptions. To do that, theory must be forced to confront the reality of the day-to-day concerns of auditors, and the logical inconsistencies between theory and practice must be addressed.

This approach yields results that challenge some of the accepted wisdom in academic, professional and political circles. I find that the desire to maintain reputation and fear of litigation may not be the strong promoters of rigorous audits that many expect. Indeed, the peculiar attributes of the auditor–manager relationship have stymied the usual beneficial effects of competition on quality. Instead, in response to the systems incentives, the profession has generally evolved away from its original monitoring role. As a result, I conclude that auditors' ineffectiveness in preventing the recent financial scandals is a result of a flawed system. The system's problems go beyond a layer deeper than many assume: the whole profession is no longer geared towards finding misstatements. Instead, it has for decades been focused on being full-service business advisors to executive management.

One implication of this finding is that re-orienting the profession towards protecting the investor and markets more generally *against* unscrupulous management is unlikely to be accomplished with quick fixes. A new professional language and culture will need to be nourished, so lasting change

is likely to be slow. While Sarbanes-Oxley does have some very promising aspects that may provide the needed shift in incentives for auditors, it may not go far enough in creating the incentives where it pays off for audit firms to compete on the quality of their monitoring services.

My research also suggests that some of the empirical research done on auditing is based on problematic assumptions, leading to researchers reading more into their results than is justified. For example, the belief by many academics that the question of whether non-audit services negatively affect audit quality is "settled" by work that finds no such effect (see Romano, 2004, for a summary of this position) is not justified: the assumption that every dollar of revenue is of equal value to the firm is clearly violated when looking at actual internal firm discussions. If the assumption is not true, then the lack of effect can be explained by modeling problems, not auditors' ability to resist financial incentives.

The rest of this dissertation is organized as follows: Chapter 2 outlines the social costs of fraud and further motivates the rest of the dissertation. Chapter 3 gives the background necessary to understand the ensuing discussions, it also defines important terms as they are used in this dissertation. Chapter 4 presents a game theoretic model of the strategic interactions between auditor and manager and provides the framework with which I will be analyzing the historical evidence I have collected. Chapter 5 looks at the historical evidence for the three possible equilibrium outcomes predicted by the model in Chapter 4 and Chapters 6-8 discuss possible extensions to the model that are suggested by the historical evidence. Chapter 9 discusses the likely effectiveness of the Sarbanes-Oxley Act of 2002 and looks at additional possible reform ideas.

Chapter 2

Cost-benefit analysis in the context of financial statement fraud

Before starting work on this dissertation, I was encouraged by a venture capitalist who had heard a presentation of my proposal to ask, "Is there a problem?" before trying to find solutions to a problem that may not warrant action. This chapter demonstrates that answering that very important question is currently impossible to do conclusively.

The basic principles of policy evaluation require considerations of both the costs and the benefits of any policy. Yet all too often in the debate surrounding financial statement fraud, the costs and benefits are not discussed together. Discussions that focus solely on either the costs or the benefits of a reform option are sometimes politically motivated and therefore not particularly concerned with a balanced consideration of issues. But even analysts genuinely attempting to determine a socially optimal path are hampered when considering the costs and benefits of a course of action because both sides of the equation are surprisingly poorly understood.

For starters, the total cost of an act of fraud—the size of the root problem—has not been satisfactorily quantified. This hinders a calculation of the benefit of any reform. Similarly, while there has been some innovative work in the area, it is difficult to determine how effective any particular policy change is in reducing the incidence of fraud. Measuring the direct

costs of a policy is, in comparison, relatively straightforward, but it may have secondary effects that are much harder to pinpoint.

This chapter explores the current state of research into the issue, particularly as it relates to interventions in the audit process, and discusses what aspects of the problem have not been satisfactorily addressed. In section 2.1, I define the types of fraud I consider here. In section 2.2, I look at the issues that we need to consider in order to calculate the total cost of fraud. In section 2.3, I discuss the barriers to evaluating the change in incidents of fraud. In section 2.4, I look at the issues that need to be considered in the calculation of the cost of a policy intervention. Section 2.5 offers concluding thoughts on the issues raised in this chapter.

2.1 Fraudulent financial reporting vs. misappropriation of assets

As with the rest of this dissertation, I only consider large, "material" fraud that affects the competitiveness of the company in significant ways. I also assume that, for the most part, such fraud is committed or directed by top level executives.

The focus on top level executives is appropriate for two reasons. First, according to the Association of Certified Fraud Examiners, while executives only commit approximately 12 percent of all known frauds, frauds perpetrated by executives cost, on average, six times more than those perpetrated by lower-level managers and fourteen times more than those perpetrated by employees (Association of Certified Fraud Examiners, 2004).[1] Second, executives have a strong private incentive to prevent fraud in lower levels of the hierarchy, since, in general, the executive's incentives are closely tied with the profitability of the company and fraud at lower levels will undermine the profitability of the company in a way that does not benefit the executive.[2] Executives are in a better position to assess the need for fraud detection and prevention measures throughout the hierarchy than is a public policy ana-

[1] It should be noted as well that ACFE's method of determining the cost of fraud is not stated explicitly. They seem to be using a very conservative measure of the cost.

[2] Of course, executive level fraud can also undermine a company's true profitability, but the executive in that instance is the beneficiary of the fraud.

lyst, and therefore it is my assumption that lower-level fraud is best left to be dealt with entirely by the companies themselves, and the market forces that shape companies decisions. (Though the public sector can assist by providing an avenue for criminal sanctions against employees caught committing fraud.)

Executives also merit public policy scrutiny because they are in the peculiar position of having enormous control over the selection of the individuals charged with monitoring the executive's success and behavior and terms by which they will carry out that monitoring. Therefore an executive intent on committing fraud can generally design the group of monitors in such a way as to ensure that it is unlikely or unwilling to catch him or her in the fraud. The combination of the potential macroeconomic effects of unchecked executive fraud and the possible difficulty the private sector has in coordinating an effective monitoring system make it a legitimate target of public regulation.

For the purposes of this discussion, it is also important to make a clear distinction between two types of executive level fraud. These types have been recognized by the audit profession (SAS 82), and are called "misappropriation of assets" (also called "defalcations") and "fraudulent financial reporting". The distinction between the two types of fraud is not absolute and people who commit fraud may commit a combination of the two types, but the distinction serves a useful purpose nonetheless.

Misappropriation of assets is direct theft, self-dealing, or abuse of perquisites. These frauds could take the form of "skimming" revenues by underreporting the true income and pocketing the difference, hiring a family member through a phony consulting contract, or charging personal expenses as business expenses. They can also be far more creative transactions whose ultimate purpose is to conceal the transfer of some of the company's assets to the executive's own private benefit.

Fraudulent financial reporting is the term used for fraud that takes the form of intentionally misrepresenting the financial position of the company in the financial statements, usually with the purpose of an indirect benefit to the person committing the fraud. Revenues might be overstated by creating phony purchase orders or by shifting the timing of sales from a future period into the current one. Debt might be hidden through special purpose entities or other vehicles which help move the debt off the balance sheet.

Accounting principles might be misapplied to change the way the company appears in material ways: a company could use unrealistic rates of return on an investment or overstate the value of an asset. All of these techniques (and many more) are used to make the company look better than it really is to help the person (or people) committing the fraud to meet targets that affect their compensation or job security. Inflating a company's performance through fraud might help an executive meet performance benchmarks such as meeting analysts' earnings targets or making a positive profit. Hiding debt fraudulently may help a company meet the requirements of its debt covenants and thereby avoid the problems that would come with a recall of loans. Executives' equity compensation is of course affected by the stock price, and so executives might commit fraud to inflate artificially the value of their stocks or stock options. Finally, if a company appears to be doing well, it is less vulnerable to a takeover, and therefore the executive is less vulnerable to losing his or her job as a consequence of a takeover.

One important difference in the consequences of the two types of fraud is that, in general, fraudulent financial reporting is, from society's perspective, a far more *inefficient* form of theft than is misappropriation of assets. The alleged frauds committed at Enron are an example of the efficiency differences between misappropriation of assets and fraudulent financial reporting. Andrew Fastow pleaded guilty to $30 million in self-dealing (i.e. misappropriating assets) from the special purpose entities that the company set up to hide Enron's debt and losses. And while he stole quite a lot of money, the millions were incidental to a company the size of Enron. On the other hand, the $1.2 billion of the debt and losses, hidden to prop up the company's credit ratings and stock price, revealed in the company's restatement of November 8, 2001, were far more responsible for driving the company into bankruptcy (Razaee, 2003; Bratton, 2002).[3] And while it is difficult to calculate the benefits the perpetrators of the fraud received from the fraudulent financial reporting, it was clearly far smaller than the magnitude of the false reporting.

From the perspective of the person committing the fraud, however, fraudulent financial reporting has much to recommend it. It is a subtler form

[3]Ken Lay offered a different interpretation of events in his criminal trial: Enron was bankrupted by a "run on the bank" due to a loss of confidence stemming from Fastow's crimes and the activities of short sellers. His argument did not convince the jury, and it seems likely that there was more substance to Enron's bankruptcy than Lay allowed.

of fraud, since the executive takes home his or her ill-gotten gains through legitimate paychecks or stock sales. Accounting principles are flexible enough that the misrepresentation may be nominally allowed, lowering further the risk of getting caught. The veneer of acceptability also may lessen the psychological effect of the crime on the perpetrator and ease his or her own rationalization of the fraud.

Auditors can be effective in reducing the incidence of both types of fraud. However, in large part because of the inefficiencies created by fraudulent financial reporting, my focus in the rest of the chapter will be on the difficulties of performing a cost-benefit analysis of measures implemented to reduce the incidence of financial reporting fraud, rather than misappropriation of assets. Many of the issues carry over to both types of fraud, but in the cases that they do not, my discussion pertains to fraudulent financial reporting. This focus is further justified by the fact that approximately 90% of fraud reported in the SEC's Accounting and Auditing Enforcement Releases (AAERs) falls into the category of fraudulent reporting and only 10% is misappropriation of assets (Beasley et al., 1999). Because of the SEC's limited resources those frauds that are the subject of enforcement action tend to be, in the SEC's eyes, at least, the most significant frauds.

Degrees of misleading reporting

In a similar vein, while the focus here is on outright fraud, which implies intention and going outside the boundaries of acceptable accounting practices, the costs of misinformation are incurred regardless of whether the financial statements are misleading intentionally or whether they technically comply with the letter of the accounting standards. In addition to fraud, there are two related problems: earnings management and unrealistic optimism.

Earnings management is the term used to describe disclosures that shade the truth in such a way as to be misleading but still compliant with accounting principles. Often, earnings management is considered a relatively accepted means of smoothing earnings and reducing the appearance of volatility. Earnings management may also come in the form of actual business decisions that may destroy economic value but achieve specific accounting goals (Graham et al., 2004). Timing projects to improve quarterly or annual results, rather than initiating them timed on market conditions,

is one example of operational earnings management. The effects of earnings management on markets is controversial, since the purpose of the management may be to introduce self-serving biases or to signal valuable private "soft" information about the company to outsiders (Ronen & Sadan, 1981; Chaney & Lewis, 1995).

Executives may also be overconfident in their assessment of future events. They may make unrealistic assumptions about such figures as the rate of uncollectible debts or depreciation of an asset, the value of inventories, or other important numbers that must be estimated in advance of their realization (Kahneman & Lovallo, 1993; Heaton, 2002). The unrealistic assumptions may be buried in footnotes or otherwise difficult to identify to a reader of the resulting financial report. Markets may be able to correct for a certain degree of optimism, but some financial statements may mislead investors in similar ways that fraudulent financial statements mislead the market.

Auditors can help constrain both earnings management and executive overconfidence in their reporting decisions. The value of their doing so may be similar to the value of restraining an equivalent sized fraud. For the purposes of clear exposition I will continue to discuss costs of misinformation in terms of fraud, but there are other important sources of misinformation that may be treated differently by the legal system but nonetheless are costly and are potentially constrained by the auditor.

2.2 The aggregate cost of financial statement fraud

One question where the type of fraud committed *does* potentially matter is that of the aggregate social costs of the fraud. The inefficiencies of fraudulent financial statements discussed above create a much more complicated set of costs than do frauds that take the form of misappropriation of assets.

Understanding the aggregate social costs of fraud is important for policy makers because costs give us a measure of how much we should be willing to pay to reduce fraud. It would also help gauge the urgency of the problem. If fraud generates costs that are large relative to the entire

economy, we ought to be more willing to experiment and expend resources to find ways to curb the costs. On the other hand, if the costs are not very large, the argument that this is an issue worthy of further policy intervention is weaker.

Unfortunately, the research into the question is surprisingly thin and scattered. The dearth of research has been noted by others, as well (Lev, 2003; Dunbar et al., 1995). In this section, I survey some of the literature on what has been learned so far about the magnitude and the nature of the costs of fraudulent financial statements.

Investor losses The costs of fraudulent financial statements that get the most attention, since they are regularly calculated in lawsuits, are investor losses. Investors who lose money due to fraud have standing to bring class action lawsuits against the company for recovery of damages under various provisions of the Securities Acts.[4] But the damages alleged by investors harmed by fraudulent financial statement fraud are not necessarily relevant to the calculation of the *aggregate* social cost of fraud, and therefore are of less interest here.

The reasons for this have been put forward by many legal scholars, (see, for example, Booth, 2005; Lev, 2003; Alexander, 1996; Langevoort, 1996; Arlen & Carney, 1992; Easterbrook & Fischel, 1985). In every instance of financial statement fraud, for every investor that bought artificially high, there is an investor who sold artificially high. The individual gains and losses cancel out because of this basic fact, making the *net* cost of fraud to these market participants equal to zero, with the only effect of fraud a transfer of wealth from one investor to another. Unless the seller is an insider with knowledge of the fraud, then both sides of the transaction are innocent of any intentional wrongdoing, though one profits at the expense of the other.

Booth (2005) takes the point a bit further by arguing that investors can diversify their portfolios to protect themselves from the risk of fraud in the same way they diversify against more usual business risks. He argues, therefore, that at the same time the net social cost of fraud is zero, the cost is also zero for the diversified investor over the long run. The main

[4]There are other avenues of recourse for investors, but class action securities cases are the most frequent and highest profile.

worry for Booth and others is the value extracted from the market of the insiders who perpetrate the fraud. Even here, the issue is one of wealth transfer, not destruction, but this time the wealth is being transferred from an innocent investor to a guilty insider. If one calculates the social cost without including the ill-gotten gains of the fraudster, then the aggregate cost of fraud is positive, not zero, but not anywhere near the magnitude of what is alleged by plaintiffs' lawyers when claiming damages for their clients.

Some of the scholars cited above recognize that there are additional costs to society of fraud (Booth, 2005; Langevoort, 1996; Alexander, 1996; Easterbrook & Fischel, 1985). Alexander summarizes the costs: "Fraud and misrepresentation in capital markets threaten investors' security, impair the ability of business to raise capital, raise the cost of capital, and undermine the integrity and well-being of the economy" (Alexander, 1996, 1497). But there is no obvious way to measure these costs and scholars disagree about their relative size.

Easterbrook and Fischel (1985), Langevoort, (1996) and Alexander, (1996) all assume the costs are small relative to the measure of damages currently used in securities class-action suits, though they do not have much evidence for their instincts. Alexander (1996) justifies her argument this way:

> It seems likely that the true social costs of any particular violation are significantly less than the tens or hundreds of millions of dollars represented by potential class-based damages. Thus, the measure of damages under current law appears significantly higher than that needed to achieve optimal deterrence. This intuition is reinforced by the fact that actual settlements in securities class actions average only about nine percent of market losses. (Footnotes omitted) (Alexander, 1996, 1497)

Alexander's logic, however, is not clear. There is no reason to think that the parties to a class action suit will consider the social costs Alexander articulated above. Neither party bears these costs—they are borne by the whole market—so there is no reason to think they would get priced into the settlement amount. The other authors who share Alexander's instincts have similarly unsupported arguments.

This work on the aggregate costs of investor losses has been used to support the arguments of proponents of liability limits in securities class

actions. The advocates of reform argue that since the social costs of fraud are low, the inefficiencies of the class action process merit restrictions on the amount of recovery or on access to the right of suit.

While the proponents of liability reform have many legitimate complaints about the inefficiencies of the process, their argument that fraud is not costly to society breaks down in the face of other areas of research that look more closely at the costs Alexander and others dismiss as small. Like other property crimes, which as G. S. Becker (1968) observed are also wealth transfers, the main source of social cost are the defensive measures that individuals take to protect themselves against private harm—which is *not* zero. The evidence is still preliminary, and there is certainly need for more, high-quality research to be done on the issues, but it does seem that the aggregate social costs of fraud could be quite large and that those costs may take some surprising forms.

The aggregate losses due to fraud can be categorized into two forms of loss. The first are the current, "realized" costs, and there are three possible approaches to measuring those costs. The second types are more speculative, and can be thought of the dynamic losses—losses of alternate futures that will not occur because of decisions made that were based on the fraudulent information.

Realized costs of fraud

The realized costs of fraud are still poorly understood, but there are three perspectives on the costs surveyed here. They are loosely categorized as investor confidence costs, the costs associated with making the fraud believable, and the opportunity costs.

Investor confidence The concept of "investor confidence" is a notoriously fuzzy one. It is also one that is still poorly understood, though the field of behavioral finance is making advances in understanding the workings of investor psychology. I will not discuss here all of the work done on various measures of investor confidence, but there is some research that is particularly relevant to this dissertation, looking at the effect of auditors' actions on investors confidence, as expressed through the stock prices of audit clients.

Two event studies trace how sudden changes in the assessment of an audit firm's integrity due to news of clients' fraud or other problems get priced into the stocks of all the firm's clients. One can argue that these studies measure the cost of a change in confidence in the integrity of a particular audit firm.

Baber et al. (1995) use the bankruptcy announcement of Laventhol and Horwath, the seventh largest audit firm in the U.S., in 1990, to measure reactions in clients' stock prices to a change in assessment of the quality of the audit.[5] The authors predict that clients of Laventhol would experience negative abnormal returns in a window following the announcement of the firm's bankruptcy. They justify their prediction with two possible theories, both of which relate to investor confidence in the quality of information contained in the financial statements of Laventhol clients.

The authors find in a sample of 75 Laventhol clients that the client portfolio had a two-day excess returns of -1.91%, a statistically significant result, after the bankruptcy disclosure. The authors also find that client firms that were classified as "financially distressed" using various methods of classification had much larger negative excess returns—as much as -6.264%. Clients who were financially healthy also had negative excess returns on average, but the difference was not statistically different from zero. This result was expected, since investors in financially distressed clients are more likely to value the insurance provided by auditors (since the company is more likely to also go bankrupt) and are likely to place a higher probability on the likelihood that the management is committing fraud. (This is on the assumption that management of a failing company is more likely to commit fraud to put off the time of a takeover or bankruptcy declaration.) Babar, Kumar and Verghese's findings are robust to a number of model specifications. The authors interpret their results as supporting either of their proposed hypotheses, and do not feel that the results support one hypothesis over the other.

Chaney & Philipich (2002) conduct a similar study of the stock prices of Arthur Andersen's clients after various announcements relating to Andersen's relationship with Enron. They are able to take the analysis a step further by looking separately at the effects on clients of Andersen's Houston office, the office that was in charge of the Enron audit. The authors find

[5]At the time, Laventhol and Horwath were the largest of the "second tier" firms. The firm declared bankruptcy in large part due to the volume of securities litigation claims it was facing.

statistically significant negative abnormal returns after Andersen announced it shredded documents relating to the Enron engagement. The mean of the three-day market value losses of Andersen clients after the shredding announcement was over $37 million. That translates to a net $10.5 billion market cap loss of the 284 Andersen clients included in the sample in three days. Furthermore, the abnormal negative returns are larger for the clients of the Houston office.

While the effects reported in these two studies are quite large, it is not obvious how to translate their findings into a calculation of social costs of fraud. Clearly the cost of capital rises for the clients of an audit firm whose reputation drops suddenly–at least in the short-run. The Babar, Kumar and Verghese study suggests that this cost could fall particularly hard on companies who are already in financial difficulty. One can imagine a company, run honestly, that is in financial difficulty that would pull through if it can acquire capital at the rate it gets with a high-reputation auditor. If that auditor suffers a reputation loss and the cost of the company's capital rises enough, the company may no longer be able to regain its footing. In such a scenario, all of the attendant losses of the company's bankruptcy could be added to the cost of another company's fraud. How frequently such a scenario occurs, though, is unclear.

It is also difficult to extrapolate from the dramatic failures of Laventhol and Andersen to the costs of frauds that do not trigger the failure of the audit firm. There may be quite non-linear effects that are the result of a confluence of numerous events in these two cases. The value policy makers should put on a marginal improvement in the incidence of fraud, therefore, is not obvious. What is clear is that fraud that implicates the auditor can have ripple effects through the firm's client portfolio, raising the cost of capital for everyone. Whether the demand for more reputable audit firms created by the increased cost of capital can create sufficient private sector pressure to move auditors to the efficient level of quality is unclear and will be addressed in greater detail in Chapter 8. If, as I will argue later, there are market failures that prevent that demand from being met privately, there may well be significant value to be had from policy intervention.

Costs of creating believable fraud Kedia & Philippon (2005) take an innovative perspective on the economic costs of fraudulent financial state-

ments. The authors argue that managers who misrepresent their company's financial position in the financial statements also need to make investment decisions at the company that are in line with their false positions, not with the real state of the company, in order to maintain the deception. The companies with poor quality financial statements, therefore, tend to over-invest and over-hire.[6]

The authors demonstrate empirically that companies that later restate their earnings hire and invest more than comparable firms during the period in which they misreport. After the restatement, hiring and investment are significantly lower, though productivity tends to improve. They find that growth in employment in fraudulent firms is 3.7% higher than in the control group during the fraudulent period. The employment growth after a restatement is 3.5% less than the control group. Similarly, the growth in investment in property, plant and equipment in the fraudulent firms is 3.8% higher than in the control group during the fraudulent period, but 5.5% lower after the restatement. (All results are statistically significant.) For a sense of the magnitude in level terms of the employment changes, employment in restating firms went up by 0.5 million (+25%) between 1997 and 1999 and down by 0.6 million between 2000 and 2002. In contrast, non-farm payrolls went up by 6.7% and down by 1.5% in the same periods.

Putting a cost to this employment and investment volatility is again difficult, but the costs are very real. Employment volatility causes a host of secondary costs to individuals, government, and communities. Investment volatility can cause disruption in supplier industries and competitors. In a related article, Philippon (2004) looks directly at the macroeconomic effects of poor corporate governance more generally and finds that governance conflicts could explain up to 30% of aggregate volatility. The empirical measure of corporate governance he uses does not include fraud-related measures, but the theory he uses to generate his hypotheses would apply to the problem of earnings management. Kedia & Philippon (2005) reflect on the findings of the earlier paper and suggest that investigating the interaction between the dynamics explored in the two papers could be a fertile area of future research.

[6]This assumes that the companies are offering overly positive assessments of their positions.

Opportunity costs The market capitalization loss attributable to the revelation of the frauds committed at only five companies—Enron, WorldCom, Tyco, Qwest, and Global Crossing—were estimated at a total of $460 billion (Cotton, 2002). This could be interpreted simply as a measure of the size of the transfer of wealth between two innocent groups of shareholders, as was discussed earlier, but that explanation is intuitively unsatisfying.

We can begin to see what has actually been lost when we consider what the world would have looked like had there been no financial statement fraud. The investors who had invested in the companies that in reality committed fraud would have, in many instances, come to a different conclusion as to which company should receive their investment dollars, had all companies reported their positions honestly.

This distinction is particularly clear in initial public offerings, where the companies are rasing equity capital for a business venture. Of course, in the initial offering, there is no transfer of wealth between shareholders: instead the capital goes from shareholders to the company, where it is presumably put to productive use. Considering only IPOs for a moment, those investment opportunities that appeared worse in comparison to a fraudulent opportunity but better in comparison to a truthful representation of the fraudulent opportunity would receive the investment dollars. Those investments, being made in real, productive activity, would generate real returns for the investor and contribute productively to the economy. They would, in expectation, perform marginally worse than the investment based on fraudulent statements had promised, so one can think of the market capitalization loss after fraud is discovered in an initial offering as a measure of the ceiling of the *opportunity costs* of the fraud Dunbar et al. (1995).

Understanding the opportunity costs associated with the secondary markets are less intuitive, but are none the less real (Bushman & Smith, 2003). And if one accepts the efficient capital market theory, the market capitalization loss due to the revelation of a fraud is a fair measure of that cost. Of course, one must be careful using the efficient capital market theory in discussions of financial statement fraud, since the strong version of the theory predicts that the market prices all *attainable* information—including the true state of the company—and therefore is not affected by fraud. This extreme version of the theory does not have much empirical support, and so we may attribute large drops in stock prices to revelations of fraud. Allowing

the attribution helps the argument that those drops are a measure of the costs of fraud, but it also opens the door to arguments that the prices are not a very good measure of the costs.

The three approaches to the costs of fraud discussed so far may be seen as different perspectives on the same costs. Investor confidence measures takes a market portfolio perspective on the question and prices the market-assessed likelihood that any given security is mispriced due to fraud. That risk is priced into the stock price in the same way that other business risks are, by deducting the expected value of the fraud. The second approach looks at the costs of fraud production. It is the other side of the opportunity costs' coin discussed in the third approach; it measures the unproductive uses of the capital that could have been spent more productively elsewhere in the economy.

Dynamic market effects of fraud

The following discussion is far more speculative. These losses have not been investigated and it is less likely that they are priced directly by the market. Instead, they consider how the existence of fraud at one company may distort the decisions of others.

Fraud contagion An impossible to measure but possible cost of fraudulent financial statements is that they may be contagious. A corollary to Gresham's law, the logic of this is simple: if a company commits financial statement fraud and makes its performance look better than it actually is, a competitor whose compensation is directly or indirectly linked to how the competitor does *relative* to the other companies in its industry will need to perform better than he would have otherwise in order to receive the same compensation. If the benchmark is sufficiently skewed by fraud, the competitor may also need to resort to fraud to keep up—or face being driven out of the market or replaced by someone who *is* willing to commit fraud to keep up. Of course, there is no empirical evidence that this sort of ripple effect actually takes place, but it would explain the appearance of "infectious greed," as Alan Greenspan so famously put it.

Reduced innovation Both stock prices and financial statements are sources of information for market participants who are not involved directly with the company. Those individuals may make decisions about how to run their own affairs based on what they learn about how other companies are performing. If that information is distorted, those decisions may not be optimal.

For example, potential market entrants may decide not to implement their ideas for a different production technology or management strategy and remain out of the market instead because a current player appears to be doing a better job than the potential entrant believes his strategy can do. If the current player is misrepresenting his success, the valuable innovations of the potential entrant are lost. Some of that innovative spirit may be directed towards other, less apparently daunting competition and may therefore be realized by the market in another form.

One commonly discussed anecdote that illustrates this point is the effect of WorldCom's fraud on investment decisions throughout the telecom industry. Executives at both AT&T and Sprint admitted to news organizations after WorldCom's fraud was revealed that they had based their decisions to lay off employees on WorldCom's fraudulent representation of its costs (Faber, 2003). CNBC quoted AT&T's chairman and CEO, Michael Armstrong, at the time of the WorldCom fraud as saying "The market said what a marvelous management job WorldCom was doing and they would look over to AT&T and say, 'these guys aren't keeping up.' So my shareholders were hurt. We laid off tens of thousands of employees in an accelerated fashion and I think the industry was hurt" (Faber, 2003).

Furthermore, WorldCom had fraudulently misrepresented the volume of internet traffic it was carrying, as well as the rate of growth of that traffic, claiming that it was doubling in size every quarter. These fraudulent figures became the benchmark for the industry when the U.S. Department of Commerce and the Federal Trade Commission adopted the numbers submitted by WorldCom. This false reporting "led to irrational and unjustified investments and the current fibre glut...which estimates that the total bubble—and resulting bust—reached $1 trillion at its height" (Lynch, 2003) claimed AT&T in a document filed with the court hearing the WorldCom case.

Of course, we can never know what could have been. Pricing that loss is still harder than pricing the realized losses from fraud.

This discussion of the social costs of fraud is inherently unsatisfying since it is so difficult to properly measure the costs of fraudulent financial statements. Ultimately, we are still left with relying on instinct, as Alexander (1996) did above. A broader consideration of the sources of the social cost, however leaves the impression that the cost of fraud is likely "quite large" and that the vast damages claimed by plaintiffs in class action suits may indeed be in the right ball park, since they are based on market capitalization losses, though for very different reasons than those used to calculate the damages.

2.3 Changes in the incidence of fraud

Even if we were able to determine the cost of an incidence of fraud, there would still be a number of barriers to doing a credible cost-benefit analysis of a reform designed to reduce the incidence of fraud. Most vexing is the difficulty in measuring changes in (or levels of) the rate of financial statement fraud. If we cannot properly measure changes in the rate of fraud, we cannot measure the effect on fraud rates from a policy change, further complicating attempts at cost-benefit analyses. (This is on top of the usual problems with determining causal relationships between a policy change and changes in the outcome of interest.)

The problem arises from the fact that we do not know how much fraud goes undetected. Langevoort (1997) voices a common belief that most if not all fraudulent financial statements are discovered eventually: "in most bad news scenarios, concealment simply delays the appreciation of the truth rather than avoids it indefinitely...." (p. 106). But there is no reason to believe this is true—and by definition undetected fraud or concealment is undetectable and therefore unmeasurable.

Nor is it the case that the rates of detected fraud are necessarily closely correlated with the overall rate of fraud in an economy (though it is certainly true that it could be). The detected rate of fraud is the product of a number of events all coming to pass, and changes in the rate of any one of them would affect the rate of discovered fraud. First, a company must create an unaudited financial statement that includes a fraudulent misrepresentation. If that misrepresentation is caught by the auditor and corrected, the fraud is never committed and the intention to commit fraud is (in most cases) never

revealed publicly. If the auditor does not find the fraud or fails to force a correction, the fraudulent statements are issued to the market. The market, through SEC enforcement activities, enterprizing journalists or financial analysts, whistle blowers within the firm, or other means, *sometimes* learns of the fraud and forms an impression of the rate of discovered fraud. So a change in the rate of detected fraud could indicate a change in the rate of detection or in the rate of fraud incidence. And a change in fraud incidence could reflect either a change in the rate of managers attempting to commit fraud or in the effectiveness of auditors catching it before the fraudulent information is released.

Researchers have recognized these problems, and have proposed a variety of indirect measures to gauge the amount of fraud in the economy. Some work has looked at discontinuities in earnings distributions (Brown & Higgins, 2001; DeGeorge et al., 1999; Burgstahler & Dichev, 1997). These studies find empirical support for the theory that managers falling just short of critical benchmarks are more prone to manipulate their earnings to reach or just surpass those benchmarks, causing a "bunching" of earnings reports at critical points rather than the smooth bellcurve distribution one would expect. In particular, DeGeorge et al. (1999) hypothesize, and find, that there will be discontinuities in the distribution of earnings around three critical thresholds: reporting non-negative earnings, stable or growing earnings, and earnings that meet analysts' expectations.

Interpreting these discontinuities must be done with caution however, since there are possible alternative explanations. If meeting these benchmarks are indeed key measures for the manager's payoff, theory would predict that managers who are close to meeting the benchmarks would exert extra effort to meet or exceed them, whereas managers who are farther away from meeting them may realize that there is little hope that extra effort on their part will be sufficient to boost the company's performance above the targets. As a result, some portion (or all) of the "bunching" is likely due to actual increased economic activity that is a result of increased managerial effort. Another portion of the results may be explained by an intermediate type of behavior, operational earnings management. Graham et al. (2004) found in a survey of CFOs that 78% would give up economic value for smooth earnings and 55% would avoid initiating a positive net present value project if it meant falling short of the current quarter's consensus earnings. While this behavior falls far short of outright fraud, it is value destroying and therefore

potentially a source of concern.[7]

Another frequent method is to look more broadly at "earnings management" by looking at the size of discretionary accruals. There are significant theoretical and methodological challenges to the use of discretionary accruals, however, which have been documented by many (see, for example, Lev, 2003; Guay et al., 1996; Healy, 1996; Dechow et al., 1995). The main theoretical problem is that earnings management has two purposes. The one relevant here is the use of allowed (and unallowed) discretion in reporting choices to distort the financial position of the company for management's opportunistic purposes. In these cases, earnings management distorts information and lowers the value to investors of the financial statements. The second reason is to convey the private information of management about less easily quantifiable measures of the company's future performance. Healy (1996) gives the example of a company writing down the value of impaired assets on a timely basis if the company believes the long-term performance of those assets has declined. This second theory of earnings management *improves* the informational value of the financial statements and their ability to predict future earnings. The two types of earnings management are not readily distinguishable to an outsider, and therefore their conflation calls into question the usefulness of the measure.

There is a lively argument as well on how best to measure discretionary accruals. There are five popular methods in use in the literature, and while I will not go into their technical details, there has been difficulty validating any one of the five. This has not stopped their use in empirical tests of the effects of policy changes, such as litigation rules, or auditor characteristics, such as firm size, on the level of earnings management, but the results of this body of research should be interpreted with caution (see, for example G. V. Krishnan, 2003; C. L. Becker et al., 1998; Frankel et al., 2002; Cohen et al., 2004; Ahmed et al., 2006; Ebrahim, 2001).

Lev (2003) surveys the evidence from these indirect measures of earn-

[7]Operational earnings management is generally not a concern for auditors to address and while reducing it would potentially create additional economic value, solutions for its reduction probably lie in the proper design of manager's compensation contracts or in accounting rules that better reflect long-term economic value. Finally, some of this type of earnings management may be in shareholders' interest even if projects of positive net present value are not pursued, depending on shareholders preferences relating to volatility and risk.

ings manipulation or fraud in the U.S. economy. In contrast to the relatively few incidents (100-150 per year, approximately one percent of all public companies) of publicly alleged manipulations (i.e. in lawsuits or SEC enforcement actions), Lev cites Dechow, Richardson and Tuna (2000) as finding 400-500 cases per year, out of a sample of approximately 2,250, of companies that either exactly meet or beat by a penny analysts' per share earnings estimates. And looking at FirstCall data on the S&P 500 companies, Lev finds that the percentage of firms "on target" with analysts' quarterly forecasts were 17-19 percent in 1995, 20-24 percent in 1999, and 24-27 percent in 2003.[8] His findings suggest that undiscovered fraud could be quite a large problem, though most probably are not on the scale of the "headliner" frauds discovered in recent years.

2.4 The costs of a reform

The above sections have enumerated the challenges in calculating the benefit side of the cost-benefit equation. The cost side has its challenges as well, though they seem less daunting in comparison. The direct costs of a policy change, those required by Sarbanes-Oxley, for example, are fairly easy to measure, since the costs are reported in financial statements and proxy disclosures. But there are indirect costs that also need to be considered, and even the direct costs need to be parsed into one-time start-up costs and recurring costs.

Butler & Ribstein (2006) review the indirect costs of Sarbanes-Oxley, and their observations can be extended to securities regulation in general. In addition to the direct costs of compensating auditors, lawyers, independent directors, etc. for their monitoring roles, Butler and Ribstein discuss the indirect costs as taking numerous forms, including: "interference with business management, distraction of managers, risk aversion by independent directors, over-criminalization of agency costs, reduced access to capital markets, and the crippling of the dynamic federalism that has created the best corporate governance structure in the world." (p. 5). These costs can be

[8]Of course, these percentages should not be interpreted as including only firms that manipulate earnings. Some companies will hit earnings forecasts exactly by chance or through extra effort, as discussed above. Alternatively, some will be better at managing *expectations*, rather than earnings.

categorized more generally into three categories: opportunity costs, increased risk aversion, and regulatory rigidity.

Opportunity costs Just as fraud creates opportunity costs, so too do its remedies. Honest managers must comply with securities regulations, too, and for a company where the manager would never commit fraud (either because of intrinsic distaste for dishonesty or because the incentive structure he or she faces never makes fraud preferable to telling the truth), many of the regulations create little or no value and only distract the executives of the company from value-creating activities.

To understand how to calculate the net opportunity cost of a reform, the example of the experiences with Section 404 requirements in Sarbanes-Oxley are instructive. Section 404 requires companies to implement and document effective internal controls. It also requires the executives and their auditors to attest to the adequacy of the controls and the accuracy of their documentation (Sarbanes-Oxley, Section 404).

Leaving aside for a moment the effectiveness of such a process for achieving the primary policy goal of deterring and detecting fraud, the process of complying with the law requires executives, their staff, and auditors spend time and resources on compliance, which they would presumably spend on other activities if it were not required. Even if, absent regulation, the optimal activity for the various individuals would not be the design, implementation, documentation and attestation of compliant internal controls, such an activity does have some value *beyond* that of its primary goal of fraud reduction. Those benefits must be netted out of the opportunity costs to get at the real cost of the activity. And while I do not wish to get embroiled in the debate over Section 404, there is anecdotal evidence that those benefits have been significant. An example from a *Financial Times* article primarily devoted to the regulatory excesses of Section 404 implementation is a typical expression of the side-benefits:

> The process has had positive effects, [Eric Hutchinson, chief financial officer of Spirent Communications] concedes, endorsing a point made frequently by the PCAOB and the Securities and Exchange Commission, the chief US regulator. "It ensures you get a rigorous rein on controls and it institutes change management. There's a lot of benefit in that and it's something you wouldn't normally set such a budget

> for," Mr Hutchinson says. However, the pluses for Spirent are outweighed by the minuses. (Jopson, 2006)

Calculating either the gross or the net opportunity costs of a reform is idiosyncratic to each company, so while it would be theoretically possible to do, it is not practicable, particularly in advance of a reform implementation. Further some of these costs are incurred once (e.g. setting up and documenting a new internal control), and so initial experiences with a reform may make the costs of the reform appear more significant than they actually are in the long run.

Increased risk aversion Reforms that include an increased punitive component run the risk of stifling growth-enhancing risk-taking. This is particularly true if the adjudication system is imperfect and makes occasional errors in the direction of penalizing innocent behavior.

Executives may be afraid of lawsuits or even criminal charges if they make an honest mistake or if an accounting estimate that relies on an estimate of future activities turns out to be incorrect. This fear may induce inefficient defensive behaviors, such as reducing the level of disclosure, particularly of "soft" information that is difficult to quantify. It may even have an effect on what business ventures executives enter into, causing them to choose actions that are easier to account for accurately over actions that could prove more profitable but are difficult to explain or are complex and innovative. Similarly, auditors or other monitors who are charged with detecting and deterring fraud might "over-audit" in ways that do not improve the informational value commensurate to its costs, but that help defend against charges of negligence or malpractice.

Changes in levels of risk aversion are difficult to measure and price. The U.S. has historically taken a very pro-risk stance, giving businesses wide latitude in their judgements. There is a consensus that such an attitude has helped the U.S. become the economic powerhouse and leader in innovation that it is, and that the attitude should be tempered only in the face of clear evidence that it is necessary (Butler & Ribstein, 2006).

Regulatory rigidity Another danger with solving the problems of corporate fraud through prescriptive public policy is that it tends to lock corpora-

tions into certain ways of dealing with the problem and to reduce the level of innovation. Companies will expend their resources on complying with current regulations rather than experimenting with different forms of corporate governance that achieve the desired level of confidence at a lower cost.

There are private incentives to improve the quality of information in the market—companies that are able to convince investors and creditors that they are trustworthy gain access to cheaper capital. Managers who are able to signal credibly their honesty will also likely have better job security and higher earning power. If corporate governance procedures are not dictated by the government, or other regulatory bodies, the best companies and managers will compete to find the best solutions to agency problems that are responsive to changes in the business environment.

In general, there should be high burden of proof that regulation is necessary before policy makers intervene in the market. Butler and Ribstein (2006) voice the philosophy that the free market is perfectly capable of addressing the policy problems of corporate fraud this way:

> The American corporate governance system is incredibly dynamic—for over a hundred years, it has demonstrated its resilience and ability to evolve in response to dramatic structural changes and external shocks. Even if there were a problem that needed solving, it is likely that existing institutions and the market could have solved it without a massive new dose of one-size-fits-all regulation from the federal government. Moreover, given the dynamism and success of our system, the proponents of massive new regulation logically should bear the burden of justifying it. (Butler & Ribstein, 2006, 4)

While Butler and Ribstein's description of Sarbanes-Oxley as a "massive new dose of one-size-fits-all regulation" is not necessarily a fair characterization of the reform, their point that prescriptive regulation should bear a burden of justifying its cost-effectiveness is well taken. This dissertation searches for additional insight into the conditions under which the market is able to satisfactorily respond to the problem with financial statement fraud, and those under which a more active policy stance must be taken. Further, understanding why the market is not successful in some cases in preventing fraud can help more targeted interventions that minimize the intrusion of regulation to the areas it is most effective.

2.5 Conclusion

Even if we cannot perform credible cost-benefit analyses on particular securities reforms, the research reviewed in this chapter suggests some principles that can help guide policy making in the absence of concrete measures of costs and benefits. The following principles also guide my approach to the policy issues facing auditors' participation in preventing financial statement fraud:

- Financial statement fraud *is* costly to society, perhaps extremely costly, so reducing it is a legitimate policy goal.
- Those harmed by fraud may not be aware that fraud is the cause of the harm they are suffering, making private action, either through contracts or the tort system, unlikely to be a fully effective mechanism to deal with the harm.
- Reforms that are low cost and allow as much market participation as possible in the shaping and evolution of the reform are preferable to reforms that are highly prescriptive.

As a result of the challenges discussed in this chapter, my goals for this dissertation are modest, but nonetheless important. I will not provide conclusive evidence that one policy option is preferable to another, nor will I prove that auditors are providing an optimal or suboptimal level of auditing. We are not currently equipped to answer such questions. Instead, I examine the assumptions underlying the current debate. I use economic theory, which has proved useful in many other policy arenas, and the historical experiences of leading audit firms to better intuit the likely forces influencing the current state of the audit profession. My hopes are that this analysis will improve future research, both in the questions asked and the way in which evidence is interpreted.

Chapter 3

Auditors' responsibilities and institutions

This chapter summarizes the responsibilities and the institutions that shape the audit profession as it is currently constituted. It is designed to provide the reader unfamiliar with financial statement auditing in the U.S. with the background necessary to follow the rest of this study. It can be safely skipped by those who are already familiar with auditing.

3.1 The responsibilities of the independent public company auditor

All companies that trade stock publicly in the United States are required to disclose their financial position in detail when they first issue stock and annually thereafter. The management of the company, with the help of their staff accountants, prepare the required disclosure statements. These disclosures, called financial statements throughout this dissertation, must be accompanied by an opinion by an independent auditor, certifying that the statements "present fairly, in all material respects, the financial position of [the client company during the period reported] in conformity with accounting principles generally accepted in the United States of America."

The independent auditor must, by law, be a certified public accoun-

tant (CPA). Accountants are highly skilled professionals who perform a number of different functions in the financial world, one of which is the financial statement audit. Therefore, all financial statement auditors are accountants, but not all accountants serve as financial statement auditors. Within the profession, when the context is clear, the term accountant is used interchangeably with that of auditor. In this dissertation, I try to use the term auditor, for the sake of consistency, when referring to accountants performing the audit function and will use the term accountant when referring to the wider profession. Some of the historical documents quoted in later chapters may be less precise, and will sometimes use the term accountant even when specifically discussing auditors.

In addition to the annual financial statements, companies issue interim quarterly reports that are not audited, though they will often be reviewed by their auditor to ensure that the main accounting treatments used are applied correctly. Audits are also conducted for privately-held companies, at the behest of major creditors or in other cases where a party who has a major financial interest in a company wishes to have independent confirmation of the company's financial position. This dissertation will only focus, however, on the mandatory audits conducted either for initial public offerings or for the annual disclosure of a public company.

A second aspect of the audit opinion that accompanies the financial statements is that it implicitly offers a signal of the ability of the company to continue operations indefinitely, as a "going concern." Many of the accounting methods used in financial statements rely on an assumption of continued operations. If the auditor does not feel that the company can continue operations, the audit opinion is supposed to include a "going concern opinion," which indicates that the financial statements' going-concern assumption may not be warranted (AICPA, 1988).

Generally Accepted Accounting Principles

Accounting is not an exact science. The main purpose of an annual financial statement is to take a snapshot of the company's financial position at one moment in time to assist interested parties in comparing the company's present performance with its past performance and with the performance of other companies. Determining what belongs in that snapshot and how to

characterize it is not a straightforward task.

Two major factors complicate the composition of that snapshot: questions of timing and uncertainty. Timing is particularly an issue in accrual-basis accounting, the predominant method of accounting, since revenues are credited to the period when the revenue is *earned*, regardless of when the payment is actually received. Expenses are then matched with the corresponding revenues they generate.[1] Determining the correct timing of revenues and expenses under this system requires judgment.

Uncertainty also plays a major role in accounting. Because some of the events that are being accounted for in a financial statement have not happened yet (e.g. creditors have not yet paid the company for goods received) there are varying degrees of uncertainty about the true value of those events (e.g. a portion of the debts owed the company may be uncollectible). There is also significant uncertainty about the real value of intangibles, such as intellectual property or other "goodwill" items. These items must be valued as best as possible, though there could be considerable disagreement amongst informed individuals about what those values should be.

A body of accounting principles and rules have been compiled over time to help managers and accountants determine how to make the judgments required to create a fair snapshot. Those principals and rules are called "generally accepted accounting principles" or GAAP. As the name implies, GAAP is a body of rules that initially grew over time through a sort of common law process of precedent and general acceptance. The principles were not codified at all until the mid-twentieth century, and the rule-making process has become more formal over time. The rules remain quite flexible, however, and allow for multiple accounting approaches in many situations. The formal collection of rules also lags accounting practice in many instances as managers and their accountants must extend the basic principles of accounting into new areas in order to account for novel aspects of a business.

Despite the flexibility in U.S. GAAP, the profession considers U.S. GAAP to be "rules-based" and quite precise in comparison to many other countries "principles-based" accounting standards. Many are critical of rules-based accounting, since the rules quickly become overly complex and are thought to encourage accounting that conforms to the letter but not the

[1] Cash-basis accounting ascribes revenues and expenses to the time the cash is actually received or disbursed.

spirit of the law (Securities and Exchange Commission, 2003). There is a movement to encourage a convergence of U.S. and international accounting standards, the details of which are beyond the scope of this dissertation.

Generally Accepted Auditing Standards

Until the implementation of Sarbanes-Oxley, auditing standards were similarly formed through an accumulation of the profession's experience and expectations and were called "generally accepted auditing standards" or GAAS. Unlike GAAP, GAAS remained very "principles-based" with only ten broad standards, though their interpretation was guided by more detailed Statements on Auditing Standards (SAS), issued by the Auditing Standards Board. (The various professional standards-setting bodies will be discussed in more detail below.) The auditing standards codified by GAAS are reproduced in Appendix A. While the SAS guidelines provided more detailed information on what was expected of an audit professional, the audit firms are largely responsible for formulating the exact methods they use in any particular audit situation.

The Sarbanes-Oxley Act moved the responsibility for setting auditing standards to the Public Company Accounting Oversight Board (PCAOB). Initially, the PCAOB has accepted GAAS as its interim standards until it can create its own body of standards. Now the standard audit opinion, rather than saying that the audit was conducted "in accordance with generally accepted auditing standards," says that the audit was conducted "in accordance with the standards of the Public Company Accounting Oversight Board." No concise acronym has yet been adopted widely to replace the use of the term GAAS. A full discussion of the implications of this change in audit standards setting authority will be discussed in Chapter 9.

3.2 The institutions of auditing

The process of conducting audits in the frameworks prescribed by GAAP and GAAS is shaped by a variety of legal, commercial and regulatory institutions. The institutions each play critical roles in defining the concept of an audit and in implementing that concept in the diverse contexts of public companies.

The legal framework set the ground rules for how the audit profession relates to its clients and its basic responsibilities to the public. It further plays an important role in implementing some of the penalties on auditors and managers when the market or regulators discover financial statement fraud. As will be seen in Chapter 4, these penalties and the conditions that must be met to trigger them are an important parameter in the incentives that face both auditors and managers.

Other laws have helped shape the development of the competitive landscape in which individual audit engagements play out. Changes in these rules governing competition have had important effects on the dimensions that are most important to competition between firms for clients and on the growth of the large audit firms. As firms grew they have performed increasingly influential roles in return in influences the nature of legislation passed—or not passed—affecting their fates.

The final component of the institutional arrangements that affect how individual engagements are performed are the regulatory bodies, both those that are government sponsored and those that are controlled by the profession. These institutions have been important in interpreting professional responsibilities and mediating between the government and the profession. The portion of the regulatory responsibility that has been under the control of the profession has been a source of much contention over the history of auditing. In general, the trend has been to take away control of the profession over its regulation. Incremental control has been surrendered voluntarily by the profession in some instances to head off further legislation that would more dramatically change auditors' roles and responsibilities. The Sarbanes-Oxley Act of 2002 has been the one instance since the 1930s where the profession was unsuccessful in heading off a major change in the regulatory responsibilities.

The nature of these institutions will be important in understanding how the stylized incentives facing auditors and managers modeled in Chapter 4 actually manifest themselves in the real world of financial statement auditing. Furthermore, they are the sources of potential policy levers (available to both public and private actors) to cause changes within the profession and, hopefully, in the incidence of fraud or other sources of misinformation in the market.

Legal framework

The modern auditing profession was born in the mid-nineteenth century in Great Britain. The profession migrated to the U.S., carried by the Scottish and English chartered accountants who lent their names to many of the major firms, primarily to report back to British companies on their interests in the U.S. American-born accountants began forming their own firms by the end of the 19th century, and New York State passed the first law recognizing the qualification of Certified Public Accountant in 1896 (Zeff, 2003a; O'Connor, 2004).

Before the 1930s, independent audits were performed voluntarily, and companies would purchase an audit when they wanted to prove to potential creditors and equity holders that the company was sound. During the speculative frenzy of the 1920s, large, reputable companies were increasing their use of voluntary audits to try to differentiate their offerings. Indeed, by 1926, more than 90 percent of industrial companies listed on the New York Exchange were audited voluntarily, albeit with encouragement from the Exchange (Zeff, 2003a, after May, 1926). There was a movement afoot, even before the stock market crash of 1929, to encourage a more universal use of audits. States began to pass laws requiring audited financial statements, though the patchwork of state legislations had many holes in it (O'Connor, 2004).[2]

It wasn't until the crash of 1929, however, that there was the sense of urgency required to standardize requirements for financial statement audits. The movement began in the private sector with the New York Stock Exchange requiring all Big Board companies to issue annual audited financial statements in early 1933. Following close on the heels of the Exchange's requirements, Congress passed the Securities Act of 1933, requiring that all securities must be registered and that registered companies must issue audited financial statements annually. The act explicitly made the deliberate misrepresentation of a company's financial situation illegal. The corporation, as well as its officers and directors, underwriters, and accountants could be held liable for the misrepresentation. The Act also directed the Federal Trade Commission to set basic accounting standards. Congress considered assigning the external audit function to a government agency, but the profession

[2]State securities laws are often referred to as "blue sky" laws.

Federal	State
Civil Litigation and Securities Fraud	**State Securities Fraud**
Rule 10b-5	"Blue Sky Laws"
Section 11	
Section 13(b)	
Other Civil Litigation	**Other Civil Litigation**
RICO	Common law tort and contract
ERISA	Corporate derivatives actions
	Miscellaneous actions, such as alleged acts of fraud under commercial law
Criminal Prosecutions	**Criminal Prosecutions**
Securities and Exchange Acts and regulations	
Obstruction of Justice	
Federal wire and mail fraud	

Table 3.1: Sources of auditor liability under federal and state law (Hanks, et al, 2005)

successfully lobbied to ensure the function remained in the private sector (Zeff, 2003a; O'Connor, 2004).

The Securities and Exchange Act of 1934 was passed the next year to modify some of the provisions of the 1933 Act and to transfer the responsibility of regulating securities to the newly created Securities and Exchange Commission (SEC). While the SEC was given the statutory right to set accounting standards, it quickly agreed to empower the profession to set its own standards with oversight by the SEC—an oversight function the SEC chose not to exercise until the 1960s and then only sparingly.

In addition to the preventative regulations, the Securities Acts, along with individual state laws, assess a variety of legal penalties on auditors who are associated with an audit failure. Both sources of penalties have three types of provisions that could affect auditors: civil litigation due to specific securities fraud provisions, other civil litigation, and criminal prosecutions. Table 3.1 lists the sources of legal liability.

It is beyond the scope of this paper to go into great detail about the specifics of any of these laws and their evolution. The laws that get the

most attention from commentators and that are the most relevant today are those related to the federal Securities Acts. The Securities Acts give the Securities and Exchange Commission (SEC) the power to bring suits against audit firms or individuals that violate the relevant sections of the Securities Acts. Private plaintiffs also have a right of action against auditors under certain circumstances. The extent of that right has been fought over and has evolved since the passage of the Acts.

In the 1970s, the Supreme Court made clear that professions were not exempt from anti-trust laws (Goldfarb v. Virginia State Bar, 421 U.S. 773, 787 (1975); National Society of Professional Engineers v. United States, 435 U.S. 679, 695 (1978)). Following the Court's lead, the Federal Trade Commission and the Department of Justice became concerned about the anti-trust implications of professional codes of ethics, both in the accounting profession and in other professions, such as law and architecture. The regulators put pressure on the profession, and the profession ultimately agreed to drop restrictions on competitive bidding, uninvited solicitation, and advertising (Zeff, 2003a).

While legislation was threatened as a result of the Savings & Loans scandals of the 1980s, the profession managed to head off any major reforms. Later, many of the suggested reforms ended up being codified in the Sarbanes-Oxley Act of 2002, which was passed in response to the Enron and WorldCom bankruptcies. Sarbanes-Oxley is considered by many the most sweeping legislation relating to the securities industry since the 1933 and 1934 Acts (U.S. Chamber of Commerce, 2006; Fass, 2003; Mogull et al., 2003).

The law directed many of its provisions towards the accounting profession. The law:

- Created the Public Company Accounting Oversight Board (PCAOB), with the power to inspect all firms that practice before the SEC and to set auditing standards for public company audits. (Title I)
- Levies fees on issuers to fund the Financial Accounting Standards Board. (Section 109)
- Bans auditors from providing certain types of non-audit services to audit clients, and requires that the client's audit committee approve

all other non-audit services provided by the auditor. (Sections 201-202)

- Requires the rotation of audit partners for each engagement at least every five years. (Section 203)
- Details required communication between the auditor and the audit committee. (Section 204)
- Requires that the CEO, Controller, CFO, Chief Accounting Officer, or any person in an equivalent position not be employed by the company's audit firm during the one-year period preceding the audit. (Section 206)
- Requires that every issuer have an independent audit committee that is responsible for selecting, compensating, and overseeing the work of the external auditor. (Section 301)
- Requires the management of the company to disclose, and the auditors to attest to the adequacy of, the company's internal controls. (Section 404)

(Sabanes-Oxley Act, 2002)

The details and implications of these provisions will be explored in Chapter 9. Most of the analysis prior to that chapter, however, will be on the pre-Sarbanes-Oxley environment.

Current makeup of the auditing industry

The entities responsible for carrying out the independent audit are private sector, for-profit institutions. Interesting to note, because of professional requirements, audit firms are private partnerships, and therefore are not themselves required to disclose their financial position publicly, unlike their publicly traded clients.

The auditing industry is dominated by the Big Four accounting firms: Deloitte & Touche, Ernst & Young, KPMG, and PricewaterhouseCoopers. These four firms audit 99% of the total sales and 78% of the public companies in the U.S. Together, in 2002 the Big Four had $17.9 billion in revenue and

employed 62,654 professional staff and 8298 partners. The market for audits is further concentrated in some areas because each of the Big Four specialize in certain industries. For example, approximately 80% of the general building contractors (by assets) are audited by either Ernst & Young or Deloitte & Touche; approximately 95% of assets in the petroleum and coal products industry are audited by PricewaterhouseCoopers or Ernst & Young (GAO, 2003). The Big Four are also some of the largest privately held entities in the U.S.

The Big Four are not the only accounting firms. As of May 2, 2006, there were 1661 public accounting firms registered with the Public Company Accounting Oversight Board, which means that they are authorized to audit U.S. public companies (PCAOB, 2006).[3] The smaller firms can be divided into "second tier" firms which have full national coverage and some international offices, and regional and local firms which may have only a handful of partners or are even sole proprietorships. But to give a sense of the scale difference between the Big Four and the rest of the industry, as of 2002, measuring either by total revenues or by numbers of professional staff, the entire second tier combined is smaller than the smallest of the Big Four (KPMG): In 2002, KPMG had revenues of $3.2 billion, whereas the eight firms in the second tier had a total of $1.8 billion in revenues; KPMG had 10,967 professional staff and the second tier had 9421.

Accounting firms offer more than audit services. For example, all of the Big Four offer tax services and related attest and valuation services (e.g. for mergers and acquisitions). Deloitte & Touche is the only one of the Big Four to still offer full service management consulting services. Due to increasing concern that management consulting services were harming the independence of the audit services, the other three have shed their management consulting divisions: Ernst & Young and PricewaterhouseCoopers in 2000, and KPMG in 2001 (Brewster, 2003).

[3]This includes firms based outside the U.S. who audit companies listed on U.S. stock exchanges or who "play a substantial role in the preparation of the audit reports" of U.S. companies. (http://www.pcaobus.org/Registration/index.aspx)

The history of industry consolidation

The Big Four that currently dominate the profession have gained their prominence slowly over the last half century. In the mid twentieth century, eight accounting firms emerged from what had been a large pool of regional and local firms, distinguishing themselves from the rest of the accounting profession in both size and reputation. The term, "The Big Eight" was coined (or at least popularized) in a pair of *Fortune* magazine articles in late 1960, though the membership in that group was somewhat fluid for a couple of decades (Zeff, 2003a). By 1986, the Big Eight consisted of: Arthur Andersen; Arthur Young; Coopers & Lybrand; Deloitte, Haskins & Sells; Ernst & Whinney; Peat, Marwick, Mitchell; Price Waterhouse; and Touche Ross.

In 1987, Peat, Marwick, Mitchell merged with the European firm, Klynveld Main Goerdeler, to become KPMG Peat Marwick (the Peat Marwick portion of the name was later dropped) to become the largest accounting firm worldwide. In 1989, there were two mergers amongst the eight, to create the Big Six. The fourth and sixth largest firms, Ernst & Whinney and Arthur Young, respectively, merged to become Ernst & Young, in June 1989. In August, the seventh and eighth largest firms, Deloitte, Haskins & Sells and Touche Ross merged to become Deloitte & Touche. Andersen and Price Waterhouse considered merging the same year, but the merger was called off (GAO, 2003).

Almost a decade later, the industry went through a further consolidation. The two smallest of the Big Six, Coopers & Lybrand and Price Waterhouse, merged in 1998 to form PricewaterhouseCoopers. This merger also changed the name of the peer group to the Big Five. Ernst & Young and KPMG also explored merging that year, but eventually dropped the plan (GAO, 2003).

The industry underwent another, unexpected consolidation when Arthur Andersen was indicted and then convicted in 2002 of obstruction of justice in their role as auditor of Enron. Andersen began rapidly losing clients beginning with their indictment and withdrew from auditing public clients at their conviction (for a detailed account of their client losses, see M. Jensen, 2003). The absorption of Andersen clients, partners, and employees into the rest of the industry went remarkably smoothly. Three of the Big Four absorbed most of the partners and employees, with PricewaterhouseCoopers

holding back and taking on only a small number of Andersen's employees and partners. Grant Thornton, one of the largest second tier firms, also took on a sizeable portion of former Andersen partners and employees: they hired 60 partners and 500 staff members (Public Accounting Report, 2003).

This final consolidation has increased worries amongst regulators, clients, and the profession that the industry is now too consolidated. The GAO (2003) was unable to find evidence of oligopolistic price increases after the fall of Andersen, but many are worried that there is not enough choice, particularly in some industries, to maintain competition. Certainly, the prospect of further unintended consolidation because of another firm failure worries everyone. The former head of the PCAOB, William McDonough, said in a speech in 2005, "None of us has a clue what to do if one of the Big Four failed" (Taub, 2005). This has restricted the enforcement options available to prosecutors and regulators, since no one wants to cause another firm's collapse.

Self-regulatory and standard-setting bodies

The accounting profession has built a complicated web of interconnected professional bodies that address different aspects of professional conduct. This dissertation will not address their complexities, except as they interact with the incentives that are the heart of this dissertation's inquiry. This section summarizes the evolution of the most relevant professional bodies and how they have defined the responsibilities of an auditor and participated in the setting of accounting and auditing standards.

State bodies The regulation of professions in the U.S. has traditionally been left to the states. As a result, state boards of accountancy grant licenses to practice and set the specific educational requirements, write the state CPA exams, and determine other requirements necessary to become and remain a CPA in that state. States also have professional accounting organizations that sponsor a variety of activities, such as conferences, and sometime publish technical or trade journals. But because so much of commerce, certainly that of publicly held companies, crosses state lines, this dissertation will not consider further the particular influence or activities of the state-level professional associations or licensing boards.

The national professional organization The accounting profession also has a very strong national-level professional organization, currently called the American Institute of Certified Public Accountants (AICPA). At the beginning of the century, the organization was called the American Institute of Accountants (AIA). It changed its name to the AICPA after a merger with a rival professional organization, the American Society of Certified Public Accountants, in 1936 (Zeff, 2003a). Most CPAs who are involved in audits of public companies are members of the AICPA and subject to its requirements.

Standards setting bodies Initially, the AIA and then the AICPA were the principle source of authoritative pronouncements on both accounting and auditing issues. At the request of the New York Stock Exchange, a committee of the AIA worked from 1930 to 1934 to promulgate the first accounting principles. It proposed "a set of 'five broad principles' of accounting that it regarded 'as so generally accepted that they should be followed by all listed companies' " (Zeff, 2003a, 191, quoting Carey, 1969, 177). The five principles and a sixth were approved in 1934 by a vote of the AIA membership, thus beginning the codification of GAAP. The Institute then maintained a Committee on Accounting Procedure which was responsible for approving and publishing Accounting Research Bulletins, that provided "substantial authoritative support" for various accounting principles (Zeff, 2003a).

Similarly, in 1939, in reaction to the McKesson & Robbins scandal, the AICPA established a committee to promulgate auditing procedures, beginning with those that were not applied in the McKesson case. The Committee on Auditing Procedure in 1947 formalized a set of standards, GAAS, that provided a framework in which to understand the more detailed procedures (Zeff, 2003a).

The AICPA also exercised significant influence over the state bodies by setting best practice expectations. For example, by 1950 all but one jurisdiction had adopted the Institute's Uniform CPA Examination (Zeff, 2003a).

Practicing accountants, many from the major firms, made up the volunteer membership of the various committees that set standards and policies. Participation in the committees was seen as an important part of a professional's responsibilities, and the prestigious firms supported their partners' participation in the major committees enthusiastically. The AICPA was the

forum for discussions about the proper direction of the profession and the role it should be playing in the financial reporting system. It also helped coordinate advocacy for the profession in front of regulators, legislators, and the public.

During the post-war boom, as U.S. corporations grew in size and complexity and the financial markets became more sophisticated and liquid, it became apparent that there were very high stakes attached to accounting principles. People began to criticize the inability of the current system to narrow the range of acceptable accounting treatments to facilitate more meaningful comparisons between companies' statements. One of the most outspoken of the critics was Leonard Spacek, the managing partner of Arthur Andersen. In 1957, Spacek began an increasingly critical campaign accusing the profession of failing to serve their public duty. His speeches publicly embarrassed the AICPA and a number of its committees and earned him the scorn of his colleagues (Allen & McDermott, 1993).

Spacek's agitations for better standard setting led the Institute to disband the Committee on Accounting Principles and replace it with a new body, the Accounting Principles Board (APB) in 1959. The APB was given a mandate to create a framework within which accounting principles would be promulgated as well as to issue specific principles. It was charged with narrowing the areas of difference in controversial areas of GAAP. It also began a movement towards progressively more formal standards-setting processes. (Zeff, 2003a)

Each of the Big Eight firms had representation on the APB, and the firms took their role in the standards setting process very seriously. There were ferocious debates over accounting principles with Arthur Andersen and Price Waterhouse often taking the lead on opposite sides, particularly over the issue of whether conformity or flexibility should take precedence as a guiding principle of standards setting. As the APB began to address increasingly controversial issues, it became the subject of increasingly fierce lobbying by interested parties. At one point, the SEC and the Treasury Department stepped in and, in a move that many saw as evidence that the regulators were at the time beholden to corporate interests, forced the APB to recognize multiple treatments of investment tax credits, one of the most contested accounting issues. This move was widely seen to undermine the Board's authority Zeff (2003a). On top of the arguments over the Board's

standards, there were arguments about whether or not auditors had to force their clients to conform to the accounting principles issued by the Board (Bevis, 1963; The Economist, 1964; Bevis, 1966b).

By the start of the 1970s, after a series of accounting scandals that seriously shook public confidence in the profession's ability to set reasonable and useful accounting standards, it was clear that the APB had lost its authority. The AICPA formed the Wheat Commission in 1971 to consider the question of how standards should be formed. The Commission, after considering the viewpoints of a wide variety of stakeholders, recommended that the APB should be disbanded because "it was clear that non-CPAs viewed the APB as captive of the public accounting profession, and they suspected board members of being unduly influenced by the makeup of their firms' clienteles." (Olson, 1982, 67). The Wheat Commission successfully proposed the formation of a Financial Accounting Standards Board (FASB) that would be an independent entity composed of full-time, paid members outside of the direct control of the AICPA or the large firms. The FASB is overseen by a Financial Accounting Foundation (FAF) that finances and oversees the Board. The Foundation is sponsored by organizations that represent a variety of constituents, only one of which is the CPA profession (Olson, 1982; Zeff, 2003a).

The FASB further formalized the standards setting process and began a movement of the process away from the control of the profession, though the profession still had significant influence. One consequence of the removal of the standards setting responsibility from the AICPA, however, was that the AICPA felt the need to create an entity that would advise the FASB as it considered new accounting standards and issue official responses to the FASB pronouncements. The AICPA therefore created the Accounting Standards Executive Committee (AcSEC) that coordinated the professional response to the FASB. The AcSEC also held on to some standards setting power by issuing auditing and accounting guides for special industries, and while its pronouncements are not as authoritative as those issued by the FASB, they do help shape issues that the FASB has not addressed extensively (Olson, 1982).

In 1984, the FASB responded to a perception that the FASB was too slow in responding to emerging issues by creating the Emerging Issues Task Force (EITF). This opened another avenue for the profession and other stake-

holders to influence the standards setting process, since it quickly became an important initial screening step. The FASB director of research and technical activities chairs the EITF, and the EITF was originally staffed by: technical partners from each of the largest accounting firms, three senior partners from smaller firms, two senior financial executives chosen by the Financial Executives Institute, one Business Roundtable member, and one National Association of Accountants member. In addition, the chief accountant of the SEC and the chairman of the AICPA's AcSEC are non-voting members (Upton & Scott, 1988). Today, the operating procedures of the EITF state that:

> The membership [of EITF] includes representatives from the following constituent groups.
>
> - Public accounting firms
> - Preparers of financial statements
> - Users of financial statements
>
> The number of representatives from each constituent group is determined by the EITF Chairman. (EITF, 2005)

The current make-up of the task force retains much of the same distribution as its original make-up, though there is more representation of investor interests.

The Equity Funding scandal that broke in 1973 with the revelation of massive fraud caused a public uproar over the auditors' failure to detect the fraud. The profession responded by investigating the fraud and how well current auditing standards should have served in finding the fraud. Although their ultimate conclusion was that the current standards should have been sufficient, and that the problem lay with the individuals who carried out the audit, the process led to the creation of the Commission on Auditors' Responsibilities, also known as the Cohen Commission, charged with studying the proper responsibilities of auditors. One of the outcomes of the Commission was a recommendation to replace the AICPA Auditing Standards Executive Committee with a new Auditing Standards Board that would facilitate a more responsive standards body. The new Board, formed in 1979, mirrored for auditing standards the earlier move of the accounting standards

setting from an AICPA committee to the APB. The effect of the change was minimal, however, since the impetus behind the move was more to improve public appearances than because of a real appetite for reform within the profession (Olson, 1982).

The Sarbanes-Oxley Act took further steps to remove the standards setting responsibility from the profession. Most importantly, it established the PCAOB, which removed *auditing* standards from the profession for the first time. Second, Sarbanes-Oxley further removes the FASB from the profession's control and puts it more squarely under the control of the SEC. It accomplishes this by giving the SEC the right to withdraw its support of the FASB if the Commission no longer feels that the Board is "capable of improving the accuracy and effectiveness of financial reporting and the protection of investors under the securities laws" (15 U.S.C. §77s(b)(1)(B)). And now, rather than being funded by donations from accounting firms, the FASB is financed through a fee levied on issuers.

3.3 Conclusion

This chapter has surveyed the basic responsibilities of the public company auditor and the major institutions that shape and interpret those responsibilities. The next chapter steps away from the specifics of the U.S. auditing industry for a moment to consider the basic incentives facing the auditor and manager as they interact strategically over the course of the audit. The rest of the dissertation will consider how the dynamics of those basic incentives have shaped over time the institutions described above.

Chapter 4

Strategic interactions between auditors and management

At the heart of the audit profession's infrastructure described in Chapter 3 lies a strategic "dance" between an auditor and the manager she audits.[1] This chapter strips away the institutional contexts to look more closely at the basic interactions between auditor and manager. To do this I construct a game theoretic model of the strategic interaction between an auditor and the management she is hired to audit. I focus narrowly on the issue of the auditor preventing the manager from intentionally misrepresenting the state of the company. I also strive to put as few restrictions as possible on the exact nature of the parameters used in the model, while still keeping the interaction recognizably that of a financial statement audit. Subsequent chapters then tie the insights gained from the modeling exercise back into the messier complexities of the actual auditing industry. The model therefore provides a starting point with which to gain some traction in interpreting the historical evidence. The feedback works in the other direction as well. The actual behavior of auditors can inform a more refined understanding of those parameters and will indicate directions that further, more detailed modeling might prove fruitful.

I first review the theoretical literature that has helped shape the debate and discuss some of its limitations in actually shedding light on current

[1]For ease of exposition, throughout this chapter and related appendix the auditor is "she" and the manager is "he."

events. I then develop a model that begins to address some of the gaps in the current literature.

4.1 Review of the theoretical literature

Perhaps the most influential paper on incentives for auditor collusion with management is DeAngelo (1981). Her paper has formed the theoretical basis for numerous empirical papers and has also articulated theoretical underpinnings to legal decisions that set a high standard of proof for auditor collusion.[2] In this paper, she argues that auditor size is a legitimate proxy for audit quality, since large firms have more reputation-based collateral on the line. She argues that if a firm is caught colluding with one client, the rest of its clients are likely either to switch to an audit firm with a better reputation, or to lower the "client-specific quasi-rents" they are willing to pay. These quasi-rents are claimed by incumbent auditors since there are numerous start-up costs (for both parties) associated with the first audit. These start-up costs create what DeAngelo calls a bilateral monopoly: "In a bilateral monopoly, both parties have incentives to continue an established relationship because of the absence of costlessly available perfect substitute auditors (clients)." (DeAngelo, 1981, 188). The more clients a firm has, the more quasi-rents are at risk if an audit firm loses its reputation: "As a general proposition, auditors with a greater number of audit clients have reduced incentives to 'cheat' in order to retain any one client, ceteris paribus." (191).

DeAngelo's argument, that one could reasonably expect a large audit firm to do a better audit than a small audit firm, has been expanded in policy debates beyond its original scope. She never explicitly argues that large audit firms would *never* collude with their clients to mislead the investing public, though some of her discussion implies that is likely the case.[3] Further, important assumptions of her argument remain unexplored.[4] She seems to

[2]See, for example, Judge Easterbrook's opinion in DiLeo v. Ernst & Young, 901 F.2d 624 (7th Cir. 1990).

[3]For example, she notes that in the 1977 annual report of Peat, Marwick, Mitchell, the firm states that its single largest audit fee comprises only 1/2% of total revenues, implying that there are no individual client's fees for which it would be worth risking the firm's reputation (193).

[4]Since her argument is not modeled formally in this paper, she does not ever explicitly

assume that the risk of an auditor getting caught colluding with a client is sufficiently high to have a strong deterrent effect. She also seems to assume that the market can tell the difference between intentional collusion and accidental oversight of misstatements.[5] Finally, she asserts that audit firms provide consistent audit quality:

> Because quality evaluation is costly, consumers will compensate auditors who enable them to avoid these costs by maintaining a relatively uniform quality level. Auditors have incentives to specialize in a uniform quality level because they can capture higher fees by doing so.... When auditors specialize in a given quality level, clients wishing to change the level of audit quality purchased will find it necessary to change auditors. (DeAngelo, 1981, 187)

However, precisely because quality evaluation is costly, it is difficult for the market to determine how consistent a firm's quality level is. The market will track the *average* outcome of a firm's audit (e.g. how many restatements or unanticipated bankruptcies are associated with the clients of a particular firm) but market participants have no direct ability to determine the variability of audit quality among audits conducted for different clients of a particular firm. As a result, it isn't clear that auditors are able to capture the value of quality consistency at the individual audit level. Rather, their focus will be on maintaining the firm's reputation for their average outcome. This could be pursued either through a policy of consistent quality or through a more diversified portfolio of client types and audit qualities.

The other theoretical paper on incentives for audit quality influential in the accounting field is Dye (1993). Dye also predicts that large firms will do better audits than small firms, but not to protect the quasi-rents that come from their reputation. Instead, he suggests that because the large firms are wealthier, they have a much greater exposure to liability if there is an audit failure, and therefore they have greater incentives to prevent such a failure. In essence, Dye assumes that smaller firms have binding liquidity constraints that limit their liability and therefore realize few benefits from performing a high quality audit. Dye's model looks at the particular case of

address her exact assumptions.

[5]Because the audit process involves the random sampling of items to test, a misstatement can go unfound by auditors even if there is no negligence involved at all.

auditors not predicting an imminent bankruptcy—e.g. not issuing a going concern opinion when one is warranted.[6]

Dye also assumes the ability of the courts to discern when an audit failure (or, in the specific case of his analysis, an unexpected bankruptcy) is due to a substandard audit or to bad luck. And because he limits his argument to going concern opinions, he reasonably assumes that all audit failures are detected by the market.

As discussed already in Chapter 2, misinformation is costly even if it does not result in an unexpected bankruptcy. Therefore, a complete theoretical consideration of auditors' incentives should take into consideration the possibility that not all misstatements of concern are eventually found by the market. If the detection rate is low, it is reasonable to expect that might reduce incentives to perform a high quality audit, and therefore it is likely an important component to any model that looks at auditor incentives.

Second, Dye, like DeAngelo, assumes that the public can discern the cause of an audit failure. Audits could fail for three reasons: the auditor could perform an audit of appropriate intensity and miss the misstatement because it was not included in the material sampled; the auditor could perform a negligent audit—one that does not offer "reasonable assurance" of discovering the misstatement—and therefore not find the misstatement; or the auditor could collude with management to release the misstated information. But almost all audit failures are not fully litigated in court and significant confusion about the auditor's role in the failure can persist. Both authors arguments turn on the ability to make that distinction at least fairly accurately. It seems worthwhile to create a model that does not allow for such a distinction.

Finally, Dye does not address the possibility of collusion between management and the auditor, focusing instead on effort levels expended on the audit, and DeAngelo implicitly dismisses it as a real possibility for large audit firms. Given that there are legitimate worries, due to the recent scandals, that the large audit firms might have indeed colluded with the management of their clients to conceal fraud, it is important to include the possibility of

[6]This is one interpretation of Dye's model, since he does not explicitly discuss going concern opinions. He does require a client company's failure to trigger liability, so even if the particulars of the case were about earnings manipulation that made the bankruptcy of the company a surprise, it would still conform to the specifications of his model.

management offering some sort of inducement to collusion and to be open-minded at the outset about the likelihood of any firm accepting it.

The "principal-agent" literature within microeconomics contributes complementary insights to those offered by DeAngelo and Dye. Principal-agent models are those that are used to explore how owners of capital inputs motivate others to perform the labor necessary to produce a good. In these models, the owner of the capital is called the "principal," and he must design a contract with his "agent" to give the agent the necessary incentives to exert the correct level of effort to meet the principal's goals. The principal-agent literature explores a wide variety of complications to the basic contracting problem. One complication comes about when the agent and the principal have different amounts of information about the agent's character or effort. These problems are called "information asymmetry" problems, and address instances where the agent can do better by misrepresenting his private information to the detriment of the principal's interests.

Fundamentally, the financial reporting system is about helping to resolve the information asymmetry inherent between agents—the executive management of a corporation—and principals—the shareholder-owners of the corporation. The economic literature on principal-agent information problems predicts a wide variety of possible solutions to the problem of inducing agents to tell the truth about their private information. One of these solutions is to monitor the agent (Alchian & Demsetz, 1972; M. C. Jensen & Meckling, 1976; Lazaer, 1986). In the financial reporting system, this is a role the auditor plays. The auditing is not done directly by the shareholder, however, so the shareholder must find a way to induce the auditor to do *her* job properly as well. This creates a three player problem that is often modeled as principal-supervisor (or monitor)-agent problems.[7]

The economics of a principal-supervisor (or monitor)-agent relationship that allows for the possibility of collusion between two of the parties has been studied by some, beginning with Tirole (1986) (see, for example, Olsen & Torsvik, 1998; Strausz, 1997; Laffont & Tirole, 1991). Like the models of DeAngelo (1981) and Dye (1993), there are also some important differences between the models used in the work following Tirole (1986) and models that would help elucidate the problems faced by shareholders, auditors, and pub-

[7]Most of the literature discusses these dynamics in terms of supervisors rather than auditors, but the model transfers directly to an audit relationship.

lic company management. This paper is an attempt to combine the useful insights of both strands of research and create a model that is useful to policy makers in understanding the real conflicting incentives facing the profession.

One fundamental difference between the work following Tirole (1986) and this paper is that Tirole (1986) and others assume that the output of the agent is costlessly observable by all parties and that the asymmetric information lies in the agent's productivity factor and effort levels. However, in public companies, the company's financial outcome is not directly observable to outsiders. To mitigate this information problem, the agent (management) issues financial statements to convey information about the outcome to the principal (shareholders).

Tirole (1986) and others tackle the question of keeping a high-productivity agent from posing as a low-productivity agent and pocketing the rent that comes from exerting lower levels of effort than they are paid to exert. Here I address the question of how to keep management that presides over a poor outcome from posing as one presiding over a good outcome. Strausz (1997) does look at a principal-supervisor-agent model where the outcome is unmeasurable. In that paper, however, Strausz focuses on the possibility of collusion between the supervisor and the principal, where the two conspire to withhold incentive pay (or other rewards) rightfully earned by the agent. The possibility of such collusion in the case of public company financial statement auditing seems remote, given that shareholders are such an uncoordinated group. Strausz addresses briefly the possibility of collusion between supervisor and agent, but assumes that it is possible for the principal to write a collusion-proof contract with both parties.

It is not clear from experience that such a contract is feasible, however. Feess & Nell (2002) show that the optimal level of care in double moral hazard situations such as that of the auditor and manager can be reached if three conditions are met: a strict liability regime, the ability for the auditor and manager to make side payments, and the existence of liability insurance for one of the players. In their model, they show that it is efficient to hold either the auditor or the manager strictly and solely liable for misstatements if the agent held liable can collect a side payment from the other agent for any misstatements the liable agent corrects. If the liable agent has access to fair insurance coverage, she will accept such a contract, since the insurance coverage will cover the contribution of the other agent to the risk of audit

failure. The authors claim in the discussion of their model that such a scheme would also prevent collusion between the auditor and manager since "strict liability ... automatically solves the truth-telling problem—since both agents take the total harm into account, neither can be better off by faking the results of the investigation."

Feess and Nell's model and discussion do offer a mechanism for inducing efficient effort levels and truth-telling, but this mechanism has a number of barriers to implementation. First, auditors are prohibited by their professional code of conduct from entering into contracts that are contingent upon the findings of their audit. Second, there is currently no real insurance available to auditors at the Big Four firms. Finally, we currently operate in a legal regime that sets a far higher bar of proof for plaintiffs. In some instances, plaintiffs must show that the auditor was negligent; in many others, they must prove recklessness or actual knowing participation. Even if the necessary legal changes were made and the insurance industry were to decide that auditors were insurable, we would need to reconsider the way the total harm of a misstatement were calculated. As was discussed in Chapter 2, it is far from clear how the total harm caused by a misstatement is related to the damages awarded in the civil system.

In addition to the problems resulting from having an incompletely observable outcome (as well as unobservable effort), public company financial statement audits have some unusual dynamics that make the relationship between shareholders and auditors different from a generic principal-agent relationship. First, all public companies are required to have an external audit performed annually, making the relationship a mandatory one.[8] Second, management has in the past had the ability to hire and fire their auditor. While this has changed officially since Sarbanes-Oxley (it is now the Board's responsibility to hire and fire), management likely still exerts significant influence on those decisions in many companies. Finally, as mentioned above, there are regulations that limit the types of contracts that auditors and management may enter into. These limitations may preclude the design of a collusion-proof contract.

[8]There is a theme in the principal-agent literature about the difficulty of a principal committing to audit the agent at the level necessary to induce the desired behavior (Khalil, 1997; Hart, 1995; Bolton & Scharfstein, 1990). The regulations requiring a financial statement audit make this a non-issue, though perhaps there remains a commitment problem in hiring a competent (and therefore expensive) auditor.

Most importantly of all, shareholders in public companies are an amorphous group and their ability to exert influence on their agents is diffuse and often indirect. In theory, their interests are supposed to be represented by a Board of Directors, which can more easily coordinate to oversee the executive management. In reality, however, there is a third principal-agent relationship occurring in public companies, that between the board and the shareholders. For the purposes of this analysis, I assume that the board has no meaningful ability to intervene in the relationship between auditor and manager.

Because of the inability of shareholders to explicitly coordinate, the analysis below begins with a game between only two active players, the manager and the auditor. The details of how shareholders exert their influence on the game will be suppressed in the initial analysis. How the shareholder influences the outcome of the game is discussed in later chapters.

4.2 The model

To understand the agency problems the public company shareholders face, it is useful to sketch out the manager's and auditor's decision process as an extended form, noncooperative game. Because this dissertation targets an audience that includes both those with game theory training and those without, this section lays out the model in intuitive, non-technical terms, so that the lay reader can follow the logic that will be important to the historical analysis in subsequent chapters. The interested, technically-inclined reader can turn instead to Appendix B for a formal, rigorous presentation of the model.

Game theory is a method of gaining insight into the interactions of actors who behave strategically by taking their "opponent's" responses to their actions into consideration when deciding on their course of action. The games analyzed with game theory are stylized forms of real world interactions. They outline the major decisions each player must make that lead to each player receiving a final payoff. What payoff they receive depends on which set of actions was taken. Players are assumed to be trying to receive the best payoff possible, given that they assume their opponent to be doing the same.

Game theory analysis is particularly good at offering systematic ways

to deal with the possibility that a player may not know everything that his or her opponent may know at various stages of the game. In an auditing game, the primary source of "asymmetric information" that affects the game is that the auditor does not know at the start whether the manager is trying to misrepresent the company. Given that she doesn't know whether there is a misstatement to find, she must decide how rigorously to audit.

Another characteristic of game theory analysis is that players develop strategies, which are essentially a set of contingent instructions that lay out how the player will respond at each stage of the game depending on the player's information about what has happened up to the point where he or she must make a decision. In order to determine the best strategy, though, players (and game theorists) must work backwards, from the payoffs, to understand the consequences of each decision.

To present the model, I first lay out the basic structure of the game as it would play out over time and discuss the different possible payoffs the players receive. To solve for the equilibrium outcomes, I work *backwards* through the game to develop the logic of the outcomes. Which outcome turns out to be the equilibrium solution depends on the size of various parameters, so one of the main results of this analysis is an understanding of what contextual conditions must hold to achieve different outcomes. The final step is to develop an understanding of what the socially desirable outcome would be and relate that to the equilibrium analysis. This comparison offers insights into the levers policy makers may have to better align the private incentives of the players with social goals

This game includes three actors: the manager, the auditor, and the market, where the manager and the auditor are the ones making active decisions. The market plays the role often designated as "nature" in games. It does not respond strategically to the actions of the other players, and its moves are determined probabilistically—as if it flipped a coin weighted to a particular distribution of outcomes. Throughout the analysis, I assume that no player is risk averse and all are profit maximizing.

The game is played out sequentially over time. Figure 4.2 illustrates the order of play. Entries above the timeline are events that always happen, regardless of how the game plays out. Entries below the line occur in only some of the plays of the game.

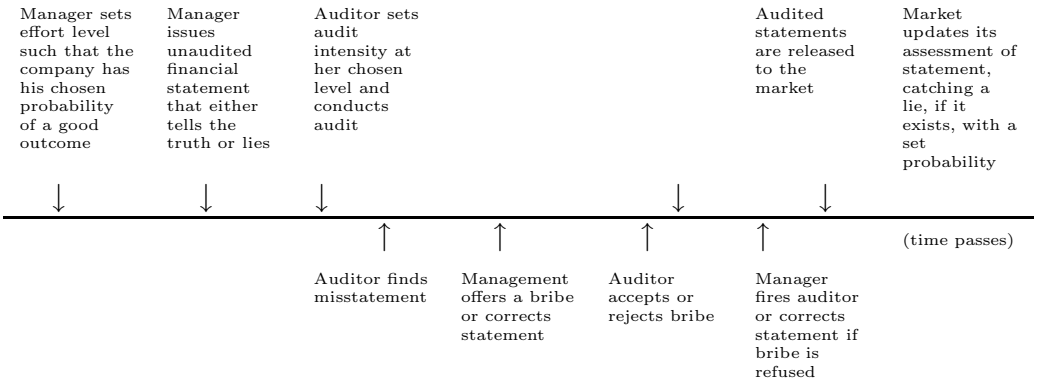

Figure 4.1: Timeline of auditing game

In every game, the manager must exert effort in running his company. The effect of his choice of effort is that his company has a particular probability that the company's outcome in the period is "good." This choice is a costly investment for the manager, where a higher probability of a good outcome is costlier to achieve. After that effort has been expended on the part of the manager, the true state of the company is revealed privately to him. Then the manager issues financial statements that may or may not accurately reflect the true state of the company.

Because the model's primary purpose is to help us understand the *auditor's* incentives, some of the complexity of the manager's decision process in the early stages of the game is suppressed so as to look at interesting aspects of the auditor's decisions in as simple a way possible. To achieve this end, I am defining a "good" outcome *by construction* as one where the manager cannot improve his expected payoff by reporting anything but the true outcome. This means that some, perhaps many, managers will always achieve "good" outcomes because they have an intrinsic distaste for lying that outweighs any financial benefits they might receive from misrepresenting the company or because the company's incentive system is such that the benefits from lying are outweighed by their expected costs (i.e. the penalties associated with getting caught scaled by the probability of getting caught). Defining a good outcome this way is artificial and less intuitive, but it simplifies some of the technical aspects of the game and allows my focus to remain on the instances where managers *do* have an incentive to misrepresent their company.

After the manager compiles his financial statements, the auditor conducts an audit of those statements. In the planning for the audit, the auditor chooses an audit intensity. I define "audit intensity" as the probability that she will uncover a misstatement, conditional on its existence. A higher audit intensity costs more than a lower intensity, and the costs grow at a faster rate the closer the probability of discovering misstatements gets to one. I assume that the audit intensity chosen is not observable or verifiable by anyone outside the audit firm. This assumption means that auditors cannot contract to perform an audit of a particular intensity, since the other party to the contract cannot independently determine whether the auditor met her obligations.

A subset of the possible decisions and events could lead to additional actions by the auditor and the manager before the statements are released. If the true outcome of the company in that period is bad and management decides to try to conceal that fact by issuing misleading financial statements, the auditor might find a misstatement if her audit intensity is greater than zero. If the auditor does find the misstatement, the manager must decide whether or not to try to induce the auditor to ignore the misstatement. The auditor then decides how to respond. If the auditor refuses to ignore the misstatement, management must decide whether to give in to the auditor's demands to fix the misstatement or to fire the auditor.

After the audit is completed, the financial statements are released to the market. After time passes, subsequent events or new public information are used to update the market's assessment of the validity of the financial statements. The market may or may not ever discover deliberate misinformation, if it exists, but it does so at a rate that is not influenced by the choices of auditor or manager modeled here.

In the technical discussion of the model in Appendix B, I follow the tradition of the principle-supervisor-agent models and model this process of the manager trying to induce the auditor to ignore a misstatement as a transfer of a bribe. Those not already used to this technical usage of the term "bribe" may find it a distraction and a barrier to understanding the dynamics described by the model, however. The term "bribe" as it is used in the economics literature could mean the shady transfer of a suitcase full of cash. *But it also could imply very different forms of inducement.* It covers any situation where the auditor believes she will do better by going

along with management than by insisting on a change. She may come to this conclusion for a variety of reasons: her auditing decision may affect the likelihood of winning a contract for consulting work; the audit engagement might not be renewed if the manager is unhappy; a disappointed manager, through social contacts, may influence *other* companies' decisions whether to hire the auditor; etc. These are all instances where the auditor, in the terminology used in the profession, has lost her independence. The value to the auditor of all of these contingencies can be captured in the term that is modeled as a "bribe."

Furthermore, the model described here is flexible enough to allow for the auditor's character to be such that no "bribe," of any size, would ever be accepted: most easily, one could model an incorruptible auditor as one who views the non-pecuniary penalties of getting caught colluding with management, such as shame, as infinitely large. In no way should this modeling exercise imply any judgment on individual auditors' character.[9]

With these caveats in mind, this model captures the reality that in some circumstances an unscrupulous manager would *like* to bribe his auditor. He has an incentive to find a way to do so that the auditor will accept. And, if the conditions are right, the auditor can do better by accepting, so she has an incentive to find a way for the manager to offer her inducements that come in a form she is willing to accept. Understanding the force of these incentives is an important step in interpreting the historical evidence and designing future policies. Therefore, in this chapter I will minimize my use of the term "bribe" but nonetheless wish readers to recognize the connections between that original, stark nature of the word and the subtler forms of inducement we actually see employed by managers.

Payoffs

Both players have payoffs associated with each of the possible outcomes of the game. Figure 4.2 describes the possible choices the players can make and their outcome in "tree" format. Each node in the tree denotes a decision that must be made by a player. Those prefixed by "M" require action by the manager; those labeled with an "A" are actions by the auditor; and those

[9]In the same way, this model makes no predictions about the characters of individual managers and is flexible enough to allow for managers who will never cheat.

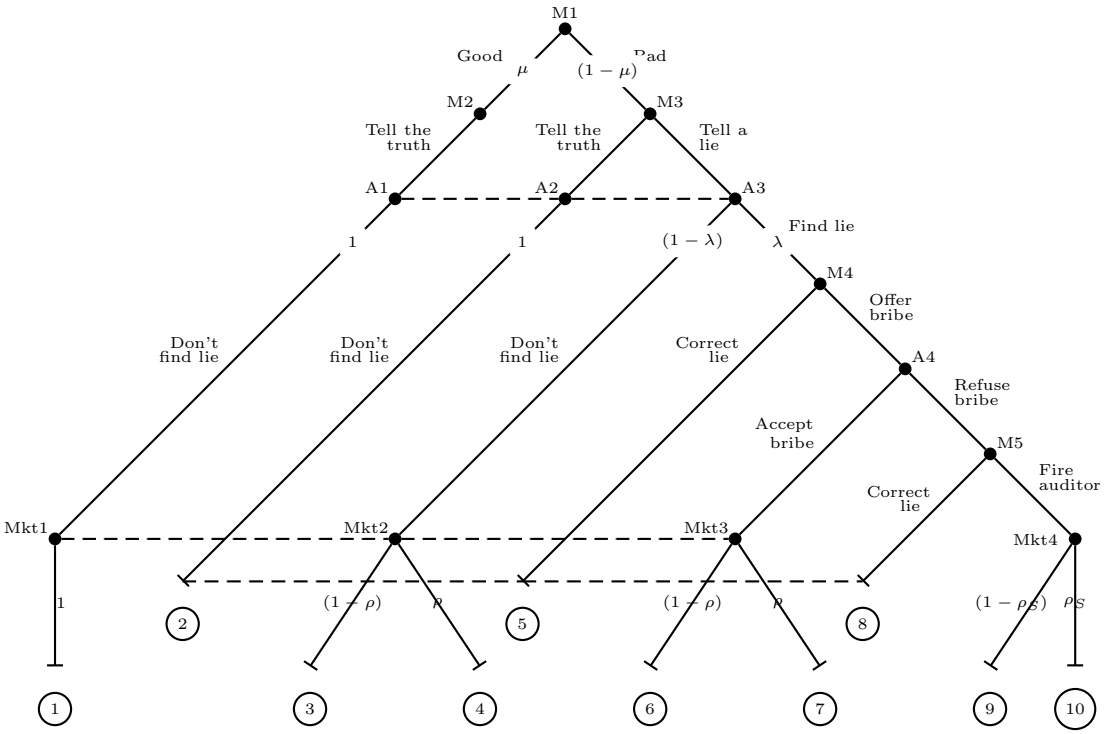

Figure 4.2: Auditing game

labeled "Mkt" are actions made by the market. Those nodes connected with a dotted line represent a situation where the player who must make the decision at that node is unaware of which node, amongst those connected with the dotted line, he or she is at. There are ten possible outcomes, and this section describes the payoffs associated with each of those outcomes. The numbers correspond to the numbers indicated in Figure 4.2.

1. If the outcome of the company is good (and therefore is reported as such), the manager will receive the wage and other benefits associated with the good outcome. He will have also expended the cost of the effort level he chose to influence the probability of the good outcome. His net payoff is therefore the difference between the benefits and the cost. The auditor will receive her fee less the costs of the audit she

conducted. Those costs are a function of the intensity of her audit.

2. If the company's outcome is bad but the manager tells the truth about the outcome anyway, he receives the wage and benefits associated with the bad outcome. He has still expended the costs of the effort level he chose in an attempt to have a good outcome. The auditor's payoff is no different than it was in the first outcome.

3. If the company's outcome is bad, the manager lies about the outcome, and the auditor never discovers the misstatement, the financial statements are released to the market uncorrected. If the market never discovers the lie, the manager and auditor both receive the same payoffs as in the first outcome.

4. If the company's outcome is bad, the manager lies about the outcome, and the auditor never discovers the misstatement, the financial statements are released to the market uncorrected. The two players initially receive the same payoff as the first outcome, but the market later discovers the misstatement, both players are assessed a penalty.

5. If the company's outcome is bad and the manager lies about the outcome but the auditor catches the lie, the manager can choose to correct the lie and release financial statements that disclose the bad outcome. In this case, the manager and auditor receive the same payoffs as they do in outcome #2—the one where the manager tells the truth to begin with.

6. If the company's outcome is bad, the manager lies about it, the auditor finds the lie and the manager does not wish to correct the lie, he can offer the auditor an inducement (bribe) to ignore the misstatement and certify the incorrect statements. If the auditor accepts the offer, and the market never discovers the misstatement, the auditor receives her fee, less the cost of the audit, plus the value of whatever inducements the manager offered her. The manager receives the payoff associated with reporting a good outcome, less the cost of his effort and less the cost to him of the inducements he has offered the auditor.

   An important difference between this model and its predecessors is that it allows for the cost of the inducement to the manager to be both greater or less than the value of the inducement to the auditor. It

allows for the possibility that the inducement is costless to the manager: he could use company resources in such a way that does not affect his payoff at all but offers something of value to the auditor (e.g. a consulting contract).

7. If there is a bad outcome, the manager lies about it, the auditor finds the lie, and the manager successfully induces the auditor to ignore the lie, the players initially receive the same payoffs as in the previous outcome. This time, however, the market does later discover the lie and assess a penalty on both players. It is important to note that I assume that the market cannot determine between this situation, where auditor and manager are colluding in the fraud, and when the auditor innocently misses the fraud. This assumption is in contrast to the models by DeAngelo (1981) and Dye (1993), and perhaps reflects reality a little better, since the facts of the case are rarely fully adjudicated.

8. If there is a bad outcome, the manager lies about it, the auditor finds the lie and the manager is not successful in inducing the auditor to go along with the lie, the manager can choose to give into the auditor's demands that he correct the statements. The financial statements issued to the market therefore disclose the true, poor outcome of the company. In this case, the payoffs for both players are the same as if the manager had told the truth from the beginning (see #2).

9. If there is a bad outcome, the manager lies about it, the auditor finds the lie, and the manager is not successful in inducing the auditor to go along with the lie, the manager can choose to fire the auditor and find another auditor to certify the false statements. I assume that the manager is always able to find another auditor, though it is conceivable that this process is quite complicated and involves another round of the game played with a different auditor. Unlike the other outcomes, those that include firing the auditor gives additional information to the public which may affect the payoffs of the players. If the market does not discover the lie, the manager receives a payoff that may be less than the payoff if he had received had he not needed to switch auditors. An example of why this might be the case would be that the market may not ever discover a problem with the financial statements but the stock price may nonetheless react negatively to the news of an auditor change, therefore reducing the value of the equity portion of the

manager's pay. As usual, the manager has also expended the cost of his original effort level. The auditor may receive only a fraction of her contracted fee, since she is fired before the audit opinion is completed, but she has already expended the full cost of the audit.

10. Finally if the same sequence of events occur as in #9, but this time the market discovers the misstatement, the manager suffers the usual penalty for being discovered misrepresenting the company's outcome, but this time the auditor may receive a reputation-related *benefit*, since the market will interpret the auditor's dismissal as evidence that the auditor stood up to the manager and refused to certify statements she knew to be incorrect.

    Also important to note is that the likelihood of the market discovering the misstatement after an auditor dismissal may be higher than if the original auditor certifies the financial statements.

For a game to be predictive of players' behaviors, we need to assume that both players understand the game and their own and other players' payoffs. There are methods of dealing with a certain level of uncertainty about other players' understanding of the game and its payoffs—or if the players are not reliably rational—but I will not address such situations here, since it would complicate the analysis. For the purposes of this policy analysis, making stronger assumptions about the players' understanding and rationality are sufficiently realistic to gain insight into the audit profession's actual experiences.[10]

Equilibrium strategies

The guiding logic of the method of analysis employed here is that every player will always make *sequentially rational* moves, meaning that a player will always do the best he can at the current point in the game, given that he will always do the same at all future points in the game. This is relevant in the early steps of the analysis in this auditing game, because a manager might like to start out by announcing he will fire the auditor should she try

[10]Situations where the assumptions are relaxed are generally dealt with by assuming a "trembling hand" equilibrium concept (see, for example, Kreps, 1990).

to force a change in the financial statements, since that might reduce the amount of effort the auditor puts into looking for a misstatement. But his threat is only credible if, should events lead to the point where the manager would actually have to fire the auditor, the manager is improving his payoff by firing the auditor. If he doesn't do better, the auditor knows the threat is an empty one and will therefore ignore it. The manager, knowing the auditor knows, will not base his strategy on a hope that he can manipulate his auditor with empty threats.

For this reason, what would happen if the players reach the bottom right area of the game tree in Figure 4.2 matters even if they never reach it in reality. This is why we use backward induction to "solve" a game. The branch of the game tree that has the most influence over the initial decisions the manager and auditor make is that branch that describes what happens when the auditor finds a misstatement. The last active decision that happens in this branch is the decision of the manager whether to fire the auditor after she has refused a bribe, so that is where the analysis begins (Node M5). (Because the market is not acting strategically, we can ignore its moves and "collapse" them into the *expected value* of the outcome, meaning a probability weighted averaging of the resulting payoffs from the market's "move.")

As hinted at above, the manager will only fire the auditor if he can do better by firing the auditor than by correcting the financial statements. The manager decides this by weighing the benefit of an improved initial payoff against the risk and penalty associated with getting caught. As discussed in the above section laying out the payoffs, firing the auditor is an observable act, so the manager's initial payoff may be less than it would be if he had gotten his original auditor to issue the audit opinion and the risk of getting caught may be higher than it normally would be. These reduced benefits and increased risks may be enough to make the manager decide to give in to the auditor's demands to correct the statements. If it is not, the "firing condition" is met and the auditor will be fired and the misleading statements issued with a different auditor's certification.

Moving backward up the tree to Nodes M4 and A4, the decisions whether to offer and accept an inducement to remain silent about the misstatement, both the auditor and manager can deduce what will happen if the inducement is turned down: they both know whether the firing condition is

met. If it is, the manager will always do better to offer a bribe, since he would prefer to fire the auditor than correct the statements, and in order to get to the move where he fires the auditor, he must offer an inducement first (which could be of negligible value), even if he knows it will be turned down.[11] If the firing condition is not met, the manager must decided whether or not to try to induce his auditor to collude. In both instances, the manager must decide how large an inducement to offer.

Taking the instances where the firing condition is met first, the manager is willing to offer an inducement that costs him anything from zero up to the value to him of having his original auditor sign the audit opinion, rather than a different auditor sign the opinion. How much the inducement costs him depends quite a bit on how it is financed. While I will not go into any detail here about the financing issue, it will turn out to be a recurring question throughout the dissertation and I will address it from a variety of angles.

If the auditor knows she will be fired if she doesn't accept whatever inducements the manager offers, she will weigh the value of the inducement and her full fee against the potential reputational payoffs she would get if it is later discovered that she resisted a bribe and the knowledge that she will not have to worry about penalties associated with a discovered audit failure. She will accept an inducement if it is valuable enough to compensates her for the risk of penalties and for foregoing the potential reputation gains.

If there exists an inducement that meets both the manager's and auditor's criteria, then the manager will offer the inducement and the auditor will accept it and the game will end without ever reaching the firing stage. If there is no inducement that meets both parties requirements, the game moves on and the manager fires the auditor.

If the firing condition is not met, then the decision process is similar, but the players are weighing different issues. The manager is willing to offer an inducement that costs him up to the difference between the benefit of getting the higher initial payout and the risk-weighted penalty he pays if the misstatement is discovered. As in the previous case, the size of the

[11] In real life, if both players know the auditor won't accept any inducements, the manager may just skip right to firing the auditor—indeed, the auditor might beat him to it and resign from the audit—but the formal requirements of game theory analysis require us not to jump ahead.

inducement, from the auditor's perspective, that the manager can "afford" depends on how the manager is financing it.

If the auditor knows she can force a change if she chooses not to accept the inducement, the inducement must fully compensate her for the risk she is taking of paying a penalty if the misstatement is discovered. As before, if there exists an inducement that meets both players' requirements, the inducement will be offered and accepted and the game will end. If there does not exist a mutually agreeable inducement one of two things will happen. Either the manager will recognize that offering a bribe is hopeless and will correct any misstatements discovered by the auditor or he will offer an inducement, the auditor will refuse it, and the manager will correct the misstatement, ending the game. Both outcomes are functionally equivalent: both players are indifferent to which path is taken.[12]

These various ways the game can play out once a misstatement is discovered by the auditor generates three scenarios. The "compliant manager" scenario is where the manager ends up correcting all misstatements found by the auditor. The "opinion shopping" scenario is the one where the manager fires the auditor to find a more willing auditor anytime the auditor finds a misstatement. Finally, the "collusive auditor" scenario is where the auditor accepts the manager's inducements and agrees to allow him to issue the misleading financial statements with her clean opinion. For the purposes of the rest of the analysis, whether the firing condition holds or not in the "collusive auditor" scenario will not matter—all that matters is where the players know they will end up if they get to the point where the auditor discovers a misstatement.

Prior to that point, the manager must decide how much effort to invest in his company and then whether or not to lie about the outcome if it is bad (Nodes M1–M3). The auditor must decide how intensely to audit (Nodes A1–A3). As a consequence of my definition of "good" and "bad" outcomes, in order for an outcome to be classified as "bad," the manager must have some incentive to lie about the outcome and it turns out that he will *always* initially lie. (The proof of this is included in the discussion in

[12]Of course, in real life, there may be differences. If the manager isn't sure about the auditor's requirements, he may offer an inducement with the hopes she will accept it. On the other hand, if the manager suffers some consequences by offering a bribe to his auditor (e.g. she is much tougher on subsequent audits because she loses her trust in him), he may play it safe and correct the misstatement.

Appendix B.) As a result, the auditor can expect the financial statements to include a misstatement with the same probability as the manager has of his company experiencing a bad outcome.

It also means that both players know at the outset of the engagement what their probabilistically-weighted average, or "expected," payoffs will be, given which scenario is the equilibrium outcome of the "subgame" that occurs once the auditor discovers a misstatement. The manager and auditor can then select the level of effort or audit intensity, respectively, that maximizes their expected payoff. If either player expects to receive, on average, a negative payoff, they will refuse to play the game and the audit engagement will not be entered into. The auditor can refuse to play by resigning from an audit (or refusing to accept the client in the first place). The manager can refuse to play by resigning as manager of the client company, hiring a different auditor before the start of the audit, or, in some cases, taking the company private.

In all scenarios, there is one more strategic component to the players' decisions. The auditor's payoff is dependent, in part, on the manager's effort level, and vice versa. Both players know that the other will take into consideration their effort or audit intensity levels, which will in turn affect their own desired effort or audit intensity level. But in this instance, again because of the requirement for sequential rationality, the manager has an advantage. By the nature of the process, he makes his investment decision first. He, therefore, can commit to the investment level that causes the most desirable response in his auditor. The auditor, since she has no way of pre-committing to an audit intensity level, can only respond to the manager's effort level.

As a result, the manager will invest slightly more in his effort levels to encourage the auditor to audit with slightly less intensity than he would if he did not take her response into account. How large an effect this has on the players' investment decisions depends on the "elasticity," or responsiveness, of the auditor's intensity to an increased risk of a misstatement.

Appendix B solves for the players' investment levels in terms of the model parameters in each of the three scenarios. While there is little to be gained from a detailed non-technical discussion of the solutions, I will touch on the important highlights of the results here. In the compliant manager scenario, the auditor sets her audit intensity proportionate to her estimation that the client is misrepresenting the company and the costs to her of missing

any misstatements. In the opinion shopping model, the calculations are similar. Whether the auditor chooses a higher or lower intensity than she would in the compliant manager scenario depends on the relative sizes of the expected reputation gains and the loss of fee should she get fired. In the collusive auditor scenario, the dynamics are changed somewhat. Rather than auditing to avoid risk, the auditor is auditing to lay claim on some of the rents the manager is appropriating: in the most stark terms, the auditor is motivated by the possibility of collecting leverage with which to blackmail the manager. Because the size of the inducement offered the auditor is related to the risks she faces, the audit risks also affect audit intensity in this scenario, but only indirectly. The manager's decisions in all three scenarios balance the costs of achieving a higher probability of a good outcome with the expected costs of experiencing a poor outcome.

4.3 Policy Implications

The model provides a framework for understanding more fully the possible effects of a policy change on audit intensity, manager effort levels, and information quality in the market. We can more readily consider the socially optimal levels of manager effort and audit intensity, which offers a target for policy makers to aim for. The model provides clues as to how policy changes might move the players' behavior towards the optimum. As it turns out, however, the strategic interactions between auditor and manager mean that changes in circumstances, such as a policy change, may not have the effect we would intuitively expect. Even though the results do not provide neat answers, they do give additional insight into the complex behaviors we observe in the market and offer caution that policy prescriptions will have very different effects on different auditor-client pairs, depending on their specific circumstances.

Information quality

As discussed in Chapter 2, high quality information has value beyond that captured by shareholders. Information quality can be thought of as the ex ante probability that any financial statement, given a set of equilibrium

conditions, will report the true outcome. The value of information quality depends on the value the market participants put on that information. Note that market participants may be shareholders, prospective shareholders, employees, management of competitors, or anyone who values accurate information about the company for any reason.

The probability of the market receiving accurate information is a function of both the manager's effort and the audit intensity. The manager's effort level matters because of the close connection between rates of bad outcomes and the manager's decision to lie. Note as well that the market cannot differentiate between the contribution of managers and auditors to the quality of information in the marketplace unless the rate at which fraud is discovered by the market is known, since only rates of discovered fraud and honestly disclosed "bad" outcomes are seen by the market.[13] This complicates the market's ability to develop a reputation metric for auditors that is fully responsive to the auditor's contribution to information quality.

Socially optimal outcome

The equilibrium strategies solved in the first part of this chapter solve for the privately optimal strategies for the two active players. They say nothing about what is socially optimal. This section looks at how society's interests compare with the equilibrium outcomes and which levers might be available to policy makers to align social and private interests. To consider the socially optimal solution, I take the traditional perspective of a beneficent social planner, whose sole goal is to maximize aggregate wealth, regardless of its distribution between society's members.

There are four components to this problem that a social planner would need to consider to maximize overall wealth. There are the individual payoffs of auditor and manager, the profits of the company that has hired the manager, and the aggregate value attached to the quality of information released by the company by all market participants. The profit of the company is a function of the manager's effort. I am assuming that the wages and fees are a frictionless transfer of wealth from company to manager and auditor and that penalties are a frictionless transfer from manager and auditor to

[13] And it is possible that the market cannot tell which outcomes are "bad" in a manager's eyes, thereby making restatements the only group that the market can distinguish.

the company.[14] The portion of any bribe not paid by the manager is paid for by the company, and again I am assuming a frictionless transfer for simplicity. The only exception to all the elements of the auditor and manager payoffs being straight transfers is in the opinion shopping scenario. The reputation benefits the auditor receives when the market discovers she was fired for trying to get the manager to correct a misstatement is gathered from the auditor's entire future portfolio. In general, the social optimum analysis of the opinion shopping scenario is more complex and less satisfying than the other scenarios, because the scenario has suppressed the complication of the manager finding a second auditor to issue a clean opinion.

Leaving aside the problems with the opinion shopping scenario, in general the only portions of the social objective function that are not canceled out as transfers between the different groups within the objective function are the costs expended by the manager and auditor, the profit made by the company and the value of the information quality.

While the specific details of the optimal investment levels under each equilibrium strategy scenario are detailed in Appendix B, the main results are consistent across each scenario. In all situations, the optimal level of manager effort is greater than it would be if managers were compulsively honest. The magnitude of the difference depends on the value the market participants put on information quality and on the auditor's ability to mitigate the problem of manager dishonesty. The audit intensity is only valuable to the extent the audit contributes to information quality. In the case of the compliant manager, the desirable audit intensity is correlated with the manager's propensity to lie. In the opinion shopping scenario, the audit is valued only in relation to the value the market puts on the signal it receives when the auditor is fired. In the collusive auditor scenario, the auditor contributes no social value and therefore the optimal intensity is zero.

One interesting result of the part of the analysis is that regardless of the equilibrium strategy, if the manager has an incentive to lie, the optimal investment in manager effort will appear to the company and manager as excessive. If policy makers were to be successful in achieving these optimal results, they should expect to hear complaints from corporate interests that

[14] This is ignoring the reputational penalties that are transfered, most likely with friction, to other clients, current and future. Assuming those penalties away helps make this analysis tractable and concise.

the regulations or risk of penalties create an onerous burden on the executive and are not cost-effective. The constituency that benefits from information quality is quite diffuse and many realizing the benefits may not be able to trace their improved fortunes to its origin in the manager's increased efforts. As a result, there are significant political economy barriers to achieving good policy in this arena.

Centrally planned audit intensity The above discussion of the socially optimal levels of manager and auditor investments is useful but artificial. In the U.S. at least, there is no attempt for a central benign planner to set manager effort levels. There is, however, an attempt through generally accepted audit standards to approximate, at least, a centrally planned audit intensity. In this case, we can look at how optimal audit levels change once managers' effort levels are set privately and therefore respond to the audit intensity.

In this case, auditors contribute value through two mechanisms. They add to managers' incentives to exert effort and they contribute directly to information quality in the compliant manager equilibrium scenario. To determine the optimal level of auditing in this case, we can repeat the social optimum analysis treating the manager's effort level as a function of the audit intensity. If the manager is exerting himself at the socially optimal level, the optimal audit intensity will be the same as in the previous section. Manager effort is likely under-produced, since even if the manager's contract is well designed, it will be designed by the company, which will not consider the positive externality created by the contribution manager effort makes to information quality. In such a case, the optimal audit intensity is greater than it would be if we could set the manager's effort at the socially optimal level.

This is the case even in the instance of the collusive auditor scenario where in the initial analysis the optimal intensity was zero. Now the optimal intensity is greater than zero, because of the auditor's incentive effect.

Figure B.8 offers a visual representation of both of the mechanisms where the auditor has an effect: the incentive effect and the information quality effect. Increasing the incentive effect will push the dotted line that divides "good" outcomes from "bad" to the right, increasing the fraction of "good" outcomes. The information quality will increase by growing the size

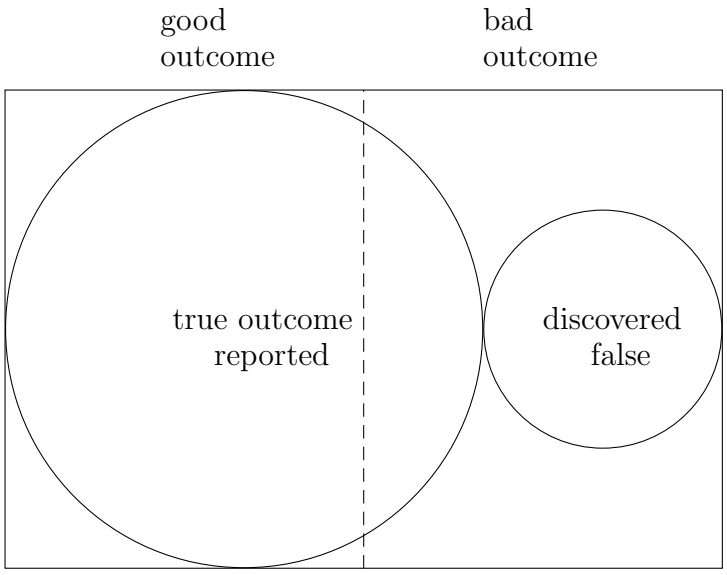

Figure 4.3: Diagram of company outcomes and information quality

of "true outcome reported" circle. It will do this both through an increase in good outcomes and an increased fraction of bad outcomes reported honestly.

Optimal equilibrium conditions The social planner need not stop at determining the optimal audit intensity given an equilibrium outcome. Which outcome is the equilibrium is, of course, of great policy interest as well. It is fairly clear that the socially optimal equilibrium outcome is the compliant manager scenario. Society gets an automatic extra benefit for every level of audit intensity greater than zero through the improved quality of information. The incentive effects are greater as well (holding all else constant).

There are several avenues to achieving the equilibrium that results in the compliant manager. Policy makers could raise penalties, improve post-release detection rates, increase the scrutiny of the manager for making an auditor change, and restrict financing mechanisms for bribes. Changes in any combination of these tactics would tend to push auditor-client pairs that are

on the margins of an equilibrium strategy towards the "compliant manager" scenario—or towards the scenario where the manager never has an incentive to lie and therefore the audit adds no value.

But given the potential significant heterogeneity in auditor and manager characteristics, chances are that a blanket policy change, such as a change in penalties for getting caught in a lie, will have very different effects on different auditor-client pairs, depending on their original equilibrium strategies and how close they are to shifting strategies. To see the complexity of the consequences of a policy change, I look at one example, the issue of proportionate liability.

Proportional liability

A major legal question being debated today since PSLRA implemented a proportionate liability standard in 1995 is how to determine the proportion of damages that is assigned to auditors (or other gatekeepers). Determining the correct course from an incentives perspective is not a straight-forward task, but the model presented here can help at least in defining the issues.

How the penalty apportionment affects the decisions of the two players is critically dependent on their equilibrium strategies. A marginal change in the apportionment of the total plaintiff award (which will have countervailing effects on the penalties recognized by each player) will have either a marginal effect on the optimization decisions made by each player, which can be understood through a comparative statics analysis, or it will shift the entire game to a new equilibrium strategy.

If some large portion of the total damages were charged to the manager, and if it were to have the effect of removing the incentive for the manager to lie in the first place, that would clearly be an efficient solution and would allow us to do away with the requirement for an external audit (since there would be no fraud to find).[15] However, through damage caps, liquidity constraints, risk aversion, or other barriers, it may not be possible to ensure that the penalty on the manager fully removes the incentive to lie. Living,

[15] As with this entire paper, I am only considering the auditor's role as monitor of the information quality released by the executive manager. Should the auditor provide other services, as is likely the case, there would still be a role for external auditing, though perhaps one that could be taken care of entirely through private contracting.

therefore, in a world in which we need to introduce auditors, the question becomes how to best motivate both actors to perform their jobs in as efficient manner as possible through the manipulation of penalty sizes exacted on one actor or the other.

Compliant manager comparative statics If the conditions are such that the "compliant manager" equilibrium conditions are met, and that the parameters are such that there is room for the penalty parameters to change without shifting the game to a different equilibrium strategy, looking at how an incremental shift of the proportion of a total penalty on the investment decisions of both players can help us understand the optimal proportion of penalties[16]

Somewhat surprisingly, the directions of change in both the auditor's and the manager's investment levels is indeterminate if the proportion of penalty paid is shifted toward the manager, and they depend in large part on the exact nature of the *auditor's* cost function. Even limiting consideration to a set of plausible auditor cost functions, all possible combinations of responses is a possible response to a change in penalty distribution *except* that we can be confident that both players will not simultaneously increase their investment levels.

These results are interesting because of their very indeterminacy. Because of the strategic interactions between auditor and manager, understanding the first-order, intuitive effects of a change in proportion of penalty are not sufficient to understand the behavior of the two players. If policy makers increase the proportion of the penalty assigned to the manager in an attempt to eliminate the incentive to lie and they are not successful in causing a change in equilibrium strategy, they may end up reducing both players' investments and *lowering* overall welfare!

The intuition behind these results lies in the way each player will respond to a change in the other's investment level. If the manager increases his effort, the auditor faces less risk and therefore will decrease her intensity level. On the other hand, if the auditor increases her intensity, the manager

[16]This analysis ignores the effects insurance might have. The presence of insurance, particularly insurance purchased by the company to cover the manager's liability, and the related moral hazard that attends insurance may well change the results presented here significantly.

will increase his effort because he now runs a greater risk of having to reveal a poor outcome, should it occur. Of course, there are second order effects: if the auditor knows that the manager will increase his effort if she increases her audit intensity, she will increase her intensity slightly less in response to an increased penalty, since she knows that the manager's increased effort will partially compensate for the increased penalty.

Therefore, if policy makers are confident that most or all auditor-client pairs are operating under the compliant manager scenario and that the manager's penalty, for whatever reason, cannot be set high enough to preclude the need for auditors, increasing auditor penalties is a more unambiguously effective way to improve the information quality and company profits. This conclusion is parallel to those drawn by DeAngelo (1981) and Dye (1993), since both authors predict that larger firms' effective penalties are larger, due either to larger risk of litigation or to increased reputational capital on the line, and therefore the information quality of the resulting engagements are higher.

Collusive auditor scenario The picture changes, however, if the compliant manager strategy is not the equilibrium strategy. The comparative statics for the opinion shopping scenario are complex and highly indeterminate, so I will not go through the analysis here. The analysis of the collusive auditor scenario is relatively straightforward, however, and illustrative.

Policy makers following the rule of thumb proposed above that raising penalties on auditors is the more effective approach to improving information and corporate profits will cause very different responses in those cases where the collusive auditor strategy is dominant. Increasing penalties on auditors will only cause them to demand larger bribes from management—which may come primarily out of the pockets of shareholders—until the equilibrium strategy shifts to one other than the collusive auditor strategy. While increasing auditor penalties might be effective in forcing a change in strategies, the most effective way is to shift more of the liability on to the manager, since an increase in the manager's share of the penalty will decrease the amount of a side-payment the manager is willing to pay faster than the same size increase in auditor penalty would increase the amount the auditor demands in compensation.

In general, the lesson from this comparative statics exercise is that

policy changes will have heterogeneous effects, depending on the equilibrium strategies employed by auditor-client pairs and on the specific parameters of each game. Changing policy to correct the suboptimal incentives in one pair may worsen the incentives for another pair. Having audits performed by large firms with more to lose may in many cases have the positive social effects that DeAngelo (1981) and Dye (1993) predict, while at the same time *worsening* the social consequences of the audit in the instances where a manager draws heavily on his company's resources to induce collusion in his auditor.

4.4 Conclusions

The model presented here offers insights into some questions and, equally valuably, it points in the direction of many more interesting questions. The model is a representation of a single-play version of the interaction between one auditor and manager pair. The parameters used in the model are quite broad and flexible. Therefore, fruitful avenues of consideration go in three directions. First, the generic parameters included here could take a number of forms in the real world. The existing literature gives some direction to their forms, as does the historical analysis in the rest of this dissertation. Second, audit firms are engaged in these interactions with many clients simultaneously. The firms' ability to design a portfolio of clients might affect the values they assign to the parameters of the game and may therefore change the choices they make with individual clients. Finally, the game may be played repeatedly with each client. Repeated games, particularly those with an indefinite number of repetitions, allow for different, more cooperative behaviors to emerge. While I will not formally model a repeated game here, there are ways to incorporate much of the nature of the repetition into the single-play game parameters.

The theories proposed by DeAngelo (1981) and Dye (1993), discussed earlier, can both be seen as more specific models of aspects of the model presented here. Relating DeAngelo's focus on reputation to the model presented here is a good illustration of how parameter specifics, client portfolios, and repeated plays of the game all extend on the model, yet can be captured approximately in the model as it stands. According to DeAngelo, an audit firm's reputation might allow the firm to capture additional "client specific quasi-rents" in their fee. I have not tried to model how the auditor's fee

is determined in this game except to note that it must be greater than the expected costs of the audit (including the risk of an audit failure) in order for the auditor to accept the engagement. It is reasonable to expect, however, that audit firms with higher reputations can negotiate a fee with a larger profit margin, thereby capturing quasi-rents. One aspect of the "penalty" associated with getting discovered in an audit failure by the market could be the loss of some of that profit margin in all future engagements due to the loss of reputation associated with the audit failure. The penalty is determined by the market for audits, not by a prosecutor or regulator, but it is no doubt nonetheless incorporated in audit firms' risk assessments in any engagement.

Dye (1993) focuses more on the explicit legal penalties associated with an audit. His work explores the possibility of small firms' liquidity constraints effectively limiting the possible size of the penalty that can be assessed against them while large firms are not similarly constrained. The model here captures those possibilities and, as discussed in the previous section, the equilibrium scenario is partially determined by the size of the penalty faced by the auditor if she fails to prevent a misstatement that is later discovered by the market. If small firms are indeed facing smaller penalties because they are judgment-proof past a point then my model concurs with Dye's analysis that small firms would invest less in audit intensity.

My work expands on theirs by allowing for the possibility that management may find ways to compensate for the additional risks auditors take on if they collude with management. Both the losses associated with reputation loss and with securities litigation are very large, and probably far larger than the private benefit gotten by management from the deception. But the manager may have financing options that allow him to compensate the auditor fully with little cost to himself. The repeated nature of the game in real situations offers a variety of financing options to the manager. Assuming that the auditor earns profits, at least in expectation, from every play of the game, the future stream of revenues from the relationship with the client are valuable to the auditor—potentially, quite valuable. The penalties to switching auditors between engagements seem to be different than those associated with switches mid-audit, so a manager may be quite credible in his threat to refuse to re-engage the auditor (or to engage her for non-audit related services) even if the firing condition is not met. Avoiding the loss of those future revenue streams may go a long way in providing the necessary

inducement to get the auditor to ignore any misstatements she finds in her audit.

Some of the results of the equilibrium analysis are artifacts of some of my modeling choices, and these should be noted. These choices highlight some possible problems with previous models, but they may not fully capture the real nature of auditor–manager interactions and therefore may make the model's predictions misleading. One important choice, discussed earlier in the chapter, is that I do not allow for differences between the penalties associated with audit failure discoveries related to whether the auditor colluded with management or missed them innocently. This is contrary to the assumptions in other models. The realism of this assumption will be explored in Chapter 6.

Another modeling choice that merits note is the assumption that the manager suffers no extra penalty when his auditor discovers a misstatement and he agrees to correct it. He receives a lower payoff than he would if he were successful in his lie, but loses no more than he would have if he had told the truth in the first place. This is a key difference between my model and many of the traditional principal-agent models in the economics literature that include a monitor or audit component and it weakens the incentive effect of the auditor. This assumption is justified in part by the single-play assumption: I am ignoring all possible future interactions between manager and auditor. But if the manager's reputation with his auditor is jeopardized by her discovery of a misstatement and if that change in their relationship significantly affects future plays of the game, the manager's decisions about whether to tell the truth initially might well change. This question will also be explored at various points in the historical analysis in Chapters 5 and 6. I believe that the historical evidence makes this assumption, at minimum, usefully provocative, and at most in line with actual experiences.

This model therefore offers a frame of expectations with which to view the historical record. In the next chapter, I explore the historical evidence to validate this model as a useful frame. Then in Chapter 6 I build on the foundation of the analytical model by looking at how aspects of the profession's development are not adequately explained by the basic model, but may be more fully understood by extensions to the model. The predictive power of the model and the nuances gained by the historical analysis then inform my assessment of Sarbanes-Oxley and future policy changes that might be

beneficial.

Chapter 5

Historical evidence: Model validation

Chapter 2 described the costs to society of fraud or other forms of poor information in the market. Chapter 3 discussed the institutions created to help auditors contribute to improving the information in the market. Chapter 4 laid out a model of the strategic interaction between the auditor and the manager of a publicly owned company, and demonstrated the conditions under which the two actors might collude to advance their personal interests, at the expense of the shareholders and other actors. The question remains, however: what relevance does the model have to real interactions between auditors and managers? The model predicts that when the conditions are right, the players will collude to commit fraud. So the policy questions become, do those conditions ever exist? Do the institutions we have created successfully limit the incentives to collude? Can the model help us understand better the effectiveness of financial statement auditing in the United States?

Traditionally, economic models are validated by statistical analyses that test the hypotheses generated by the model. I have chosen to approach an initial validation of my model differently. I do this because I have serious questions about the validity of much of the empirical accounting literature. The accounting literature in general does not demonstrate the same technical sophistication or care in interpreting causal relationships that is standard in areas of policy research dominated by econometricians. Unfortunately, the

results of the research are nonetheless held up as "scientific" evidence by those attempting to influence policy. I could have chosen a narrow issue and attempted to improve upon the statistical modeling, but that seemed to be less useful at this point than using an entirely different type of approach to demonstrate the flaws in the assumptions of the empirical research while at the same time offering preliminary support for the theoretical model.

Therefore, to validate the model and to develop a better understanding of how real auditor-manager relationships are shaped by underlying economic forces, I have instead turned to the techniques of historical analysis. The core of the evidence used here comes from the PricewaterhouseCoopers archives, donated to Columbia University in 2000. The archives contain internal firm documents from the predecessor firms of PricewaterhouseCoopers—Price Waterhouse & Co., Coopers & Lybrand, and Lybrand, Ross Bros. & Montgomery—from the late 19th century to 2000 and are particularly rich in documents from the 1950's-1970's.[1] I have supplemented the materials I found in the archives with news accounts, court records, congressional testimony, government reports, and journal articles from the periods in question. Inferences drawn from the use of historical artifacts are not as readily generalizable as those from well-constructed statistical models, but they can offer insights that provide suggestive evidence of my model's validity. The evidence presented here will also highlight the short-comings of much of the statistical analysis done to date, drawing attention to widely-ignored alternative interpretations of the statistical evidence.

While most commentary on the history of auditing focuses on the changes and reforms that have happened over time, the historical analysis in these chapters will demonstrate that the fundamental dynamics of the economic incentives at play in the system have remained essentially constant and so are visible throughout the 85 year history (1921-2006) surveyed here. The intensity and the particulars may have changed, given changes in the business and political contexts, but the fundamental dynamics remain unchanged. And until the root incentives are changed, policy makers should expect to continue to encounter the same conflicts and system failures that they have encountered repeatedly in the past.

This chapter offers evidence that audit firms are engaged in the payoff maximizing behaviors predicted by the model in their approach to planning

[1] A fuller description of the archive contents are included in Appendix C.

audits. It also offers historical evidence that all three scenarios outlined in the last chapter have occurred at least in some instances. At the same time, an important lesson that emerges from the mundane communications of an accounting firm is that real men (and the archives document a completely masculine world) are not the simple *homo economicus* depicted in economic models, though he is an important component of their character. Pride, fear, friendship, bureaucracy and confusion all play important roles in the history of the auditing profession, as they do in any setting. Optimization calculations are generally not made explicitly, but instead are arrived at through trial and error, and much argument. That being said, instincts towards optimization do exist, and there are some clear examples of real decision processes whose outcomes mirror the optimization calculations of the previous chapter.

5.1 Auditor discretion

A challenge faced by all attempts to understand auditors' effects on the quality of information disclosed by management is the obligation of auditors to maintain the confidentiality of their interactions with management under most circumstances. Most often, disputes are negotiated and resolved before the financial statements are made public and auditors believe strongly in their responsibility to keep such disputes confidential. This complicates any attempt to measure the contribution auditors make to the quality of information in financial statements: statistical research on the effect of a change of auditor-related policy on financial statement quality, historical research into auditors' relationship with management, and investors' ability to formulate an accurate assessment of an auditor's quality are all affected by this challenge.

We can see the role discretion plays in the auditor-manager relationship in an attachment to a 1984 Executive Letter for Partners and Managers at Price Waterhouse & Co. In this document, the firm gives guidance to audit partners on how to respond to the possible question "Have you had any significant disagreements with management on financial reporting practices or accounting policies" that might arise during the annual shareholders meeting:

> We should discuss the response to this question with management prior to the shareholders' meeting. Ordinarily, management that has carefully considered the question will want to make a general response such as, 'There were no important disputes that were not resolved to our auditors' satisfaction.' The response (either the client's or ours) should stress that the question is hypothetical and difficult to answer as there are discussions between the independent accountants and management on an ongoing basis and that, while differing viewpoints have been expressed during these discussions, it is believed that the eventual outcome has been considered satisfactory to all parties. It is recommended that, if it is agreed in advance of the meeting that there was a formal disagreement, the auditor should take the position that management should first answer the inquirer's questions and that we will agree with the response, assuming it is a reasonable description of the disagreement....(Price Waterhouse & Co., 1984)

Similarly, when *Wall Street Journal* reporter Lee Berton approached Price Waterhouse managing partner Herman Bevis in 1966 for an article he was writing on auditor liability and related issues, Bevis issued a written statement that illustrates the firm's commitment to discretion about its clients' affairs.[2] Rather than discuss the frequency of misstatements that auditors find and force management to correct, Bevis states: "We sometimes have disagreements with clients on how their figures should be reported, but no more now than before. All of these cases are settled to our satisfaction before the company reports see the light of day with a clean opinion from us" (Bevis, 1966a). This discretion makes it very difficult for outside observers to tell how regularly audit firms force changes in the financial statements. In turn, the inability to observe the direct influence auditors have on financial statements limits any evaluation of the audit firm's effectiveness.

Furthermore, this discretion lends credence to my modeling choice in Chapter 4 that assumes no extra penalty for a manager when the auditor finds a misstatement that the manager agrees to correct (in addition to the cost of telling the truth). The auditor's discovery remains private in almost all instances, and certainly when the manager agrees to correct the misstate-

[2]According to marginalia on the copy of the statement included in the PwC archives, Bevis issued this statement after refusing to speak with Berton because Berton had distorted Bevis' words in the past. An unrelated section of the resulting article is cited below in Section 5.4 (Berton, 1966).

ment. The auditor has some obligations to report major disagreements to the audit committee though there is the suspicion among many that auditors and managers find ways to stop short of having a "reportable event" (GAO, 2000; Levitt, 2000). Any consequences the manager can expect to suffer, therefore, are in his future relationship with his auditor and, at worst, his audit committee.

This is not simply a professional tradition. The expectation that any attempts made by management to insert misstatements or otherwise break the law that are caught by the auditors and corrected before the financial statements are issued are to be kept private are codified in SAS pronouncements and even in the Private Securities Litigation Reform Act of 1995. SAS 82, issued in 1997, stated the requirements clearly this way:

> Fraud involving senior management ... should be reported directly to the audit committee.... The disclosure of possible fraud to parties other than the client's senior management and its audit committee ordinarily is not part of the auditor's responsibility and ordinarily would be precluded by the auditor's ethical or legal obligations of confidentiality.... (AICPA, 1997)

In practice, there is a certain amount of flexibility with regards to the auditor reporting findings to the audit committee. The auditor is required to report findings of "illegal acts" to the audit committee (PSLRA, 1995), but if the misstatement is not clearly intentional (and therefore not clearly an illegal act of fraud) and the manager corrects it, the auditor is not required to report it. In the interests of maintaining friendly relationships with their clients, auditors take a conservative view of what constitutes "illegal acts," particularly if they are addressed before the statement is issued and no harm is done (GAO, 2000; Levitt, 2000).

As was discussed in Chapter 4, because of their discretion, the auditor's contribution to information quality cannot readily be separated out from managements' contribution or, in some instances, the rate at which misinformation is discovered after the initial disclosure to the market. If one wishes to get at auditors contribution in an empirical analysis, therefore, one needs to get at auditors' effects indirectly, through proxies. These proxies need to be designed with care and the specification of the models used must be done thoughtfully and with attention paid to possible alternate interpretations of results. Unfortunately, much of the research done in this area has

failed to meet this difficult challenge. This has severely limited the usefulness of some segments of the empirical academic literature on auditing.

For example, the widely cited study by Palmrose (1988) finds that Big Eight firms are sued at a lower rate than are the larger non-Big Eight firms in the period 1960-1985. Palmrose interprets this as evidence that Big Eight auditors conduct a higher quality audit: "Accepting both audit failures as less likely with higher quality services and litigation as a primary consequence of audit failures, yields a basic proposition that higher quality auditors have relatively lower litigation rates than lower quality auditors" (Palmrose, 1988, 59). But her logic is flawed in a number of ways. Most importantly, audit failure rates, and therefore litigation rates, will only be lower if the client populations are similar in the rate at which misstatements are introduced. There is no evidence that this is the case, and indeed a number of different theoretical reasons why it might not be the case.[3] Audit failure discovery rates and litigation rates in response to audit failures may also differ across the two types of auditors for reasons that are unrelated to the auditor's ability to improve the quality of information released by her clients. While Palmrose recognizes some of the issues related to correlating litigation rates with audit failure rates, she ignores completely the possibility of the client populations being different. Other research into the quality differences between the dominant firms and other firms runs into similar problems to various degrees (see, for example Teoh & Wong, 1993; R. A.

[3]To give a toy illustration of this point, consider a world with two audit firms and 100 companies. One audit firm has a good reputation and 75% of the market share of audits and the other firm has a bad reputation and only 25% of the market. Half of the companies never lie on their financial statements and the other half always lie. The honest companies wish to signal their honesty to the market by hiring the reputable auditor. Half the lying companies also try to fool the market by hiring the reputable auditor. Therefore, the reputable auditor audits 75 statements, 25 of which include misstatements. The disreputable auditor audits 25 statements, all of which contain misstatements. Say that the reputable firm's audit is completely ineffective, but the disreputable auditor is slightly better and catches 20% of the misstatements. All misstatements that are missed by the auditors are later discovered and suits are filed in each case. In this scenario, the reputable but incompetent auditor would have a litigation rate of 33% and the disreputable but somewhat capable auditor would have a litigation rate of 80%. In such a world, the litigation rates would clearly not be evidence of audit quality. Interestingly, even in this world, it would be rational for the market to continue to give more credence, ex ante, to the statements issued by clients of the reputable but incompetent auditor. The audit firm's reputation rests on the client mix, however, not its audit ability.

Davidson & Neu, 1993; C. L. Becker et al., 1998; G. V. Krishnan, 2003).

Auditor discretion has implications for historical analysis as well. Unsurprisingly, the archives made available to the public do not include confidential client working papers or other documents that *would* give clear evidence of auditor contribution to information quality. Therefore, there is little evidence of what happens at that crucial point when an auditor discovers what she considers a misstatement in a client's financial statements, giving us little to work with to validate the three scenarios that might result from such a discovery. There is some indirect evidence of what happens, however, in references to particular instances made in passing in other contexts or instructions to staff on how to handle hypothetical situations. Court documents too can give some insight into the few cases that do reach the justice system. These kinds of evidence can give proof of the existence of scenarios hypothesized by theory, though they do not give any indication of the relative frequency of such occurrences.

As a result, it is important to keep in mind throughout the discussions in this chapter that the paucity of information on what happens when an auditor discovers a misstatement could be evidence of three different states: clients almost never introduce misstatements so there are very few to find or discuss; auditors are very bad at finding misstatements so there are few instances of them doing so, even though misstatements are a common occurrence; or attempted misstatements are a frequent occurrence, auditors find and deal with them regularly, but their discretion results in very few records of their experiences.

5.2 Evidence of audit intensity calculations

Before looking at the consequences of an auditor discovering a misstatement, the first aspect of the model to inspect in light of the historical evidence is the decision process auditors go through to determine what level of audit intensity to exert in any audit engagement. The model predicts that auditors, regardless of the equilibrium outcome, will balance the costs of achieving a particular level of audit intensity with the benefits of additional protection against the penalties associated with an audit failure. Even if the auditor colludes with management when a misstatement is found, the size of the

penalties associated with an audit failure affect audit intensity indirectly through the size of the inducement management will offer. There is clear and frequent evidence of auditor responsiveness to the risks associated with audit failure in the PricewaterhouseCoopers archives.

Many of the early memos circulated around the New York office of Lybrand, Ross Bros. & Montgomery (LRB&M) were concerned with achieving—and tracking—the correct balance between audit effort and payoff. Even before the 1929 stock market crash, when the penalties associated with audit failure were considered much lower, staff were required to insert, in red, the following paragraph at the top of each audit program:

> The following audit program covers the work to be performed under the conditions of the engagement existing at the date appearing on the program. It is to be distinctly understood that this program does not necessarily include all work to be performed nor does it exclude any further examination which may appear to be necessary. *The program does not absolve any member of the staff from using all diligence in detecting errors or irregularities.* Any items not covered by the program should be investigated, but *if it appears that such investigation will materially increase the time allotted to the engagement, the situation should be brought to the attention of a partner or manager*, so that the necessary approval may be given before additional work is undertaken.... (LRB&M, 1928, emphases added)

This disclaimer highlights the tension between the need for vigilance and skepticism to ensure that all "errors or irregularities" are detected and the pressures to keep work within the time-budget allotted the engagement. The audit firm would clearly like to balance the costs of the audit against the risk of audit failure in such a way that maximizes its payoff. How successfully it navigates the tension these conflicting goals pose depends on how well supervisors exhort their staff to "use all diligence" in their search for errors and irregularities. It also depends on the consequences of asking for more time to investigate an additional item. Some current critics of the Big Five claim that one of the reasons there were so many accounting scandals in recent years is because of overwhelming pressure put on staff to meet their time budgets regardless of whether they were satisfied with the results of their work in the time allotted (Toffler, 2003; Brewster, 2003).

One prediction of the model is that when the penalties associated with an audit failure increase, the equilibrium audit intensity level will also increase.[4] For example, after the passage of the Securities Acts in the 1930s, LRB&M encouraged its employees to exert still more effort on their audits:

> As you all know, the rigorous provisions of the Securities Act and the Securities Exchange Act have added to the responsibilities of accountants and have increased their possible liabilities under those Acts; therefore, no matter how careful we may have been in the past, in making our examinations, to assure ourselves of the correctness of the statements which have been prepared by us it has seemed wise to review our procedure in order that we may, if possible, work even more efficiently and productively. (LRB&M, 1934)

Similarly, as the likelihood of managers introducing misstatements increases or when the risk of the public uncovering the misstatements rises, auditors will audit more intensely.[5] In 1966, a Price, Waterhouse Executive Letter for Partners and Managers directs staff to increase scrutiny during the audit to balance the greater risk audit failure, due to an upsurge in the number of reported business failures:

> Newspapers of recent weeks have reported a number of business failures as a result of tight money, increasing costs and shrinking profit margins. Some lax lending, financing and other business practices condoned without penalty by a period of prosperity are now being harshly exposed. In this atmosphere we must exercise special caution, particularly where the client may find itself in difficult financial straits.
>
> ...Some companies may be tempted to resort to business and accounting practices they might not follow under more normal conditions....

[4] In formal terms, a marginal increase in the penalty associated with an audit failure will cause a change in the optimization calculation of audit intensity. Using the compliant manager scenario as an example, that change will be: $C^A_{\lambda,P^A} = (1-\mu^*)\rho$. Given that the right hand side of the equation is always positive, an increase in the penalty will always cause an increase in the optimal audit intensity.

[5] The likelihood of managers introducing misstatements is equal to $(1-\mu)$, so the comparative statics in a change in that likelihood are (again, using the compliant manager scenario as an example): $C^A_{\lambda,(1-\mu^*)} = \rho P^A$, which is always positive. Similarly, the comparative statics of an increase in ρ are: $C^A_{\lambda,\rho} = (1-\mu^*)P^A$, which is also positive.

> With shrinking profit margins, unusual or improper steps may be taken to bolster earnings.
>
> This situation taxes the skill of the most experienced auditor. Supervision and review assume added importance. Alertness to all indications of problem areas are absolutely necessary. (Price Waterhouse & Co., 1966)

It is difficult to say if the softening economy of the 1960s intensified the incentives for managers to manipulate their financial statements or increased the rate of manipulations coming to light because the changed economy makes the manipulations unsustainable—or both. But clearly here the risk-related portion of the auditor's optimization calculation has increased, and the firm has responded by increasing audit intensity.[6]

The audit procedure has long explicitly acknowledged the risk/reward trade-off. The analytical review procedures in an audit are all about assessing the various types of risk, and selecting procedures that most efficiently address those risks. For example, audit engagement planning instructions from 1986 walk the auditor through the different risk assessments she should make and instructs her to determine her audit strategy as follows:

> Based on the information obtained as a result of the foregoing procedures, our preliminary assessment of inherent and control risk factors, and preliminary judgments about materiality, determine and document the appropriate audit strategy to be applied to significant account balances and classes of transactions. The strategy selected should be effective and efficient. (McCormack & Dodge, 1986, A3)

The passages presented here give historical evidence of auditors attempting to maximize their payoffs through balancing their audit intensity with its costs. Indeed the PricewaterhouseCoopers archives are full of discussions, staff directives, and policy manuals that demonstrate that the firms were trying to strike the right balance between decreasing costs and reducing

[6]In the notation of the compliant manager scenario, the risk related portion of the optimization problem is $(1-\mu^*)\rho$, where an increase in $(1-\mu^*)$ is an increase in the rate at which managers are attempting to insert misstatements into their financial statements and ρ is the rate at which those misstatements are coming to light, after the release of the statements to the public.

risks of audit failure. While historical evidence cannot prove a model's predictions will always hold true, it certainly gives credence to the expectation that the behavior predicted by the model will tend to hold true.

More generally, it suggests that auditors do respond to economic incentives. This should not be a surprising or controversial point. But if the model is correct in its predictions about basic responses to incentives, it has a controversial implication. If audit intensity increases when penalties for audit failure increase, as was seen in the response to the passage of the Securities Acts, it stands to reason that the firms might *decrease* their audit intensity if there is a decrease in penalties for a failure. This becomes important in the debate over limiting auditor liability. Auditors lobbying for reduced liability argue that their professionalism dictates their audit intensity, not their incentives. The evidence presented here, however, makes it clear that auditors, like most other people, respond to economic incentives. The reality of this statement need not cast doubt on auditors' professionalism. Instead, liability, like other prices, conveys important information about the market or society's preferences and priorities. If liability for audit failure is low,[7] auditors, consciously or otherwise, receive that message and incorporate it into how they decide to allocate their limited resources of time and attention.

5.3 Evidence of the "compliant manager" scenario

As discussed in the section on auditor discretion, there is very little public evidence of the contributions auditors make to the quality of financial statements, particularly when they are indeed performing their duties as required by law. One would expect that in most audits where the auditor finds a material misstatement, it is reported to and corrected by management. But because such a transaction happens before the statements are released publicly, we rarely see concrete evidence of such interactions. We do get a few indirect glimpses of these interactions, however.

Critics of the profession argue that accountants are particularly reluctant to risk offending those executives with whom they have personal

[7]Large informal penalties (such as reputation damage) can act as a substitute for formal liability.

relationships by asserting their judgment. While there may be merit to such claims in some instances, there is one early example, from 1934, where the critique is undeserved. In a brief correspondence between George May, the influential leader of Price Waterhouse, and unnamed partners at Arthur Young & Co., we see May setting aside his personal ties with a corporate manager to insist on conforming to high standards, encapsulating the ideal behavior and attitude of an auditor. He was asked by Arthur Young & Co. to "testify" on their behalf to the board of American Radiator & Standard Sanitary Corp. during a dispute with the chairman of the board over the treatment in the financial statement of a particular transaction. In response to their thank you note for his assistance, which resulted in the board agreeing to Arthur Young's preferred treatment, he writes:

> I much appreciate your note of March 27. I was very glad to do something for the cause of solidarity in the case of the American Radiator & Standard Sanitary Corporation, though I confess that it was made a little difficult by the fact that the Chairman of the Board is a very old personal friend of mine. (May, 1934a)

This letter offers evidence of two things. First, Arthur Young & Co., with the help of May, forced a change in a client's accounting treatment. Second, it shows that May, at least, was willing to jeopardize a personal relationship to help enforce a professional accounting judgment—that of a competitor firm, no less. This early letter is one of the few clear-cut examples of every aspect of the "compliant manager" scenario occurring in the PricewaterhouseCoopers' archive.

There is further indirect evidence that auditors *do* find misstatements and force changes that management would prefer not to make. For instance, there are discussions of situations where the audit firm is not sure whether they will be able to force the manager to make the requested change or whether they will be fired from the engagement. In other words, the audit firm is not sure yet whether the "firing condition" from Chapter 4 is met in the eyes of the client company or not.

The Price Waterhouse annual report to partners from 1971 lists some engagements in the Washington, Los Angeles, and Syracuse offices that may be lost due to disagreements over accounting treatments:

> Strained relationships over Washington's opposition to accounting treatments proposed by management in an effort to increase earnings per share, plus some fee resistance, may result in the loss of Publishers Company, Inc.
>
> Los Angeles insistence on disclosure in the annual accounts of a private SEC investigation of possible violations of Federal Securities laws and the issuance of a qualified opinion have made the Rusco Industries, Inc. engagement vulnerable to loss.
>
> ...Continuing friction over fees and selection of accounting principles may cause Gladding Corporation to replace Syracuse with other auditors. (Price Waterhouse & Co., 1971)

Occasionally reports of auditors forcing changes in their clients statements made news. One example is a 1985 *Wall Street Journal* article about the Savings & Loans' widespread use of accounting gimmicks (Berton, 1985a). For the most part, according to the article, the auditors of the thrifts were supportive of their clients accounting: auditors and regulators both saw it as a necessary evil to keep the thrifts from bankruptcy.

But in one instance in 1982, an Arthur Young & Co. client went too far, and the auditor forced at least some restraint on the thrift. The main issue in this instance was whether a real-estate project was an investment or a loan. If an investment, the profits could not be recognized until the project is completed, an accounting principle that recognizes the magnitude of the risk taken on. If, on the other hand, it was a loan, the bank could book the profits as revenues from loan fees immediately, since they were comparatively certain. The *Wall Street Journal* article described the dispute this way:

> Alamo Savings Association of Texas, for example, books fee income even when it has as much as a 50% interest in a real-estate project. Its outside auditor, Arthur Young & Co., demanded a reduction in reported 1982 earnings because the thrift used to book income associated with projects in which it had as much as a 75% interest.
>
> "I still think the 1982 loan fees should be booked as profit, but the rules seem to be changing daily," says C.R. Stahl, Alamo's president. (Berton, 1985a, 1)

The openness of Alamo Savings Association about the dispute is unusual, and is likely related to the fact that there was much dispute over the ac-

counting rules throughout the Savings & Loan industry. Alamo may have felt protected from any sort of official action in response to revelations about its aggressive accounting since the government's top priority at the time was keeping the industry solvent and a panic-induced bank run at bay.

5.4 Evidence of the "opinion shopping" scenario

The excerpt reported in the previous section from the 1971 annual report where Price Waterhouse was discussing clients they might lose due to accounting disputes also gives evidence that the "opinion shopping" scenario is, on occasion, the equilibrium outcome when auditors find misstatements. Indeed, since this is the one outcome that creates additional public evidence—the switch of auditors—there is more known about its prevalence, although it is not necessarily possible to separate out those auditor switches that were made to keep a misstatement from those made for other reasons.

One clear example of opinion shopping was that done by the Broadview Financial Corp., a savings and loan, in 1982. According to the SEC Accounting and Auditing Enforcement Release, Broadview's transgressions related to improper revenue recognition stemming from a $4 million land deal in Florida. The deal was constructed to help fend off the possibility that the S&L would receive a qualified "going concern" opinion from its incumbent auditors. Broadview shopped around the Big Eight until it found an auditor willing to sign off on its accounting:

> ...[The incumbent] auditors informed Broadview that the $4 million gain on the Sea Level Ranch transaction was recorded improperly and that it must be restated. Broadview's management contacted four other "Big Eight" accounting firms until it found one that was willing to allow Broadview, after minor modifications, to recognize the $4 million as immediate revenue.... The three other firms contacted agreed with Broadview's auditors' position on the transaction. Broadview then dismissed its auditors and engaged the firm that would allow it to recognize income from the transaction. (Securities and Exchange Commission, 1985)

Rarely is the publicly available evidence of opinion shopping this cut and dried. A more typical example was reported in the *Wall Street Journal* in 1966 (Berton, 1966). Alaska Juneau Gold Mining Co. (later called A. J. Industries Inc.) was originally audited by Arthur Andersen. But in 1958 its certification of the annual financial statements included many qualifications. The following year, Alaska Juneau switched auditors, by "mutual agreement" with Arthur Andersen, to Arthur Young & Co., as told to the *Wall Street Journal* by the Andersen partner in charge of the engagement. Arthur Young did not remain the company's auditors for long, however. The firm issued its 1961 certification with "two major qualifications" The following year, the company switched auditors again, this time to Haskins & Sells, for their 1962 audit, this time earning a clean opinion from their new auditors. Berton reported this about A. J. Industries' justification for the switch:

> George A. Fitzpatrick, A. J. Industries' vice-president-finance (and the former Haskins & Sells member who took over the auditing chores from Arthur Young), comments: "It's true that no company likes to have anything in the auditor's statement other than a clean opinion, but A. J. switched because it felt it could get better service from Haskins & Sells, not because the qualifications weren't justified." (Berton, 1966, 1)

It seems reasonable to be skeptical of Mr. Fitzpatrick's statement. Auditor switches are expensive, and companies do not undertake the change lightly, so a serial switcher like A. J. is viewed with suspicion. Furthermore, the fact that the audit partner who took on the audit for Haskins & Sells was then employed by the company further calls into question the audit team's independence. Nevertheless, the switches *could* be legitimate and unrelated to the desire to find an "easy" auditor.

Auditor resignations

A closely related phenomenon to opinion shopping is auditor resignations. The possibility that an auditor would resign mid-audit was not modeled directly in Chapter 4 but can be understood as equivalent to a manager firing the auditor: if the auditor recognizes that she will not succeed in getting a manager to change his financial statements to her satisfaction, she

may choose to resign before she is fired. This short-circuits the game as modeled in Chapter 4, and may be the outcome if the auditor feels she can more clearly signal the reasons behind the switch for reputational gains if she resigns before she is fired.

A famous—and famously successful—example of this tactic was Arthur Andersen's mass resignations from all of its Savings and Loans audit engagements. Arthur Andersen resigned, under the direction of its long-time leader Leonard Spacek, from all Savings & Loans clients in 1964. Spacek was quoted in a 1966 *Forbes* article as saying "their income was overstated by at least 100% in every case." (Forbes, 1966, 22). At the time of the resignations, many in the profession viewed Spacek as a dangerous firebrand who was unpredictable, indiscreet, and indecorous. His public speeches on the flaws of the profession's approach to their public duties repeatedly embarrassed and infuriated other leaders of the profession.

Of course, when the Savings and Loans scandals broke in the 1970s and 1980s, Spacek, and all of Arthur Andersen by extension, was seen as a visionary with a commitment to the interests of the shareholder that surpassed that of the other accounting firms. Andersen was also able to avoid almost all of the civil liabilities that resulted and threatened to overwhelm the other firms. The advantages in reputation that Andersen gained from this choice helped it overcome the mounting evidence in the 1990s that it had lost some of its interest in protecting shareholders until the Enron scandal engulfed it.

Perceived decline in opinion shopping

Interestingly, opinion shopping has faded as a worry as a result of a series of reforms in disclosure requirements for auditor changes. Concern over opinion shopping seemed to receive particular attention in the 1970s and 1980s as a part of a more general concern that competition was becoming too cutthroat. J. Michael Cook, the chairman of Deloitte, Haskins & Sells, described in 1985 the increased competition this way: "Five years ago if a client of another firm came to me and complained about the service, I'd immediately warn the other firm's chief executive.... Today I try to take away his client." (Berton, 1985b, 1). But based on a private conversation with a current PricewaterhouseCoopers auditor, blatant opinion shopping is not perceived

as such a concern anymore, at least in the U.S.

Companies have for a long time been required to file a Form 8-K notifying the SEC of a change in auditors, but the SEC has taken a series of steps over time to improve the usefulness of the disclosure. For example, in 1989, the SEC shortened the period companies have to file an 8-K. Other requirements that have been added over time include:

- Whether the auditor has resigned, declined to stand for reelection, or was dismissed
- Whether the incumbent auditor qualified the audit report or disclaimed an opinion during the previous two years
- Whether the change was approved by the board of directors or audit committee
- Whether there were any "reportable events" (i.e. disagreements that were required to be reported to the board) concerning accounting, auditing, or financial disclosure issues in the last two years
- Whether the newly engaged auditor had been consulted any time in the past two years on the application of accounting principles or on any matter that was the subject of a disagreement or reportable event with the former auditor
- Whether the former auditor agrees with the company's characterizations included in their disclosures.

In addition, since 1989 the former auditor is required to notify the SEC directly of their removal from the engagement (regardless of which party initiated the removal) to help protect against non-compliance with the company's disclosure requirements. Auditor switches are also the subject of particular attention in audit firm peer reviews if a disagreement with the former auditor is reported or if the former auditor resigned from the engagement.

Boards, markets, and the SEC all have more detailed information about auditor changes. The filings allow for markets to express their skepticism about the move through stock price reactions, which might lower the manager's equity compensation, and it allows for the SEC to spend less effort

in identifying suspicious switches that merit further investigation. Therefore, if opinion shopping has declined as believed, this gives some credence to the validity of the "firing condition" predicted by the model. The improved disclosure requirements probably have increased both the likelihood that the fraud attempt would later be discovered and the size of the initial payoff to the manager required to induce him to fire his original auditor, thereby lowering the likelihood that the "firing condition" will be met.

Opinion shopping has not been entirely eradicated, however. An SEC Accounting and Auditing Enforcement Release from April 2006 recounts an opinion shopping episode in 1998 at AremisSoft Corporation. The software company that booked fictitious sales and accounts receivable and overstated earnings at two subsidiaries in at least 1999 and 2000. The company filed for bankruptcy on March 15, 2002.

AremisSoft was audited originally by PKF, a UK-based accounting firm, but a Big Four firm was hired to audit AremisSoft for its registration statement in preparation for an initial public offering.[8] The Big Four firm received an anonymous letter advising them that AremisSoft was planning on issuing fraudulent financial statements. When the audit firm began its audit it indeed uncovered numerous irregularities. It notified the CFO, who was not involved in the fraud, of their findings. On October 15, 1998, representatives met with the co-CEOs (the perpetrators of the fraud), the CFO, and others to discuss the issue. According to the Enforcement Release:

> Also attending the meeting and introduced as a prospective director of AremisSoft was a corporate finance partner from PKF.... There were heated exchanges concerning the contracts [that were the source of the accounting irregularities] at the meeting. The PKF corporate finance partner stated that the Big Four firm was unable to verify the contracts because it did not understand AremisSoft's business, and suggested that AremisSoft re-engage PKF to perform the audit work.
>
> Shortly thereafter, AremisSoft's CFO resigned and [one of the co-CEOs] assumed the CFO duties. In November 1998, the "Big Four" firm was informed that AremisSoft had made a decision to re-appoint PKF as its independant auditor and the engagement of the "Big Four"

[8] According to the AAER, PKF is the eighth largest firm of accountants and business advisers in the UK.

> firm was discontinued as of December 16, 1998. PKF was then re-engaged as AremisSoft's independent auditor. (Securities and Exchange Commission, 2006)

Despite PKF receiving copies of the anonymous letter about the fraud and communications from the innocent CFO to the Big Four auditor, PKF eventually offered a clean opinion to the financial statements AremisSoft eventually filed.

The subject of the prevalence of opinion shopping has been the subject of some empirical studies. J. Krishnan (1994) found that companies that switched auditors did not get more favorable opinions from their new auditor than from their old auditor, which he interpreted as evidence that opinion shopping is not effective, even if it is the motive for an auditor switch. Using a different method of estimation, however, Lennox (2002) estimates that opinion shopping motivated approximately 17% of auditor dismissals from 1996-1998.

None of this evidence speaks to the scenario discussed in Chapter 4 where the "firing condition" is met and the threat of losing the engagement makes it possible for the manager to induce his auditor into colluding in the misstatement. A change in the number of incumbent auditors who are willing to allow management to account for their business as they please could also contribute to changing rates of opinion shopping.

5.5 Evidence of the "collusive auditor" scenario

There is little unequivocal public evidence of active auditor collusion with management, though the story of AremisSoft and PKF discussed above seems to be one. The PricewaterhouseCoopers archives certainly did not have explicit communications about one of its predecessor firms colluding with a client. The firms did, however, seem to worry about the possibility that some teams would be pressured into collusion. For example, Price Waterhouse would occasionally send out memos that would offer cautionary tales from scandals occurring at other firms. One such memo in 1962 told of a Peat, Marwick, Mitchell audit team that had been pressured into going along

with management in preparing the financials for an initial public offering:

> This situation is an indication of the difficulties which can be encountered in initial examinations of small companies when their prime purpose in obtaining an auditor's opinion is to facilitate the sale of their stock. In these circumstances, because of the requirements of the S.E.C., there is likely to be pressure on the accountant to avoid an exception in his opinion. Care must always be taken, if we accept such an engagement, to assure that this pressure does not lead us into the expression of an unqualified opinion where one is not warranted. The dangers are obvious. (Price, Waterhouse & Co., 1962)

These kinds of warnings are hardly evidence of widespread corruption in the large firms, and certainly they suggest that the problems are localized to individual engagements. Nonetheless, they suggest that collusion occurs at least occasionally.

A 1989 GAO report of its investigations into the audits of 11 failed Savings and Loans do offer more direct evidence of auditors' knowing about suppressed information that would put the thrifts in a bad light. Here is a sample of the kinds of evidence the GAO discovered the audit firms were aware of but did not either disclose or force management to correct:

- A CPA firm did not disclose in its audit report that its client improperly reported a $3 million unrealized gain in investment securities, even though the firm had evidence in its working papers that the S&L did not follow prescribed accounting principles in reporting the gain. The firm also did not take exception for a finding in its working papers that the S&L improperly reported the risks associated with $86 million in investments.
- Two CPA firms did not disclose that S&Ls had received formal enforcement orders from the FHLBB to cease and desist from their unsafe and unsound lending practices. In one of those two cases, the CPA firm not only did not comply with its own policy to disclose such action, but it also had information from federal examiners that the S&L was failing to comply with the cease and desist order.
- Two CPA firms reported that S&Ls had no material weaknesses in internal controls even though the S&Ls were under formal regulatory enforcement actions from the FHLBB for severe internal

> control weaknesses relating to appraisal and other underwriting and managerial deficiencies.
>
> (GAO, 1989, 8)

The specific firms were never named in the report, so it is impossible to know what their side of the story was. It is likely that at least some of the firms would counter that the above issues were not "material."

If the *Wall Street Journal* article cited earlier (Berton, 1985a) in the discussion of the compliant manager scenario as it applied to Alamo Savings Associate was correct that regulators were initially turning a blind eye towards deceptive accounting at Savings and Loans in hopes to prevent panics that might result if the true state of the thrifts were revealed, auditors and managers both might expect that the penalties associated with discovery might be relatively small. If that is the case, the model would predict that the conditions necessary for the collusive auditor scenario might be more readily reached. It is therefore no surprise that there were numerous discovered problems of auditors covering up problems with Savings and Loans' accounting.

Once again, the limited evidence of collision should not be taken as the same as clear evidence that this scenario does not occur. Inducements may take very subtle forms and the difference between active collusion and willful ignorance is not clear cut. Furthermore, suits against auditors need only show recklessness (or, in the case of initial offerings, merely failure to exercise due professional care), not actual knowledge of the fraud, to be held liable. Since proving knowledge is often particularly difficult, many SEC actions or private suits work to prove that the fraud was so obvious that the firm either knew or should have known that it was going on. A product of this litigation strategy is that there is little in the public record that shows conclusively that an audit firm was actively, knowingly colluding with its client.

One important aspect of the collusive auditor scenario that is not fully addressed by this evidence is the mechanism by which the manager induced the auditor to collude. In the AremisSoft affair, the inducement may have been targeted directly at the PKF partner who was promised a directorship. If that is all PKF got from the collusion, though, it begs the question of why PKF did not have sufficient controls in place to protect its partners from

such inducements since the entire firm is harmed (both reputationally and financially) when a partner is caught colluding with management to commit fraud. The Price Waterhouse memo only speaks vaguely of "pressure" causing the Peat, Marwick, Mitchell team to collude; there was no discussion in the GAO report about why the auditors might have ignored the accounting problems at their clients.

5.6 Conclusion

This chapter surveyed the historical evidence to validate the predictions of the model developed in Chapter 4. For the most part, auditors and management behave as predicted, though the public record is not terribly rich, due to the confidentiality of the relationship. Of course, another explanation that deserves mentioning for the poor historical record of the outcomes that follow an auditor discovering a misstatement is that managers in all likelihood very rarely commit fraud, so discovering it would be similarly rare.

Even while the evidence for how auditors handle the discovery of misstatements is thin, the fact that all three equilibrium strategies seem to exist does tell us that there is significant heterogeneity in the value of the model parameters faced by auditor-client pairs that leads to different outcomes, even within the prestigious firms. This undercuts the assumption made by DeAngelo (1981) that firms produce consistent levels of quality in their audits. It also suggests that the volumes of empirical pieces trying to demonstrate that the large firms produce higher quality audits, in addition to their technical problems, are not asking the most interesting questions. More interesting questions would look at the auditor-client pair characteristics that lead to better or worse qualities of information.

There are significant technical challenges to looking at the propensity for fraud at the auditor-client pair level, but doing so could prove very useful to our understanding of how such things as the structure of the auditor's contract, the structure of the executive's compensation package, other intermediaries, and other factors affect information quality. One example of research that is beginning to look at finer-grained predictors of audit quality is a paper by Gaeremynck et al. (2005). The authors use a unique proxy for audit quality available only for Belgian clients—their compliance with a

new Belgian disclosure standard[9]—a proxy which has the advantage of being objectively measurable. There is a relatively low level of compliance with this disclosure standard, allowing for sufficient compliance variation to make empirical results meaningful. They then look at two characteristics of the audit firms' portfolios, their percentage of risky clients and the size and visibility of clients, to test how those characteristics predict the rate of client compliance with the disclosure standard. They find that differences on these more detailed measures of client portfolios are a better predictor of compliance than is a binary Big 6 versus non-Big 6 variable. While this work still faces challenges in separating client/auditor choice from the contribution of the audit process itself and in generalizing the results to other types of disclosure problems and other countries, the work begins, at least, to move to conversation away from the limited discussion about large firm superiority.

[9]The standard is a strict requirement for disclosure by firms in financial difficult (defined as those who report either a loss in the income statement during two consecutive financial years or have negative retained earnings) as to whether or not they have valued the balance sheet according to the going concern principle. If they have, they must discuss why a going-concern principle is justified.

Chapter 6

Historical evidence: Model extensions

Chapter 5 showed some historical evidence that firms responded, as expected, to increases in the risk of audit failures by exhorting staff to take additional care in the course of the audit and to be particularly aware of the possibility of irregularities. It also discussed evidence that demonstrates that each of the three scenarios predicted by the model in Chapter 4 that might result from the auditor's discovery of a misstatement do occur at least occasionally.

It is not sufficient, however, to simply hunt for evidence to support a theory and present only that which supports it. The PricewaterhouseCoopers archives also clearly raised issues that are not captured directly by the model in Chapter 4. In particular, firms reveal a great deal about their priorities through the incentives they offer to employees and partners. The evidence available of the incentives used within audit firms to motivate their partners and employees suggests that the incentives faced by accounting firms' are more complex than those discussed in Chapter 4.

6.1 Internal firm incentives

The archives have only spotty records of how partners and employees were rewarded, but the evidence that does exist reveals a fairly consistent picture of the firms' priorities—albeit in quite different ways. The incentives within

the accounting firms reveal one important preference, throughout the years and the ranks of the firm: there is a great emphasis on selling services, both audits and other services, and on customer satisfaction. And in all instances, the "customer" considered is the management of the client companies, not the owner-investors.

As the firms grew and matured, incentive systems became more formal and based more on tangible metrics than intangible qualities. There is an early, colorful Price Waterhouse artifact from a round of partner selection that mixes formal rating systems and older processes based on personal knowledge of every candidate. The archives had a file containing a spreadsheet and accompanying worksheets, in what appears to be Herman Bevis's hand, from one year's partner selection process at Price Waterhouse in the late 1940's.[1] Bevis filled out a worksheet for each candidate for partner that was a mimeograph of a list of personal characteristics, both negative and positive, and each candidate was given a score for each characteristic. In addition to characteristics that all candidates were rated on, there was room on the sheet to add characteristics that the rater felt were important but were not included in the sheet. Unfortunately, the algorithm for consolidating the individual scores into an overall score was not included in the archive, but the handful of candidates with the highest scores were made partner. The lists, even without the algorithm combining them, give a sense of which personal characteristics were valued and which were not, and are given in Table 6.1.

Because the positive and negative are jumbled together, it is difficult to determine just how some were meant. Clearly strong social skills were highly valued: aggressive, articulate, energetic, imaginative, resourceful, and witty. But if one were to think of the characteristics of a person who would be good at sniffing out fraud, many of the adjectives that might apply that are included in these lists have a negative connotation: cautious, dogmatic, plodding, prim, pedantic, Prussian. A few are more positive—deliberate, inquisitive, observant, tenacious—but they do not dominate the list. Interestingly, ethical was only an add-on trait, not one on which every candidate was judged.

[1]The sheets are undated, but a reference to a character from a radio show, Senator Claghorn, dates the sheets to no earlier than 1945 and not much later than 1949. (en.wikipedia.org). Since Bevis himself was not made partner until 1946, it is likely that the sheets date from the very end of the period (Allen & McDermott, 1993).

Characteristics rated for all candidates

aggressive	articulate	careless	casual	cautious	clumsy
conceited	deliberate	discreet	discriminating	dogmatic	dull
eager	energetic	enthusiastic	erratic	excitable	flexible
flippant	gullible	imaginative	immature	impulsive	inarticulate
indifferent	indiscreet	inflexible	inquisitive	lazy	loud
mature	nave	neat	observant	officious	open-minded
overbearing	plodding	presumptive	prim	pushy	resourceful
self-assured	shallow	sloppy	steady	taciturn	tenacious
vacillating	verbose	vulgar	witty		

Added individual characteristics

calm	impressive	unenthusiastic	average	diamond in the rough	
uninteresting	quiet	shy	pleasant	loyal	obtuse
business-like	alert	gregarious	smooth	strident	rumpled
self-righteous	bland	self-important	worrisome	wasp	long winded
tactful	tactless	sparkling	self-centered	cold	technical
pedantic	prissy	brilliant	a leader	ugly	gentlemanly
ethical	far-sighted	quietly witty	aloof	a positive thinker	
empathetic	obsequious	weak	hospitable	solidly competent	
Prussian	stiff	anxious	all PW&Co.	hesitant	breezy
jolly	unreliable	Senator Claghorn			

Table 6.1: Personality traits worksheet from partner selection process, late 1940s (Bevis, n.d.)

More prosaically, Lybrand, Ross Brothers & Montgomery's values are reflected in the personnel report forms of LRB&M from the mid 1960s. Managers were rated on eight criteria by the partner in charge of the audit, on a scale of excellent, good, fair, poor, and not relevant:

1. Effective planning and scheduling.
2. Effective staff utilization considering rotation policies, billing rates and timing.
3. Report preparation and technical correspondence.
4. Suggestions useful to the client.
5. Effective use of time and dollar budgets and administration of costs and fees.
6. Knowledge of client's organization, accounting methods and industry.

7. Encouragement of additional services of the Firm.

8. General relations with the client. (LRB&M, 1966)

The most valued attributes of a manager were clearly his ability to run the engagement efficiently, but items 4, 7, and 8 speak to his alertness to business opportunities and his ability to cultivate a positive relationship with the client.[2] This is before the provision of formal management consulting services were a significant portion of any of the Big Eight's business.[3] There are no items that address his skepticism of management, alertness to fraud, or insistence on using accounting treatments that reflect the economic reality of the business.

Similarly, the personnel reports for lower level staff show a parallel emphasis on sales and efficiency. Supervisors and seniors are rated on their "alertness to opportunities for additional services to the client" (LRB&M, 1966) and various procedural abilities, but not on their attentiveness to the possibility of fraud or other misrepresentations. Staff accountants got good marks for the "ability to recognize potential opportunities for additional services to client" (LRB&M, 1966) but none for discovering irregularities. Of course, such abilities may have been rewarded in other ways, but the official firm incentives were not geared towards taking the auditors' monitoring responsibility as their primary goal.

A very interesting snapshot of the tension at Price, Waterhouse between exhortations to be better auditors and a different set of priorities expressed through the firm's incentives is found in a collection of John Biegler's closing remarks at the Annual Partners' Meeting that is preserved in the PricewaterhouseCoopers' archives. Biegler was the senior partner from 1970-1978, a turbulent time in the profession. Long excerpts from these speeches are included in Appendix C.

The speeches capture a tension between the maintenance of a reputation for "professional excellence", which seems in his speeches to be short

[2]It is interesting to note that in all of the above discussions, "client" fairly clearly refers to the executives of the company—not its shareholders or those who are the real beneficiary of the audit service.

[3]Fifteen years later, management consulting made up only just over 10% of Big Eight revenues. If one includes tax services, the firms derived 30% of their revenues from non-audit services in the early 1970s (GAO, 2003).

hand for avoiding audit failures (see, for example, Biegler, 1975), and the pursuit of growth and profitability. Biegler insists that "there is absolutely no inconsistency between these three major goals" (Biegler, 1973). The model in Chapter 4 also predicts the compatibility between profitability and audit intensity (at least, a cost-effective level of intensity) but much of the rest of his speeches belies this compatibility. Instead, it is fairly clear from the context that many in the firm think that professional excellence is at odds with the goals of growth and profitability.

Notably, while Biegler often exhorts the partnership to focus on professional excellence, all of the concrete plans he offers are incentives to increase growth or profitability. Particularly striking are the speeches of 1975 and 1976, where despite the generally dark mood as a result of major financial scandals and congressional hearings on auditors' roles in those scandals, the speeches end with plans to increase monitoring of profitability metrics and, in 1976, to link partners' compensation and career advancement to the outcome of those metrics:

> As your Senior Partner, I also take final responsibility for maintaining—and sharpening—the competitive edge.... I must tell you that I am still not completely satisfied that the partners are doing as much as they could to maximize either the firm's growth or its profitability. ...
>
> I have suggested ... that, as part of our general program of reorganization, we take a fresh, hard look at the firm's systems for recognizing partner performance. I intend that this be done in a broad-based way, including partner career path aspects as well as related compensation aspects.
>
> It may be that the time is right for considering a more methodical way of recognizing, in profit-sharing structures, the many different areas and levels of partner responsibility that already exist and to give even sharper focus to individual partner performance. The time may, indeed, be past when... we can live any longer with any partner's inability—or unwillingness—to do what is necessary. (Biegler, 1976, emphasis in the original)

Finally, the concept of "professional excellence" is discussed frequently in firm documents—Biegler's speeches are not the only place where the term is used—but its meaning is ambiguous. In many instances, the term could

easily be interpreted as describing the high standards of a professional, full-service business adviser: honorable on its own terms, but the concept conflicts with the monitoring needed to mitigate the principle-agent conflicts inherent in a public company's governance structure.

Given how audit intensity was the sole choice variable auditors controlled in the optimization calculation modeled in Chapter 4 and the relative lack of attention it receives in the firms' incentives systems, the model developed in Chapter 4 needs to be modified to explain the evidence. The emphasis on sales and performing the role of trusted business advisor that are reflected in the firms' evaluation systems offer some clues as to what is missing from the model. Fortunately for the utility of the model, these complications do not invalidate the model. Instead, they point to how issues outside the scope of the model interact with the basic dynamics that the model does address.

6.2 Model extension: Attracting and retaining clients

The model in Chapter 4 begins its investigations after an engagement has been entered into. It does predict the minimal conditions necessary for the two parties to be willing to enter into the engagement, but it does not look at how the need to compete for audit engagements might change how audit firms make their calculations. The reason for the lack of concern for audit ability in the firms' reward systems may be rooted in the peculiarities surrounding how auditors must compete with clients. Fundamentally, the interests of the real client (the corporation, owned by its shareholders) and those who do the hiring (the management) are not well aligned in the decision of whom to hire. Even if management does not officially make the hiring decision, it has significant influence on the options and on who ultimately gets selected. In other words, even the auditor selection process suffers from potential principal-agent conflicts.

The manager would like to maximize his personal payoff. If one considers the manager's payoff derived in Chapter 4, it is clear that, all else being equal, he would personally prefer for the auditor to audit with as little intensity as possible. This is because he would prefer to reduce the proba-

bility of getting caught introducing a misstatement, should he choose to do so.[4] A manager who has no intention to cheat, regardless of the company's outcome, also has no preference for a high audit intensity, since he knows his statements are honest.

There are counterbalances that appear to restrain managers from choosing the worst possible auditor. Most obviously, management derives value from the signal a clean audit opinion from a reputable auditor provides. They derive a signaling value from having an auditor with a reputation for insisting on high quality financial statements, since that quality signal reduces investors' assessment of the risk of financial statement manipulation, and thereby lowers the cost of capital available to the company (Spence, 1974, Brealey and Myers, 2003). That lower cost of capital translates into personal benefits for the manager such as higher stock prices, better access to capital to make acquisitions or otherwise grow the company, thereby increasing personal status and compensation, etc. The manager will therefore balance the auditor's reputation against his private desire for the auditor to audit with as little intensity as possible.[5]

There are other criteria that could affect the manager's choice in addition to the auditor's ability or reputation. The audit firm must have the necessary capacity to handle the clients' business—particularly important for companies that have particularly complex accounting needs or that have a multinational footprint. Managers may also take into consideration such intangibles as how well the manager will work with the auditor, how trustworthy the auditor is, how discrete, etc. Presumably, the manager will also

[4]This can be seen mathematically since audit intensity (λ) only enters his payoff in a way that increases the manager's costs (using the compliant manager scenario as an example): $W^H - C^M(\mu) - (1-\mu)[\lambda(W^H - W^L) + (1-\lambda)\rho P^M]$. An increase in λ is an unambiguous cost because of the condition $W^H - \rho P^M > W^L$ is true if this scenario is the equilibrium outcome.

[5]This discussion of manager's desire for minimal intensity in the audit only applies to intensity of scrutiny on the *manager's* contribution to the financial statements. If one drops the assumption that the manager has perfect information about the true status of the company, the manager may well derive private benefits from an audit that helps him improve his own understanding of the true nature of the company. This aspect of an audit's overall intensity is not the subject of this dissertation. I assume that the private benefits of an audit that accrue to the manager do not suffer from the same exotic principal-agent problems that are encountered when the principal cannot directly contract with the auditor and can instead be achieved through normal contracts without policy intervention.

take into consideration the price of competing bids. While it is not clear how price sensitive the manager is, particularly if audit fees are only a tiny fraction of a company's assets or revenue, presumably if the manager is presented with two audit firms that are otherwise similarly attractive, he will select the firm based on price. Finally, the auditor can bundle the audit with the provision of other services, such as tax services, IT systems, and management consulting, and the choice of auditor may well depend on the relative value of those other services to the manager.

Therefore, audit firms must market their services in such a way that the management, particularly those of desirable clients who are low risk and high in prestige and fees, choose their firm for a service that, while mandated by law, is not directly valued by the manager. The profession as a whole has a franchise, but the question still remains of how to divide that pie.

Even without modeling formally the competition for work, it is clear that firms will compete along a number of dimensions:

- Reputation
- Size
- Industry specialization
- Compatibility with management's personality
- Price
- Scope of services

In addition to the profits that each additional client brings, growth of the client base also feeds back into a number of these dimensions. Most obviously, the size of the accounting firm depends critically on the number of clients it has. Each additional client, *ceteris paribus*, will increase marginally the odds of the firm winning the contract for the *next* client. Additional clients in a particular industry can enhance the ability to specialize. Additional low risk, prestigious clients can add to the audit firm's reputation.

Leaving aside, for the moment, the issue of reputation—I will return to the question in Chapter 8—there is clear evidence of the firms competing on the other dimensions throughout the archives.

Importance of size and expertise

As corporations grew in size, geographical spread, and complexity, so did the need for large accounting firms to provide adequate coverage for the external audit. Size of firm and industry expertise in turn became major selling points for audit firms as their clients and potential clients grew. The National Industrial Conference Board published a report in 1962 on "Company Relationships with Public Accountants", where they surveyed 222 manufacturing firm executives about their relationships with their auditors. The survey found that national and international coverage were important in the selection of an audit firm, as was industry knowledge. As one director of an oil company is quoted as saying:

> In selecting a public accounting firm, our board has in mind that our operations are world wide. It therefore selects an internationally known firm with one or more offices in most of the countries in which we do business. Knowledge of local laws and regulations, customs, currencies, and languages is important. The local offices of the firm we have selected have this knowledge. The firm's representatives are readily available for consultation, and substantial savings in traveling and living expenses are effected where their local offices handle our work. (The Conference Board, 1962, 21)

This need for growth to accommodate clients' growth drove the most prominent firms to grow in size extremely rapidly and forever changed the competitive nature of the auditing industry. The firms that led the way in growth began a positive feedback cycle that made them the auditors of choice for larger firms, thereby fueling still greater growth. Small firms could no longer compete for large clients and either exited the large public client market or merged with the large firms—increasing still further the gap between large and small.

During the period where the large firms emerged as industry leaders, there was not the sense that there is today that that leadership is unquestionable and irrevocable. Instead, the firms that enjoyed the benefits of prominence felt keenly the possibility they could fall back into obscurity, making it all the more important that they continue to grow and attract new clients. Price Waterhouse was an early leader in its international scope,

but in its 1982 "Price Waterhouse: A Retrospective Look", leaders of the firm fear that they have lost some of their initial edge:

> ...For during this same period [the late 1950's to early 1970's], while we were looking inward, our principal competitors who had heretofore relied on our international network to serve the needs of their multinational clients started to build their own world organizations in direct competition with us. This is an inescapable fact from an historical point of view—which somehow escaped any efforts on our part for contemporary action.
>
> ...[O]ur competitors, particularly Andersen's, were getting their international organizations into high gear and we were in danger of losing ground. And the fact is we did lose ground.... [It] didn't take long for our competitors to catch up and even overtake us in terms of fees, offices, chargeable hours and strength of practice in the specialized areas such as Tax and MCS [Management Consulting Services]. (Field et al., 1982)

This excerpt offers a sample of the anxiety, particularly in the Price Waterhouse records, that run throughout the archives about the possibility of falling behind competitors in terms of size and profitability. This is despite Price Waterhouse being the premier firm in many eyes for the entire century.

Importance of personal relationships

Personal relationships with executives have historically played an important role in the competition for audit clients. This is partially a path-dependant result of early constraints on other forms of competition in the profession's ethics codes. Until the mid 1970s, while the post-Securities Acts character of the profession was maturing, the competition for clients amongst audit firms was complicated by strict professional ethics rules that prohibited advertising, competitive bidding, and the explicit solicitation of clients of other firms. This did not mean that auditors did not compete actively for clients, it simply drove the competition underground—or to the country club—and changed the dynamics of the competition.

Particularly in the early days of the profession, when few accounting firms had wide name recognition, firms depended on word-of-mouth to win

new clients. Auditors actively cultivated personal relationships directly with potential clients—or, more accurately, the executive management of potential client companies. Price, Waterhouse had extensive communications in the 1950s about ways to improve its competitiveness. In one communication from the Los Angeles office to the Business Research Committee, formed to explore new ways of obtaining business, the office encourages a systematic approach to attracting new business:

> We believe that the present 'hit or miss' new business methods should be replaced by more definite programs, with each office exercising direction of older and younger staff in various activities who should report regularly thereon rather than relying entirely upon the voluntary decision of staff members as to activities to be engaged in. To the extent appropriate, wives of all staff members should be included in these programs. (Price Waterhouse & Co., Los Angeles Office, 1955)

The "various activities" the letter refers to are memberships in country clubs, civic groups, and chambers of commerce, even attendance at churches, as well as accepting speaking engagements and writing articles for trade journals or newspaper opinion pieces. Los Angeles went on to describe how they were trying to systematically place partners and senior staff in various country clubs throughout the city, but were having difficulty covering all of the clubs because of the large number of important clubs that were spread out across the city.

Recruiting by leveraging social networks can only be successful if there is an expectation of a friendly, cooperative relationship. Audit firms were dependent on the willingness of their current clients to speak favorably of the firm in social contexts. It would be very awkward to one day be grilling an executive on his ability to override internal controls, with the implication that he is suspect in his honesty, and then the next ask to be included in a golf game that would provide an introduction to a friend of the executive who happens to be in the market for a new audit firm. Auditors' need to recruit clients through their social networks therefore provides an incentive for auditors to resist defining their role as one with an adversarial relationship with the person responsible for hiring them.

Bundling services

A very important component of audit firms' competition strategy was offering a broad scope of services to their clients. This was the case long before consulting became a significant part of the accounting firms' revenues, however. As noted above, employees were being judged and rewarded on the basis of their ability to make "[s]uggestions useful to the client" and for "encouragement of additional services of the Firm" (LRB&M, 1966) over a decade before those services were of much financial consequence for the firm in themselves. This suggests that this part of their service offering was important indirectly to improving their audit revenues.

Non-audit services are valuable to the manager who is responsible for contracting for the service. Because the statutory audit provides the audit firm an opportunity to establish a positive relationship with management, as well as unprecedented access to all of the company's business issues, the audit firm is extremely well placed to identify demand for services and win the contract to provide those services. Indeed, if the audit can become, rather than a monitoring activity, a tour of all the issues the company is facing—operational, accounting, financial, and tax—with a trusted business adviser, the audit itself becomes more valuable to the manager.

This view of the auditor as adviser has its roots in the very earliest days of the profession. Auditors served as an information conduit for best business practices as exemplified by the following LRB&M memo from 1931 (emphasis added):

> It is a matter of common knowledge that many companies have made intensive organization studies of late and have rearranged personnel, office routines, etc., with the view of reducing expenses to the minimum and improving the efficiency of the administrative organization. However, it is quite probable that many of our clients have not carried out such improvements to the fullest extent, and *it would appear that in some instances we can be of real service to our clients by discussing the matter with them and making suggestions as to improvements in system or changes leading to economies....*
>
> We request each member of the staff to give careful consideration to the organization, system, personnel, accounting methods, etc., of such clients as he has heretofore been assigned to, and if he believes that

> worthwhile improvements may be suggested to one or more of these clients, he should take the matter up with a partner preparatory to discussion with the client. (LRB&M, 1931)

While this discussion is primarily about the problems non-audit services pose to the use of auditors as a solution to the principal-agent problem between shareholders and company management, it should be noted that accounting firms may have played an extremely important role in the rapid maturation of American business practices. They have an advantage over pure consulting firms as a clearing house for business methods because of the insider insight into the existing practices of their clients—including the successful practices that would have no need of a consultant's input—gained through the audit process. Another early LRB&M memo shows how the firm saw its role in the widespread adoption of budgets:

> ...During the next three months we shall examine the accounts of the major portion of our clients[, in] order that we may know the extent to which each client uses or has use for a budget....
>
> On account of the present agitation by bankers and others for the adoption of budgets it is probable that an enlarged field of work will be opened up to us during 1933.... (LRB&M, 1932)

The advantages of having an entity on-site that understands the requirements of state-of-the-art business practices and can help a company design its systems pro-actively to meet high standards is clear.

Some of the evidence from these earlier years shows directly how these management-oriented services helped develop and retain audit clients. The Los Angeles Office letter quoted above about its systematic approach to encouraging business development through social networks also reported beginning a program of deliberately placing Price Waterhouse alumni in client and non-client companies to retain old business and solicit new:

> We believe that each office should have a local policy of trying to control the placements of financial executives and junior executives in client and non-client offices. In Los Angeles we have tried to maintain this control as well as we can. It has produced good results both in retaining present clients and in new business persons placed are

> friendly to the firm and seek to have us retained as auditors. Our office Business Research Committee is considering whether we should maintain a register of openings as well as persons who are available for placement. (Price Waterhouse & Co., Los Angeles Office, 1955)

This is an early example of the practice of employees of accounting firms moving on to become executives at client companies. It later became so institutionalized in the large accounting firms that they began offering formal executive placement services.

Accounting firms went beyond helping clients find good employees that also happened to benefit the accounting firm's practice development. They also began helping clients find acquisition targets. Beginning in the late 1950s and heating up significantly in the 1960s, U.S. corporations began to merge into larger and larger conglomerates. There were numerous reasons for this, with only one being that it sometimes made economic sense. One side-effect of the merger movement is that it began to reduce the number of clients for auditors overall, and the auditor that was retained by the resulting merged corporation got a client that was that much larger and a source of more revenues (not to mention the additional work that comes with attestation services needed to complete a merger or acquisition). So audit firms clearly wanted as many of their clients as possible to be buyers and as few as possible to be sellers (particularly if they were sold to a non-client). This desire is discussed by M.J. Dahlem in a memo to all U.S. partners at Price, Waterhouse in 1957:

> Our April 1956 report discussed at some length the vulnerability of the firm to the loss of work through mergers, sale of the business, etc. Also reference was made to the fact that there have been a large number of such transactions, with our clients conspicuously absent from the list of those prominent on the acquiring side. (Dahlem, 1957)

While there were clearly many more drivers to the conglomeration movement, it is disturbing to think that companies were egged on by their auditors to buy rather than be bought. This need to win out in mergers became codified into the firm's practice development strategy by 1971 as evidenced by the following discussion in the 1971 Price, Waterhouse annual report:

> Our 'we wish we could sell' situations exceed 500, including some 170 clients who are considering the merger route before giving up the ghost. Our job is to see that these companies are sold to, or merged with, clients of PW, not of other firms.
>
> ...Practice development is part of our objective. If we help sell a good business to a prospective client, that nonclient becomes more prospective. If we help a client get rid of a lemon (but not to another client), he will be forever grateful. These are services. (Price Waterhouse & Co., 1971, 45)

Price Waterhouse may well have been completely ethical in the way they helped clients "get rid of a lemon (but not to another client)." Nonetheless, it is easy to imagine that they would have been under pressure to dress up the "lemon" to make it attractive to non-client buyers who were shopping without inside information on the true nature of the division for sale.

There is some evidence that there were concerted efforts to re-frame auditing from a monitoring activity into a direct management service. A 1959 memo from Herman Bevis to A. C. Tietjen, the head of the research department, discusses Bevis' desire to redirect the emphasis of the audit, particularly with regards to the managers' and partners' roles. In his preface to the memo, Bevis makes clear that these following two projects are his highest priority:

> No. 1—Study our audit objectives
>
> This is a "practical" research project. I suspect, and would hope that it could be persuasively demonstrated to our organization, that many steps in our detailed audit programs are beside the point as to current audit objectives in the large publicly-owned company with good internal procedures and personnel. I would have high hopes that a research project with intensive studies in the field would also point the way toward more efficient and effective supervision of our audit work, probably with more specific concepts of responsibility and authority at various staff levels. It seems to me that, generally speaking, *our managers and partners are probably bound up in details more than they should be with a resultant lack of time for creative and constructive thinking regarding their clients' problems.*
>
> This project may well be so closely related to the next one as to form one project.

> No. 2—The business approach to auditing
>
> I doubt that this project would go very far without Project No. 1 but, with No. 1 under way or completed, *the business approach to auditing would probably develop as a logical implementation of audit concepts.* (Bevis, 1959, italicized emphasis added)

This memo suggests that the details of the statutory audit procedures should be left more completely to the lower levels of the engagement hierarchy and that the managers and partners are to focus their attention on "creative and constructive thinking regarding their clients' problems." The memo is not very clear on what exactly Bevis means by a "business approach to auditing," but from the context of discussion about this approach, it is most likely an approach that would enhance its value to the manager.

The firm seems to continue to follow through with the priorities set by Bevis, as evidenced in this Executive Letter for Partners and Managers from 1961 that exhorts partners and managers to take a "business approach to auditing":

> Because of our unique position in having access to all facets of the businesses of our many clients, we have within our firm an almost limitless wealth of knowledge of business problems and how they are solved. On almost every assignment, we are exposed to some idea which one of our staff devised or our client devised which could be of benefit to some other client. *Our value to our clients can be greatly enhanced if we are continually alert to provide them with ideas which will either save them costs or otherwise improve their business.* Experience has shown that in a good percentage of the instances where we have made business suggestions we have later received instructions to implement those suggestions.
>
> Our problem is how to develop in our professional staff *the business approach attitude* and how to communicate ideas developed to the clients.... (Price Waterhouse & Co., 1961, emphasis added)

The focus on the importance of non-audit services increased as they became a greater part of the firms' businesses and as the changes in the professional ethics code increased the overt competition for the audit market. John Biegler, managing parter of Price Waterhouse during the 1970s, makes

the connection between offering a broad base of services with fending off the competitive pressures that he anticipated would be released on the profession in the following two points of a 7-point agenda he sets out for the firm's future:

> Point 4. Strengthen our practice development capabilities and broaden their base
>
> You will all recall John Zick's report on the moves which are now under way within the AICPA to permit firms to advertise their services to clients and nonclients alike. Adoption of the new rule concerning advertising will undoubtedly have a dramatic effect on the way accounting firms market their skills. I visualize a period of intensive competition within the profession which, in the long run, *will force us to broaden the base of our practice development efforts beyond anything we have experienced to date.* Not only will there be greater competition to make inroads into our existing clientèle—there will be intensive efforts by all firms to exploit new markets....
>
> Point 5. Strengthen our commitment to, and mutual concern about, our capacity to maintain a full service posture to our clients throughout the firm
>
> In my judgment we have not yet reached the optimum level of development of our capacity to provide a full measure of sophisticated tax services to the firm's clientèle, wherever located, although we are closer to that point of development than ever before. Of even greater concern is the feeling ... that the development of our capacity in the MAS area is still far short of what should be our ultimate goal, both in the terms of the range of skills which should be readily available to our clients and the depth of coverage in a geographical sense of our MAS capability. (Biegler, 1977, italicized emphasis added)

These two points anticipate the firms' push to develop rapidly both the breadth of services they offer to clients and to market those services more aggressively. They also indicate the maturation of the firm into one that offers three diverse types of service that each have their own marketing capacity and infrastructure. Non-audit services are no longer just the product of good ideas the auditors have during the course of an audit.

Competition required that Price Waterhouse move from an *ad hoc* approach to client service to an institutionalized one. This evolution was not

immediately embraced by all partners at Price, Waterhouse and the growth of non-audit services happened only sporadically during the 1970s, according to an internal retrospective. A conclusion to the document, written by Biegler, offers a diagnosis—and solution—to the problem:

> Once again, the reasons for the loss of momentum [in the growth of MCS] are obscure, but one can conclude that such factors as isolated instances of poor experience with MCS work for audit clients, an overprotective attitude of audit partners to their clients, low MCS profitability particularly in the start-up phase, and an occasional tendency to over-expand the range of MCS services into minor peripheral areas all contributed to this unfortunate loss of momentum in building MCS as an important service. Compounding all this was the existence of a heavy bias among the great bulk of partners to audit services and the financial security which such services have traditionally provided. The typical audit partner was simply not very interested in supporting the development of new and potentially costly services such as MCS.
>
> ...
>
> ...But what we have to do now is get our act together, once and for all, and resolve that we are all going to work toward a common objective rendering distinguished service to our clients day in and day out, relentlessly expanding our practice and vigorously developing an even broader range of services to meet the needs of our world clientèle. It can be done—it will be done. (Field et al., 1982)

Biegler recognized that despite its different institutional format, the purpose of this shift came from the same source as the original approach to additional services: the need to make their service more valuable in the eyes of the individuals who made the purchase decision.

By the middle of the decade, Price, Waterhouse had clearly caught up with the other firms in recognizing the value of the non-audit services to their audit business. Joe Connor, the managing partner through most of the 1980s, issued a report on the firm's "Business Strategy and Directions" in 1985, that discussed planned changes in the organization of the firm to allow for better utilization of talents and profitability. In passing, he notes that "MCS is an important part of developing our geographic office markets and *protecting our audit practice.* Each office and each partner will continue

to be responsible for developing MCS services for audit clients " (Connor, 1985, 17, emphasis added). His explicit recognition of the value of management consulting in protecting the audit practice is particularly interesting. Presumably, the additional services protected the "poaching" of an audit engagement by another firm during this time when competition for clients was particularly fierce.

The added value of non-audit services were also beginning to be reflected in their billing rates, at least according to the 1986 report "Enhancing Firm Profitability: Priorities for Fiscal 1987-88" that breaks out the billing value per chargeable hour for the three types of services—audit, tax, and management consulting services—in each year from 1980 to 1986. The nominal value rose for all types of services every year, but their proportions remained approximately the same across the period. The billing value of tax services was approximately 20-30% higher than the audit billing value; management consulting's value was approximately 60-70% higher than that of auditing (Price Waterhouse & Co, 1986, 15).

The same report included a grid, developed by McKinsey for the firm, to describe the relative profitability of different types of engagements. It is replicated in Figure 6.1. It also reflects an increasing sophistication about how the different types of services interact and how to best compete in the environment of the time. The report discusses the grid as follows:

> The annual examination and much of our tax work fits in the upper left quadrant. The upper right quadrant would include special projects for audit clients. Proposal costs should be lower there, if required at all. And our learning curve should be lower if we work closely with the audit engagement team. Therefore, this should be our most lucrative market, while at the same time providing a closer bond to our historical clients. In this segment, why can't we charge higher billing rates? The client respects our quality, and we bring special skills and knowledge of their operations. Are we taking adequate advantage of our position in this quadrant?
>
> The lower left quadrant, that is recurring work for non-audit clients, has many of the characteristics of the upper right cell. It may require a buy-in for the first time, but it also provides the ability to move the client into the upper left quadrant.
>
> The lower right quadrant is our toughest market. It requires bidding

PRICING STRATEGIES
for
TYPES OF ENGAGEMENTS

CLIENT		
Audit	HARVEST	BUMPER CROP
Non-Audit	BUY-IN	BIDDING
	Recurring	Non-Recurring

TYPE OF WORK

Figure 6.1: McKinsey grid, reproduced in "Enhancing Firm Profitability: Priorities for Fiscal 1987-88" (Price Waterhouse & Co, 1986, 54)

> each time with high PD [i.e. Project Development] costs. It requires specialization and niche marketing. It is the place where we need to get high enough rates to cover our costs, but conversely, it is the place with the most competitive pressure to lower rates. (Price Waterhouse & Co, 1986, 37).

While not made completely explicit in the report, the ideal strategy for the firm is to try to move clients in a clock-wise manner through the grid, with the client's first encounter with firm a one-time consulting experience that has a very low margin for the audit firm. The client is then coaxed into increasingly long-term, interdependent relationship, with the ideal end result being that the client becomes an audit client and a frequent purchaser of high margin special services. Therefore the client is wooed initially by non-audit services that are of high value, low cost to the decision-maker executive, and the audit firm recoups its costs and makes its *profits* from the later, full-service

relationship that is established.[6]

Competing on price

Interestingly, once the bans on explicit competition were lifted, the widespread perception is that audit quality worsened. Rather than begin to advertise to investors on the basis of auditors' reputations for quality, the lifting of the ban on advertising and competitive bidding in the mid 1970s only accelerated the trends in competition—redefining the auditor's role towards that of full-service business adviser—that were already occurring discreetly. Perhaps the profession's culture was already too well adapted to the old modes of competition to be able to quickly adapt to the new possibilities offered by the ability to advertise.

The changes the explicit competition wrought on the industry are discussed in a letter by James J. Mahon to Coopers & Lybrand partner, Charles F. Jacey. Mahon was a former tax partner at Coopers & Lybrand turned writer who was working at the time on a history of the firm. His reflections on the changing competitive landscape are interesting and worth quoting extensively:

> Dear Charlie:
>
> I think Bob Charpie has a point—that the major firms race for bigness is becoming more frantic and could conceivably end in trouble for one or more of those involved. He probably envisages something as ordinary as a ruinous price war or some other profit squeezing phenomenon as the ultimate instrument of destruction, for he referred to the need for "harboring" capital to survive the resulting environment.
>
> I don't think there is much doubt about Charpie's major premise. The big firms have accelerated their growth efforts in the past decade. While Andersen had firmwide practice development programs as early as 1950, and we began them in the late 1950s, all the major firms now seem to have formal growth mechanisms in place and are revving

[6]It is important to note that the upper right quadrant could make up only a relatively small portion of the revenues of the audit firm while still making up a large portion of the partnership's profits. This observation becomes very important in understanding the flaws in most empirical work done on the relationship between non-audit services and auditor independence.

> them up in various ways. Publications are proliferating—and improving. So are press references. Industry specialization is becoming more prevalent. Six and possibly seven-digit advertising programs are in the wings. Requests for proposal by major companies and governments are being met with bigger outlays of time, money and energy by more firms. Price is becoming an increasingly important factor—and charges of "low-balling" are heard more frequently. Competitor "back-biting" is common.
>
> ...
>
> I am fearful that the principal victim of the two-level divisiveness (small firms vs. big firms, and big firms vs. one another) may be the independent audit or attest function itself—with all that connotes. Traditionally, auditing has been invested with a professional aura or mystique which has already been battered by the adverse events of the last fifteen years, but which could be further ground down by a public spectacle of quarreling, squabbling and commercialism within the profession. And if the independent audit function is lost, everything is lost. Because even the ancillary consulting services are dependent upon auditing. But the big firms particularly seem to be obeying some hypnotic force to run pell mell into danger.... (Mahon, 1982)

Even though the push for growth was quite ferocious before the advertising bans were lifted, Mahon is not the only one to feel that those changes in the professional ethics rules changed significantly the profession for the worse. It is not clear that impression is correct, but it must certainly have made the underlying competitive pressures much more visible to all members of the profession: before, the jockeying was confined to the partners and, except for the firm leaders, even partners were probably mostly unaware of competitive efforts occurring outside their own office.

6.3 Conclusion

The economic reality of the problem of selling a service whose value is not fully realized by the nominal purchaser of the service has driven the evolution of the complicated relationship auditors must build with the executives of their client companies. As stated in the same report that discusses the McKinsey grid, "Clients tend to think of cost-benefits from our work. Their

Year	Actual	Real (1981 dollars)
1946	57	380
1960	47	168
1973	81	165
1981	141	141

Table 6.2: Average partner income at Price Waterhouse ($ thousands) (Field et al., 1982)

cost is our revenue. Perhaps we can be more successful in raising revenue if we think in their terms. If our work is really value-added, and the client will gain great benefit, the client's cost and therefore our revenue should enjoy greater leeway" (Price Waterhouse & Co, 1986, 40).

Auditors need to respond to these incentives if their firms were to be able to remain viable. According to Price Waterhouse documents, there were steadily increasing competitive pressure on profits throughout the auditing industry since at least the 1950s and through at least the early 1980s. It does appear that average partner earnings fell over the period of 1946 to 1981, both at Price Waterhouse, and, most likely, at the other accounting firms as well. Since in a partnership the profits are distributed amongst the partners, partner earnings are one of the better measures of firm profits (though by no means a perfect measure).[7] According to a study conducted at Price Waterhouse in 1982, average partner income had dropped significantly in real terms, as shown in Table 6.2. The report does not have numbers that go as far back for Price Waterhouse's competitors, but it does show that they were all experiencing a similar drop in real average partner earnings in more recent years, from 1977 to 1981, as shown in Table 6.3.

According to a later report written in 1986, partners continued to

[7]Average partner earnings could also have fallen because of a dilution of the definition of "partner". It is possible that people who would have remained longer as managers or some other type of salaried staff in the earlier years of the firm are promoted to junior partner so as to have more of the senior staff receiving incentive-based pay and to help retain the best managers with the prestige and job protection that comes with being named partner. They would, nonetheless, start out with a much smaller share of the firm than they would had the promotion to partner happened later in their career, thus lowering the partner compensation at the bottom end of the range. Partners with comparable power and responsibility as their earlier counterparts may not have seen a drop in real earnings.

Firm	1977 (Nominal dollars)	1977 (1981 dollars)	1981
Price Waterhouse	106	155	141
Peat, Marwick, Mitchell	99	145	136
Arthur Andersen	102	149	148
Touche Ross	66	97	92
Coopers & Lybrand	84	123	119

Table 6.3: Average partner income at five largest accounting firms ($ thousands) (Field et al., 1982)

perceive a squeeze on earnings at Price Waterhouse, drawing the firm to conclude that"in developing our practice over the next few years, we must concentrate on approaches to enhance profitability" (Price Waterhouse & Co, 1986, 3). The firm had not been able to raise billing rates much more than necessary to keep pace with inflation over the decade 1976-1986: "The fact is, however, despite all our efforts to raise our rates, and to make these increases stick with our clients, in inflation-adjusted terms, our prices are up only modestly over what they were ten years ago" (Price Waterhouse & Co, 1986, 4) despite the fact that the mix of services had changed considerably over that period.

Once again, we see auditors responding to the incentives they face. In order to remain in business, firms need to attract clients, and to do that they needed to shape themselves in such a way that they can win contracts. To win the contract, they need to offer a service that offers the highest level of utility for the hiring agent—the manager—of the available alternatives. The successful strategy seems to have been to reshape the service of auditor into a full service business adviser. By the late 20th century, the centrality of auditors' focus on management services to the firm's identity is captured well in a 1989 speech by Shaun O'Malley, Joe Connor's successor at Price, Waterhouse:

> At Price Waterhouse, meeting this obligation translates into two words—client service. Within the limits set by independence requirements, we have a professional responsibility to serve our clients' needs. To use my own favorite phrase, we have to be obsessed with client service. I like the word obsession. To me, it's an active word. It means thinking, eating, breathing, and living client service. (O'Malley, 1989)

O'Malley's words can be contrasted with the far cooler attitude that LRB&M staff were instructed to have towards clients in 1921, when audits were voluntary and were sold much more explicitly on the basis of the individual probity and sobriety of the auditor:

> Attitude to Clients:
>
> It is undesirable that accountants become too intimate with clients and their employees. The attitude toward the former should be one of dignified friendliness. Any association which requires more than this should be avoided. This does not mean that accountants may not with propriety accept reasonable entertainment. It does mean that the relations should not be carried so far as to make possible subsequent embarrassment.
>
> Disagreements with Clients:
>
> Clients and their employees should not be antagonized. They should be accorded courteous, dignified treatment under all circumstances. This at times may be difficult, but it is the proper position to take. An accountant should maintain his equanimity and dignity under trying circumstances. Any unpleasant developments or disagreements with a client should be reported to the firm immediately. (LRB&M, 1921)

As this chapter has shown, the need to appeal to management to win engagements competed for auditors' attention with the need to audit effectively. But there remains one question that must be addressed before the understanding of auditors' motivations developed here makes theoretical sense. The requirements of sequential rationality hold for the engagement process as well as for the audit. As modeled so far, auditors would like to appear to management, pre-engagement, as if they would audit with a low intensity to save on the costs of the audit and on the uncomfortable questions of management's integrity that an effective audit would require. Once engaged, however, the auditor cannot be held to her promises of low audit intensity. Instead, she will carry out her audit as predicted by the equilibrium strategy as analyzed in Chapter 4. A rational manager, recognizing this, would not believe the promises made pre-engagement. However, the evidence of the internal rewards systems discussed here is not consistent with the rewards for audit intensity one would expect if any of the equilibrium strategies predicted by the model held true. The next chapter looks at how

the repeated nature of the real life interactions may provide the necessary levers in some instances for the manager to ensure that the auditor carries out the low-intensity audit she has incentive to promise when competing for the engagement.

Chapter 7

Wilful blindness: A fourth equilibrium scenario

We began to see evidence in Chapter 6 how some of the dimensions on which auditors need to compete to win and retain clients competes with their attention to their monitoring role. But the desire to win new clients cannot alone explain the apparent lack of tangible rewards for successful discovery of client misstatements. Even in the collusive auditor scenario, the auditor needs to find the fraud in order to capture the compensation for the added risk taken by colluding to ignore the misstatement. In order to compete as business advisers selling services valued by management, audit firms and their clients need a mechanism for auditors to credibly commit to being the congenial business advisers who will not ask the awkward questions that may be necessary to be an effective monitor.

There does exist the potential for such a mechanism in the dynamic modeled in Chapter 4, if one extends the interaction to allow for multiple rounds of the relationship. The desire of auditors to retain clients for repeated engagements may have a profound distorting effect on audit firms' priorities. Winning and then keeping a client brings value to the audit firm directly through the profit stream it makes on the recurring engagement and indirectly in bolstering the firm's ability to win additional clients. The total value of a client to the auditor, therefore, is not restricted to the fee earned in the current period, as depicted in the model in Chapter 4. Instead, it brings the additional, expected value of the continuing relationship. That value will

vary based on the size of the fee (including bundled non-audit services) and the client's ability to enhance the audit firm's competitive advantage, which may depend on such client attributes as industry and reputation.

This added value—in technical terms, the discounted present value—of the future relationship has the potential to change the audit intensity decisions of the auditor. If the auditor knows that she will agree to ignore any misstatements she finds when faced with the threat of the loss of future engagements, her optimal audit intensity becomes zero. The value of future work can be considered a subtle contingency fee for issuing a clean opinion and working cooperatively with management through the audit process. If the value of future work fully compensates the auditor for any additional risk taken should there be a misstatement, the auditor does best by not looking for misstatements generated by top management and instead focusing all of her resources on providing a valued service to that top management.[1]

The engagement renewal can generally be relied on because there are real advantages to both parties to renewing the audit engagement every year if there are no problems with the relationship because of the relationship-specific capital built up through the audit firm learning about the specifics of the business. Any new audit firm would have to learn about the idiosyncracies of the client's business, increasing the costs of the audit, both in terms of the auditor's time and the time spent on the part of the client orienting the auditor. These "client-specific quasi-rents" as they are called by DeAngelo (1981) help ensure that a renewal of the engagement is the default choice. Nonetheless, the manager can use the threat of putting the audit out to bid as a disciplining device to win disputes with his auditor.

This chapter first sketches out an extension to the model that considers the effects of the value of future work on the interactions between auditor and manager. Then I discuss some cases which may be examples of the resulting equilibrium strategy. Chapter 8 then looks, in the light of the

[1]It is worth reiterating that throughout this discussion I make a distinction between auditing information flowing from top management and information transmission at lower levels of the hierarchy. I am considering *only* auditing of disclosures that could be manipulated by top management. Auditors face a different set of incentives to audit effectively lower levels of the hierarchy, and throughout I assume that any principal-agent issues can be mitigated by the audit contract, since top management has a personal interest in the accuracy of information they receive from below. Unlike shareholders, top management can control the form of the contract they enter into with the audit firm.

strategic interactions discussed in this study, at the political tactics the audit profession has taken to shape the institutions that affect their role. From this perspective, it appears that auditors' political activities have tended to work towards facilitating socially suboptimal equilibrium strategies.

7.1 Model extension: Value of future engagements

This threat could be modeled the same way as any other inducement offered by the manager to persuade the auditor to collude in fraud except unlike other possible ways to finance an inducement, it is automatic and "offered" even in years in which there is no misstatement for the auditor to find. Not only that, but it is costless to the manager personally—if anything, it is likely less costly than the alternative (i.e. ending the relationship). Therefore, if the auditor and manager are in a relationship where the equilibrium outcome once the auditor discovers a misstatement is for the manager to threaten to terminate the engagement in the next period and for the auditor to give in and allow the misstatement, a rational auditor would not go to the expense of looking for a misstatement. In other words, the auditor would set the audit intensity to zero. (The auditor would still need to go through the motions to satisfy regulatory requirements, but she would presumably audit as minimally as possible without arousing suspicion.)

This result is driven by the fact that the auditor is just as well off not finding the misstatement as she is finding it, in that she "collects" her fee and her reward for collusion, but does not go to the expense of auditing with great intensity. Indeed, there may be additional benefits to not actually auditing: the auditor does not have to worry about investigators finding evidence the auditor knew about the fraud, should the fraud ever be discovered, nor does she need to worry about a subordinate reporting the fraud and its cover-up to the authorities. This might reduce the probability of the fraud ever being discovered by the market.

Current liability rules in most contexts require that the auditor "knew or should have known" about the fraud (also known as a recklessness standard). Even cost-effective levels of audit intensity will on occasion fail to discover fraud. Therefore, if the audit firm never found the fraud because of

a no-intensity audit, there may be enough uncertainty about the real intensity of the audit (remember that audit intensity is difficult or impossible to verify outside the audit firm) that the settlement values would be lower than they would be had the firm found and covered up the fraud. I return to this observation in Chapter 8, as it is consistent with the political activities of the profession directed towards the definition of recklessness.

To the extent that audit firms market other, non-audit related services, they offer managers the opportunity to increase the discounted present value of the relationship to the auditor, providing a way for motivated managers to "buy into" the threshold where a zero-intensity audit becomes the equilibrium strategy for the auditor. Furthermore, if the manager purchases non-audit services from the auditor, he has leverage over the auditor that does not bear the same regulatory scrutiny as does the audit. The manager can therefore discipline his auditor more credibly by threatening to withdraw non-audit services, changes in which will not receive the same scrutiny by regulators or audit committees.

The major prediction generated by this sketch of an equilibrium scenario is that auditors operating in this equilibrium will have an audit intensity equal to zero (or a low as possible to still avoid regulatory scrutiny). As with all scenarios, detecting evidence of the existence of this scenario as an equilibrium outcome that actually occurs is challenging, but the available historical evidence is suggestive. The next section offers some instances of engagements where auditors may have set their audit intensity equal to zero.

7.2 Model validation: Lack of auditor skepticism

There remains quite a bit of ambiguity about the role of the auditor surrounding almost all of the famous audit failures involving reputable firms, but there is suggestive evidence that many of the failures were due to gross negligence rather than collusion. There is rarely clear evidence that the audit team was actively colluding with management, and yet often their blindness and passivity is stunning—and puzzling—given the flagrancy of the frauds and the consequences for the firm when the fraud is discovered. The theory offered above may help explain auditors' lack of skepticism in the face of

blatant warning signs of fraud: auditors' desire to retain their future income stream may overwhelm their interest in stopping fraud. By refusing to incorporate a skeptical attitude towards their gathering of evidence supporting the financial statements, auditors are able to appear to be auditing properly (and able to show evidence in court of following auditing standards) without jeopardizing their future relationship with management.

In this section, I present the details of two examples where the audit firms appeared to be genuinely unaware of the fraud being committed under their noses but had also clearly collected information about the companies that if they had allowed for the possibility that management might commit fraud would have provided ample evidence of something untoward going on inside the client companies. I chose these two cases just as examples of a wider phenomena that appears to happen regularly. Indeed, many of the scandals that made headlines in recent years have similar attributes and could be evidence of other instances of the behavior predicted in this fourth equilibrium scenario.[2] I selected these two cases, McKesson & Robbins and ZZZZ Best, because there are good records of the details of the cases, they were considered important cases at the time, and they help, along with the other frauds discussed at other points in this dissertation, to introduce the reader to frauds committed during many of the different eras of U.S. business after the 1929 stock market crash.

The first example of a case where the auditor displayed a surprising lack of skepticism is the McKesson & Robbins scandal, which broke in 1939. This was the first major fraud to come to light after the Securities Acts had been implemented, and showed to the public that the Securities Acts were not perfect protections against egregious fraud. This fraud had a huge effect on the profession, and the debate over the lessons to be learned from the scandal continues to shape much of the debate over auditors' responsibilities and abilities.

As described in Baxter (1999), the president of McKesson & Robbins, a large, well-respected wholesale drug company, perpetrated a massive fraud by creating, entirely out of whole cloth, a Canadian subsidiary to complement its very real U.S. operations. The fiction went undiscovered for 10 years, despite the company subjecting itself to audits, which were voluntary at

[2]WorldCom, Parmalat, Adelphia, and even Enron may be examples of a willful lack of skepticism.

first, by the most prestigious audit firm, Price Waterhouse, and despite the fact that Canadian business purportedly made up a quarter of the company's assets and half of its profits. After the fraud was uncovered, investigators discovered that the CEO was a convicted con man who was operating under a false name, and that three of the other top managers were really his brothers, though they all had aliases that obscured their family relationship. The four had developed an elaborate operation to forge vast numbers of documents, such as purchase orders and shipping documents, to create the appearance of business activity: in 1937 alone, over $18,000,000 of sales were created out of thin air.

Price Waterhouse was completely taken in by the con and gave the company clean audits throughout the decade. In part, the reason for their failure to detect the fraud was due to the explicit limitations on audit scope laid out in their contract with McKesson. Their audit was not to include a "detailed check of all cash transactions" nor would it include "checks that might 'disclose a misappropriation of funds or manipulation of accounts'. More important, [the engagement agreement] said that PW did not circularize the foreign or the (90,000) US customers; nor did they make any physical check of inventories." (Baxter, 1999, 167). But the auditors also failed completely to be skeptical of the evidence they *did* audit. While they made sure that the phony receipts were properly accounted for in the balance-sheet, they did not seem to get suspicious when the dates in the shipping notices did not allow sufficient time for the movement of goods between Canada and New York. Nor did it bother them that there were never any unpaid vendors at the year-end (no real business is that fortunate). Nor that the amounts of drugs purportedly traded exceed the entire amounts of those drugs traded in the US or Canada. Nor that there were never problems with customers' accounts, even in the face of exchange difficulties that would be expected to cause delays in payments, or problems with returned or damaged goods (Baxter, 1999).

The McKesson case is often raised as an example of the kind of massive, collusive fraud that auditors cannot be expected to find. Yet, even though the audit would be considered seriously deficient in its scope by today's standards (which are heavily influenced by the lessons the standard-setters took from the McKesson scandal), as Baxter (1999) shows, sufficient evidence of the fraud was in front of the auditors that they *could* have found it in the material they did look at.

The leader of Price Waterhouse during the McKesson scandal, George O. May, was quite defensive in many of his correspondence and public communications of the job Price Waterhouse did at McKesson. But even he recognized privately in a 1956 letter to his successor, Herman Bevis, that it would have been possible to find the fraud had the men on the job been alert and skeptical:

> There is no system of qualification which will prevent the top flight men [e.g. senior managers and partners] from becoming slack or indifferent.... Of course, the McKesson setup was unique and a collusive fraud, but it is sad to think that a little intelligent supervision would have exposed it and that the firm lost this great opportunity.
>
> There is food for thought that the two Morlands who were exceptionally intelligent had a leading part, one in the Kylsant case[3] and the other in the McKesson case, and that Thornton, who was entirely self taught, found a defalcation on his first job and *would undoubtedly have discovered the McKesson frauds, if he had spent a week on the job.* (Emphasis added, May, 1956a)

The SEC also cited the lack of skepticism as the cause of the audit failure, not the procedures followed. In the Accounting Series Release issued in 1940 that summarized the SEC's conclusions from their investigation into the fraud, the SEC says of the Price, Waterhouse auditors:

> Their failure to discover the gross overstatement of assets and of earnings is attributable to the manner in which the audit work was done. In carrying out the work they failed to employ that degree of vigilance, inquisitiveness, and analysis of the evidence available that is necessary in a professional undertaking and is recommended in all well-known and authoritative works on auditing....(Securities and Exchange Commission, 1940)

A more recent example that is similar in the singular lack of skepticism displayed by the auditors on the engagement is the ZZZZ Best fraud,

[3]The Kylsant case was a major financial scandal in Britain in 1931. Price Waterhouse was the auditor for the Royal Mail Steam Packet Company, of which Lord Kylsant was chairman.

discovered in 1987. The fraud's audacity has added it to the ranks of famous financial statement frauds. The litigation against the auditors and other gatekeepers that ensued also played an important role in expanding the definition of primary liability after the Supreme Court's decision in *Central Bank* struck down the private right of action against aiders and abettors, which had previously been the most frequent charge against auditors in civil securities suits (Labaton, 1996).

Barry Minkow started a residential carpet cleaning company out of his parents' garage as a teenager. He got an adult friend to take out a loan for him to start up the business. When he fell behind on the loan payments, he began to overstate the size of his business to get more loans to pay off the original loan. The scam snowballed until Minkow had added an entirely fictitious second business line in restoring office buildings damaged by fire or flood for insurance companies. The company had offices in three states, more than 1000 employees, and almost no legitimate business. A couple of the banks involved in the loans discovered some of the fraud but did not report it to the authorities, choosing instead simply to refuse to continue to do business with ZZZZ Best. In an attempt to get ahead of the escalating bank loans after one major source of credit ahd been cut off, Minkow and his co-conspirators decided to issue a public offering. At the time of the offering, Minkow was 20 years old (Murphy, 1989).

The underwriter for the public offering insisted that ZZZZ Best hire a Big Eight auditor to audit the prospectus, so the company engaged Ernst & Whinney. While Minkow had been able to put off most of the loan officers and underwriters who wanted to see a work site by telling them that the locations of the sites were secret, Ernst & Whinney insisted on touring a job site. To comply, the group bribed a security guard at an office building in Sacramento to allow them access to the building on a Sunday. Though there was construction going on in the building at the time, it was not a client of ZZZZ Best, and indeed had never been damaged by fire or flood. But the company was able to convince the auditors that it was the site of a ZZZZ Best job (Labaton, 1996; Murphy, 1989).

There were numerous red flags that should have prompted the auditors (and the other professionals involved in the IPO) to be suspicious of the operation. The reported growth of the company was phenomenal: they reported $5.4 million in revenues the first quarter of fiscal 1987, compared

with $4.8 million in revenues for the entire 1986 fiscal year. The contracts for their multi-million dollar insurance restoration jobs consisted of the same one page form used in their $39.95 residential jobs. All of the insurance company jobs were supplied by one firm, Interstate Appraisal Services, which a Dun & Bradstreet report in the auditors' files said had a credit rating of a mere $50.[4] The Ernst & Whinney auditors accepted the story that Interstate acted on behalf of larger insurance companies, whose identities, according to Minkow, were a secret (Labaton, 1996).

Despite the many oddities about the business, Ernst & Whinney signed off on the prospectus and ZZZZ Best raised $13.2 million in its offering in December 1986. The audit firm was retained to do the annual audit. In connection with the audit, which was never completed, the audit firm again insisted on a tour of a job site. This time, ZZZZ Best actually leased a building in San Diego to pose as the site. There was one fact that should have caught the auditors' eyes, however: the contract was for replacement or cleaning of almost 800,000 square feet of carpet, but the largest building in San Diego at the time had only 525,000 square feet of floor space (including hallways, bathrooms, elevators, etc.). The building itself, inspected by Ernst & Whinney auditors in February of 1987, had only approximately 120,000 square feet (Labaton, 1996). Despite this discrepancy, the fraud was not brought to light until four months later when ZZZZ Best was on the verge of acquiring KeyServ, a legitimate carpet cleaning chain, with $40 million in junk bonds (Murphy, 1989).[5]

What is striking about the ZZZZ Best story is the auditors' mix of aggressiveness and lack of skepticism. They were the only ones to successfully demand inspections of job sites, but they then ignored the evidence of a scam once they got there. It is possible that breakdowns in the audits of McKesson and ZZZZ Best were due to particular auditors who were incompetent or distracted and are not representative of normal audits. But these two cases are not unique. The lack of inquisitiveness of auditors that often comes to light in scandals has been a source of enormous frustration with the profession for regulators and the public. This frustration was colorfully expressed in

[4]Interstate turned out to be just as fictitious as ZZZZ Best, and was created by one of Minkow's co-conspirators at Minkow's behest.

[5]The fraud was finally brought to light by an accountant tenant of Interstate who approached Ernst & Whinney to tell them that the first job site they had visited was not real (Murphy, 1989).

2005 by Mark Schonfeld, director of the SEC's Northeast Regional Office, as quoted by the *Wall Street Journal*, in this instance about Deloitte & Touche's audit of Adelphia: "They didn't just miss red flags, they pulled the flag over their head and then claimed they couldnt see." (D. Solomon, 2005, C3).

Chapter 8

Facilitating wilful blindness

The problem of competing for clients who do not value your service has clearly made the real payoff function for the auditor far more complicated than represented by the model in Chapter 4, though the complications follow directly from the basic dynamics set up in the model. The competitive pressures encourage auditors to redefine their roles as management allies, not monitors. This creates tension between the needs to initiate and continue an engagement and the steep penalties associated with the audit failures that follow from the shift in approach from monitor to adviser. The opportunity to compensate auditors for the risk of audit failure through the value of future work further increases the pressure on auditors to resist their monitoring responsibilities.

Rather than find ways to lessen the need to appeal to management, the firms and the profession has tended to focus its investments on ways to manage the penalties associated with low audit intensity levels on a system-wide basis. The penalties associated with an audit failure can be classified loosely into three categories: legal penalties, firm-level reputation penalties, and individual-level reputation penalties. The profession has worked on reducing the impact of all three types. This has lowered the threshold managers have needed to meet to compensate auditors for the risks of collusion (tacit or explicit). It has also had a more subtle effect. The penalty mitigation efforts have created a culture within the profession that justifies a negligible audit intensity. It has institutionalized tacit collusion with management by refusing to define the auditor's role as one of monitor, and relieves individual

auditors of the need to grapple with whether their profit-maximizing effort levels really meet their public responsibilities.

Unifying the profession's efforts is a concept referred to in the profession as the "expectation gap." Section 8.1 defines the expectation gap and looks at how it has shaped the auditing culture. The rest of the chapter then looks at how the expectation gap and related strategies have systematically reduced the penalties auditors face when an audit failure is discovered by the market. An important lesson for policy makers in this discussion is that auditors' aversion to aggressive fraud prevention is deeply rooted in their economic incentives and in their culture. It will not be easily or quickly overcome, particularly if the economic incentives facing the profession are not decisively changed.

8.1 Expectation gap

The "expectation gap" is the term used by the profession to describe the difference between what the public expects the audit to provide—among other things, an assurance that the financial statements are free of material fraud—and what the audit actually does, which is to offer reasonable assurance, using procedures determined by generally accepted auditing standards, that the financial statements fairly present the financial position of the company in question in conformity with generally accepted accounting principles. That does not, according to many in the audit profession, include a responsibility to look for or find fraud. This is despite frequent attempts to codify such a responsibility in auditors' professional standards, despite fraud deterrence playing a major role in the public policy decision to require financial statement audits and despite the frequent litigation troubles the firms have because of audit failures due to fraud.

Wallison (2006) offers a typical example of the rhetoric used by the profession when discussing auditors' responsibilities:

> As I see it, the main problem is that auditors cannot detect or discover fraud unless they stumble on it.... The WorldCom case is a great example of the problem. If Arthur Andersen's auditors had looked at more of the company's accounting, they might have been lucky enough to have stumbled on the way that WorldCom was treating its

> leases, but they didn't. Fraud is, by definition concealed. The purpose of fraud is to put something over on someone; if you're management and you control the financial statements and you're halfway clever, you ought to be able to do it.... However, that is not, as I see it, a perspective that is shared by the public, by the media, or most important, perhaps, by congress. I think that, in general, those groups assume that when fraud occurs, auditors should discover it. (Wallison, 2006, 136)

Wallison proposes that auditors' job should be viewed differently: "ultimately auditors are doing nothing more than endorsing what management said was happening within the company." (Wallison, 2006, 138).

The "expectations gap" began at least 100 years ago, though the name was not coined until the 1970s (see Koh & Woo, 1998, for a history of the gap and a review of the academic studies on the issue). Sir Nicholas refers to it in his 1926 letter to George May: "...there is even now too much of the inclination, especially among certain classes of clients, to look upon the auditor as a detective and to regard his fee as an insurance premium." (Waterhouse, 1926). Sir Nicholas' belief that auditors should *not* act as a detective is a common refrain in discussions of the expectations gap. The profession has (and continues to) resist the notion that auditors should be put into an adversarial position with respect to management. Sir Nicholas also articulates the profession's stated fear that by accepting a responsibility to look actively for fraud, the investor would be able to pass all of the risk of loss from fraud to the auditor.

The rhetoric surrounding these debates over the gap tends to enhance auditors' professional mystique and gives little purchase to critics of the profession. Even the term used for the problem, "expectation gap", implies that the problem is with the expectations of the public, not with the performance of the profession, thereby implying that the public is somehow unreasonable or ignorant. To illustrate the power of the label, it could have been labeled the "performance gap," which would have been an implicit criticism of the auditor's work. The profession's rhetoric more generally tends to denigrate the intelligence and worldliness of anyone who takes the public's side of the gap: "It is sheer ignorance, [auditors] maintain, to think that the purpose of an audit is to detect fraud." (Hershman, 1974).

The profession's success in defining the problem as one of expectations has made a true investigation into the problem difficult. Those who question the public policy desirability of the profession's definition of auditors' responsibility are met with a scorn that makes constructive conversation almost impossible. A good example of how the expectation gap rhetoric stymies constructive debate is the 1993 Public Oversight Board report, "In the Public Interest," that ostensibly sought, among other things, to resolve the expectation gap.

The report begins the discussion by worrying about "a serious erosion of public confidence" (Public Oversight Board, 1993, 31) in the profession. The authors accept no responsibility on behalf of the profession for the loss of that confidence, however. Instead, they imply that the public had unreasonable expectations of auditor perfection: "Public confidence has been affected by the unpleasant fact that failed audits do occur. Audits are performed by people, and not all people are at their best all the time." (31)

But the public and policy makers were not asking for supermen to resolve their "severe loss of confidence." The loss of confidence referred to here was primarily due to the Savings & Loan scandals, where in at least some instances, the auditors were clearly not doing all that was reasonable to search for fraud and report known problems with the financial statements. A GAO report on the audit failures associated with 11 failed Savings & Loans in the mid 1980s identified severe problems with the audit firms' evidence of audit work. A sample of the types of inadequate evidence in the working papers found by the GAO were:

- ...[In a 1985 audit, the] CPA firm was aware of several past-due loans, including one past-due loan of $30 million guaranteed by two principal shareholders; however, there was little evidence in the working papers that the firm adequately evaluated the collectibility of those loans, appearing to rely primarily on guarantors' unverified assertions that they could repay the loans.
- In a 1985 audit, a CPA firm did not have evidence in its working papers that it sought to independently verify oral assertions by S&L management that a number of problem loans were collectible. The firm itself had identified the loans as having collectibility problems. This included at least one major loan in which the CPA firm had no evidence that it sought to verify oral assertions concerning the loan's collectibility from a member of

the S&L's management who was also one of the borrowers on the loan.

- In a 1985 audit, a CPA firm did not have sufficient evidence in its working papers that it followed up on severe loan problems and management deficiencies identified by federal examiners.... In one case, the working papers showed no evidence that the firm addressed federal examiner findings that the S&L had incurred unreported loan losses of $7 million....

(GAO, 1989, 6)

These findings could be written off as poor paper work, rather than a severe lack of skepticism in the face of self-dealing or even discoveries of unreported losses by federal examiners, but the findings of inadequate reporting of known problems discussed in Chapter 5 suggests that the above problems go beyond poor record keeping. The failures to follow up on or question known problems in the S&Ls' financial statements goes beyond a problem of "not all people are at their best all the time." Instead these instances are either evidence of a lack of skepticism or evidence of outright collusion to suppress negative information.

When the public, or policy makers, ask for auditors to maintain scepticism, look for fraud, and develop more effective techniques for finding it, the profession often resists reform by saying that they cannot guarantee an absence of fraud: "...[The] Board believes it is unreasonable for users of audited financial statements to expect auditors to guarantee the honesty and integrity of the information contained in them." (Public Oversight Board, 1993, 33, emphasis in the original). Rather than respond to demands for cost-effective fraud detection, the profession shifts much of the burden on to the investing public to readjust their demands: "Users of financial statements need to understand the nature of these statements, the limitations of GAAP, and the significance of the auditor's opinion. The 'expectation gap' must be narrowed from the user's end as well as the auditor's" (34).

The "expectation gap" is evidence of a market failure that results from the conflicts inherent in the auditor's position. This becomes clear when one considers how other professions handle the challenges of their jobs and their inevitable imperfections. Doctors cannot save every life, and yet they do not say it is unfair for the public to expect them to do the best they can to save the life of every patient in their care. Aerospace engineers know that space

shuttles will occasionally blow up or otherwise fail catastrophically. That has not caused them to stop trying to make the shuttles safer. In both the medical and engineering professions, both the public and the professionals understand that failures are inevitable but also that failure should be fought against. Failure is the source of innovation and technological advancement, and everyone involved understands that the only way to reduce failures is to *try* to reduce failures.

Audit failures are not the same spur to innovation. The profession does not seem to have the incentives to meet the demands for aggressive audits by investors. Indeed, just the opposite seems to be the case. The profession seems to have an enormous amount invested in maintaining the expectation gap. In addition to reinforcing their views on the gap through frequent public commentary on the issue, they have attacked those within the profession who seem to advocate from the "wrong" side of the gap. When leaders within the profession publicly question the validity of the expectations gap, they too tend to be treated with scorn by their peers.

One of the most famous outspoken insider critics of the profession was Leonard Spacek, head of Arthur Andersen from the late 1940s through the 1960s. While Spacek did not address the expectations gap straight on, he frequently criticized accountants' lack of commitment to the shareholder and their ready acquiescence to managements' demands for greater accounting "flexibility." He expressed his views this way in a 1957 speech: "Let me state the problem simply and frankly. There is only one reason for misleading financial statements. It is the failure or unwillingness of the public accounting profession to square its so-called principles of accounting with its professional responsibilities to the public" (Spacek, 1957). He also famously pushed for more governmental involvement in the standards setting process—which would have undermined auditors' ability to define their responsibilities and to defend their side of the expectations gap.

Spacek came under repeated fire from other members of the profession, and the attacks frequently bordered on the personal. One such example is a letter from Bevis to Spacek, objecting to Spacek's call for reform in the standards setting process by hinting that Spacek's actions are equivalent to a communist takeover and lack professionalism or restraint:

> People who help bring about the destruction of a social political or economic system do not have control of replacing that which has been

> destroyed. Witness student participation in the overthrow of governments in Latin America. It is because of this that I should like to see the people in our profession and in business show restraint in their public utterances and work toward a solution of the problems which face us in an atmosphere of cooperation and calm deliberation. If this is done, we should be able to avoid the necessity for governmental control. (Bevis, 1963)

Joe Connor, head of Price Waterhouse in the 1980s was also ostracized for criticizing the profession, this time by confronting the expectations gap head-on. In 1986, he published a white paper, titled "Challenge and Opportunity for the Accounting Profession: Strengthening the Public's Confidence" where he proposed that auditors accept responsibility for detecting material misstatements. In a speech in 1987 that summarizes his proposals, he sums up accountants' current position as follows:

> Take auditor responsibility for detecting material misstatements. The present standard can be read to support a position that, so long as the numbers conform to GAAP, auditors have no responsibility for recognizing, for example, that most of an entity's assets have been converted to support the expensive lifestyle of insiders. Or no responsibility for spotting any of the other material deviations that make financial statements misleading. How unrealistic can you get? (Connor, 1987)

Brewster (2003) quotes an interview with Shaun O'Malley, Connor's successor, remembering that period: " 'He really wanted to be open about all of this and come clean. Connor made his proposal, and practically no one in the profession would even speak to him.' " (Brewster, 2003, 172). The profession was successful in its ostracizing of Connor and his reform proposals, including that of giving up the "expectations gap," went nowhere.

In normal commercial activity, a difference between what the consumer expects from a product or service and what it actually does would not persist for decades, as the expectations gap has in the auditing profession. Any initial confusion over the capabilities of the good would be resolved relatively quickly by experience. If there were demand for some capability that the good was initially thought to provide but, with experience, could not provide, some alternative would eventually be created to meet that demand.

Even initial technical barriers would be overcome: contemporary experience is dominated by devices and services that were technologically infeasible only a short time ago, but whose utility were evident to creative inventors and entrepreneurs. For example, the desire for instant, cheap global communication was not addressed by education campaigns by postal services to explain to customers that their demands were unreasonable and ignorant. Instead, the telegraph, telephone, fax machine, Internet, cell phone and Blackberry were all invented to meet that desire, with each device improving in some way the ability to meet consumers' demands.

The profession's steadfast refusal, in Spacek's words, "to square its so-called principles of accounting with its professional responsibilities to the public" has caused numerous public, embarrassing fights over the issue. It has probably contributed to auditors' failure to play a more successful role in uncovering fraud and therefore led to costly lawsuits and loss of reputation. It is totally implausible, therefore, to think that the lack of skepticism and the expectation gap are not evidence of a market failure due to private incentives dominating auditors' behavior. If it were a matter of bad apples or inefficient internal incentive systems, the fierce competition between firms would have purged the problem from the profession at some point during the last century. My hypothesis that the value of the future relationship acts as an inducement to collude and its unavoidable presence in every auditor-manager relationship offers a plausible explanation for the source of the market failure and the resulting lack of audit intensity. It is the only evident way that managers can offer anything of such large value to auditors at such little cost to themselves so consistently.

8.2 Reducing penalties of audit failure

The tenacity of the expectation gap begins to make economic sense when considering the problem of reducing the tension between the need to appeal to management and the need to avoid penalty from audit failures. The model has treated the penalty associated with the discovery of an audit failure as exogenous to the players' actions and was vague about the nature of the penalties. The historical evidence makes it clear that the assumption of an exogenous penalty is not fully accurate. To understand why, it is helpful to look more closely at how the penalties are issued. As mentioned at the

beginning of the chapter, there are three broad categories of consequences for an auditor caught up in an audit failure: legal penalties, professional reputation loss, and personal reputation loss. The audit profession has some influence over the size of all three categories, and the "expectation gap" will play a role in each.

First, regardless of the source of a penalty, the auditor can choose to exert costly effort in reducing the size of the penalty (through lobbying and the other methods discussed below). This added component interacts with the decision, even in the compliant manager scenario, of what level of audit intensity to choose, generally lowering the optimal level of audit intensity.[1] Since many of the activities used to affect the size of the penalty are system-wide efforts, even very costly lobbying efforts could be cost-effective from the audit firm's perspective.

The three sources of penalties that might be experienced by auditors—legal, professional reputation, and personal reputation—can be thought of as three lines of defense against auditor collusion or negligence. The legal penalties were the focus of Dye (1993), but as has already been discussed, there are limits to the feasible amounts of legal penalties that can be assessed, since audit firms have liquidity constraints that become binding at some point. There are other penalties, however. DeAngelo (1981) focused her work on the effects of professional reputation loss on the firm's earning potential in the future. If a firm earns a bad reputation, the signaling value of the audit will be diminished, and the firm cannot command as high a price for its services. Finally, many auditors have a strong ethical compass and would be horrified at the suggestion that they collude to cover up fraud. They would not be induced into collusion at any price, and they would be motivated to audit intensively by the fear of the possibility of having their ethics called into question should they accidentally miss a misstatement.

Unfortunately for the quality of information in the markets, the strength of all three of these penalty sources has been weakened over time through a

[1] Adding this complication to the auditor's expected payoff in the compliant manager scenario would change the payoff to $F - C^A(\lambda) - C^I(L) - (1-\mu)(1-\lambda)\rho P^A(L)$ where $C^I(L)$ is the cost of influence as a function of lobbying effort and $P^A(L)$ is the penalty suffered by the auditor when an audit failure is discovered as a function of the lobbying effort. $C^I_L > 0$ and $P^A_L < 0$. The first order conditions combine so that auditors will select L and λ such that the following holds true: $\frac{P(L)}{-(1-\lambda)P_L} = \frac{C_\lambda}{C_L}$.

variety of efforts of the profession. I look at each in turn.

Legal penalties

Auditors have approached the task of limiting their legal penalties for audit failures through three avenues: lobbying for legislation and court decisions that restricts the conditions under which they can be held liable for clients' misstatements, writing and interpreting professional auditing standards in such a way that make it comparatively easy to defend against charges of negligence, and influencing accounting standards so that clients can achieve their financial targets while still complying with GAAP.

Restricting legal liability Today, there are frequent complaints from the Big Four and their surrogates that they are facing a liability crisis that threatens their very survival. They are asking for relief from civil liability from legislators and for restraint in applying criminal liability from prosecutors. They worry that the Big Four firms are on the verge of collapse, and that the health of the capital markets are at stake. They also warn that the profession will no longer be able to attract the necessary talent to the field because of the crushing liability risks (Palmrose, 2006; U.S. Chamber of Commerce, 2006; Kinney, 2005).

But the rhetoric of a liability crisis has been a consistent staple of the audit profession's lobbying activities for most of the last 80 years at least.[2] There have also been a couple of studies done in the 1990s, during the lead-up to the passage of the Private Securities Litigation Reform Act (PSLRA) in 1995, that debunked much of the evidence presented in favor of the existence of a liability crisis (Shorter, 1995; Seligman, 1994). The rhetoric is therefore more likely evidence a profit-maximizing attempt to lessen the consequences of an audit failure.

There is nothing particularly unusual about an industry lobbying for litigation protection—every industry that has the potential to cause harm does it, with varying degrees of success. There are several aspects of auditor liability that merit discussion, however.

Most importantly, both private plaintiffs and the SEC suing auditors

[2]Appendix C contains a sample of the liability crisis rhetoric from 1926-2006

must prove at minimum that auditors were negligent in their duties, and often that they were either knowing co-conspirators or reckless in their conduct,[3] in order to collect damages. These standards for liability date back to at least the Securities Acts and they seem intuitively fair: given that auditors are *not* expected to find all fraud, it seems like it would be unfair to penalize them unless they had either colluded in the fraud or not exerted sufficient effort.

There is a problem with this standard, however. Recall that the model developed in Chapter 4 assumed that the penalties associated with an audit failure do not vary with the auditor's role in the failure. In addition to making it more difficult for management to find sufficient inducement for an auditor to collude in committing fraud, these penalties for audit failure are an essential part of the calculation the auditor makes to determine the profit-maximizing level of audit intensity. If that level of audit intensity is to equal the socially optimal one, the penalties for an audit failure *regardless of the degree of fault* must equal the social cost of the audit failure divided by the probability of discovering the failure.[4] If there is no penalty for not finding fraud, but a penalty for collusion, this only reinforces the incentives already present in the system for auditors not to audit at all, as discussed in Chapter 7.

Much of auditors' lobbying activity has focused on the ability of the courts to make more accurate distinctions between the collusive and the unlucky auditor and to lower the penalties for the unlucky auditor. For example, Sir Nicholas Waterhouse wrote to George May in 1926 of the British profession's efforts to limit damages "in cases where a client has a grievance for the non-discovery of some fraud or peculation, the suggestion being that in no case should the damages be more than say five times the annual audit fee" (Waterhouse, 1926). An important provision in the PSLRA allowed defendants to ask for dismissal of the case before discovery, reducing the likelihood that plaintiffs would have sufficient evidence of auditor misconduct

[3] A standard measure for this more difficult test of liability is that auditors "knew or should have known" that fraud was being committed.

[4] An alternative incentives-based solution to induce the appropriate audit intensity does exist in theory. Instead of face a penalty for audit failure, auditors could receive a "bounty" for fraud discovered that was of sufficient size to induce the right level of effort. This observation is a key element of the truth-inducing mechanism proposed by Feess & Nell (2002), but is currently barred by professional ethics rules.

to advance their claims. Current advocacy efforts are also pushing for sharper distinctions:

> We recommend that the PCAOB promulgate a safe harbor standard for fraud detection, which clearly defines the nature and extent of procedures that an auditing firm must employ to detect fraud.... Such a standard would ... protect auditing firms from legal liability when the PCAOB-prescribed procedures have been reasonably performed. (U.S. Chamber of Commerce, 2006, 10)

This last quote highlights the question of the definitions of negligence and recklessness. It would be theoretically possible to allow for the current standards of liability and still achieve the socially optimal level of audit if regulators could define with sufficient detail the appropriate standards of conduct that would lead to socially efficient levels of auditing. If auditors deviated from that standard, they could then be held liable. This has, generally speaking, been the strategy in the U.S. to maintain appropriate levels of auditing.

The strategy has been deeply flawed, however. A major problem is that auditors themselves have great power over the definitions of audit standards (at least until the introduction of the PCAOB). As the next section demonstrates, there have been consistent efforts, often employing the expectation gap rhetoric, to keep standards low. Furthermore, there are strong incentives on the part of auditors to define negligence and recklessness standards in terms of procedures performed, rather than in terms of a skeptical attitude *combined* with appropriate procedures.

This allows auditors to shift their focus from an incentive to find fraud by whatever creative means they can come up with to generating volumes of material that help justify a future claim that they acted with due care while remaining relatively indifferent to whether the procedures actually result in effective and efficient fraud detection. An extreme example of this may be auditors' interpretation of Section 404 in Sarbanes-Oxley, the new requirement that they audit internal controls. Auditors have, in many eyes, gone overboard by auditing extensively internal controls over even the smallest transactions even to the exclusion of effectively identifying opportunities for executive management to commit fraud. It may be the case that they are simultaneously over-auditing and under-auditing: over-auditing in terms of

the number of hours spent on irrelevant transactions and under-auditing by still resisting the necessary skepticism of executive management to identify managers' overrides of controls.

In a similar vein, the response of the profession to ZZZZ Best, one of the audit failures discussed in Chapter 7, as seen in two "lessons learned" articles in professional journals helps support this prediction of a focus on adding procedures rather than intent to find fraud. The articles do not focus on how to encourage common sense skepticism, such as offering rewards to auditors who uncover inconsistencies in managers' presentations, which may well have sparked the auditors' to pay more attention to the inconsistencies in ZZZZ Best's story. Instead, their focus is entirely on suggesting procedural improvements, which is surprising since the auditors in the case had been aggressive procedurally and were missing instead the skepticism necessary to interpret the results of their procedures.[5]

Stice et al. (1991) consider the lessons from ZZZZ Best and two other frauds, Regina and Lincoln Savings and Loan (both culminated in 1988). The authors find in their examinations of the three frauds a number of similarities. They suggest that auditors can reduce the risk of missing such frauds by "evaluating the reasons surrounding a predecessor accountant's or auditor's leaving, evaluating the basis for a company's fast growth, and conducting careful background checks of key principals" (Stice et al., 1991, 53). These suggestions are certainly good ones, but ZZZZ Best was already an improbable company. If auditors had sufficient skepticism, they would be able to use their judgment as to how best to substantiate their suspicions that something is amiss in a client's financial statements.

Similarly, Wells (2001) focuses on the development of new analytical ratios that have been developed since ZZZZ Best that might have encouraged the auditors to be more suspicious of the company's numbers. Wells reviews work done by Professor Messod Beneish, who developed average ratios between various entries in financial statements for statements that were not manipulated and compared them with the average ratios of statements that were manipulated. Wells then generated the same ratios for ZZZZ Best.

[5]These two articles are representative of the discussions within the professional journals of ZZZZ Best. *Journal of Accountancy* mentions the fraud in 8 articles and *The CPA Journal* mentions it in 4. All are either about procedural improvements or simply mention the fraud in a list of other major frauds in a discussion of the problems the profession is facing. None question the lack of auditor skepticism.

While the details of the ratios are not important for these purposes, their results are summarized here to show how far from the normal relationships between numbers in a financial statement ZZZZ Best's were:

Ratio	Non-manipulators	Manipulators	ZZZZ Best
Days' Sales in Receivables	1.031	1.465	177,622
Asset Quality	1.039	1.254	2.043
Sales Growth	1.134	1.607	3.905
Total Accruals to Total Assets	0.018	0.031	0.064

(Wells, 2001)

These ratios are useful, particularly for detecting more subtle financial statement manipulation, but the numbers issued by ZZZZ Best were so fantastical that again, if the auditors' suspicions were not raised by the evidence they already had, it is not clear that these ratios would have roused them either or that they would not have accepted the story Minkow would have concocted as justification for his phenomenal numbers.

Ideally, the incentives auditors would face would encourage the firms to be continually developing better, more efficient methods of finding fraud, including hiring individuals who are interested in and motivated to find fraud. The safe harbor in due professional care complicates the incentives, even though it seems at first to be more fair. Combining the safe harbor with the incentives discussed in Chapter 7 to audit only minimally, the incentives to "check boxes" rather than audit with the intention of finding something are only enhanced.

Setting auditing standards As discussed in the previous section, the details of auditing standards have significant influence on the legal penalties auditors face in the case of a discovered audit failure. Therefore, auditing standards have been a focus of the profession's attempts to lower penalties. The expectation gap is central to this front, though the profession has lost some ground, at least nominally, as the profession has come under close scrutiny by politicians and regulators. But nominal losses have helped the profession maintain, until the Sarbanes-Oxley Act, essential control over the setting and interpretation of standards. As a result, the interpretation of

auditors' fraud detection responsibilities has not kept up with the evolution of the language codifying those responsibilities.

The first concerted attempt to codify finding fraud as an aspect of auditors' responsibility was made by the Auditing Standards Board in the late 1980s in response to the Savings & Loan scandals. The ASB issued SAS 53 "The Auditor's Responsibility to Detect and Report Errors and Irregularities" in 1988 to head off the threat of congressional action to force auditors to accept more responsibility to find fraud. This standard was a part of a group of nine standards that were collectively referred to as "The Expectation Gap Auditing Standards," where SAS 53 tried to redefine auditors' responsibilities and the subsequent eight standards offered more detailed guidance on how to meet those responsibilities (Guy & Sullivan, 1988).

SAS 53 superseded and earlier standard, SAS 16, promulgated in 1977, which required the auditor to "plan the audit to *search* for material misstatements" (Guy & Sullivan, 1988, 38, emphasis added). The new standard's critical passage assigned the auditor the following responsibilities:

> The auditor should assess the risk that errors and irregularities may cause the financial statements to contain a material misstatement. Based on that assessment, the auditor should design the audit *to provide reasonable assurance of detecting errors and irregularities* that are material to the financial statements. (Guy & Sullivan, 1988, emphasis added)

The major advance in this standard was that the auditor no longer merely needed to search for fraud, she had to do so in a way that offered "reasonable assurance" of detecting material fraud. This is the same standard of responsibility (in regards to both assurance level and materiality) as auditors responsibility to find errors, though one should note that the word "fraud" is not used in the title of the standard (nor in its text), reflecting almost a squeamishness of the profession to address the reality of fraud head-on.

SAS 53 did not provided the hoped-for closing of the expectations gap, however. For example, there were still expectations problems when the Public Oversight Board of the AICPA SEC Practice Section (POB) issued a report in 1993 titled "In the Public Interest." And even though much of that report reflected the practicing auditors' perspective on the issue, it did acknowledge briefly that:

> The principal obligation for closing the gap rests with the profession and that only improved performance and an expansion of its responsibilities can close the gap to the extent necessary if the profession is to serve the public interest and satisfy the reasonable expectations of users of financial statements. (Public Oversight Board, 1993, 33)

To accomplish this, the POB recommends that the "profession improves its standards and practices, including particularly its ability to detect management fraud" (Public Oversight Board, 1993, 34).

A provision was included in the Private Securities Litigation Reform Act of 1995 (PSLRA) that codified auditors' responsibility to "provide reasonable assurance of detecting illegal acts that would have a direct and material effect on financial statement amounts" (PSLRA, 1995, Sec. 301). This provision essential codifies into law the SAS 53 standard, though it does call "irregularities" "illegal acts" instead.[6]

The ASB issued a revised standard, replacing SAS 53, in 1997, to respond to the POB's recommendation and to help bring the auditing standards in line with PSLRA. The new standard, SAS 82, was called "Consideration of Fraud in a Financial Statement Audit." And although some noted its boldness in using the word "fraud" explicitly (e.g. Farrell & Franco, 1999), the title of the standard also takes a step backwards: rather than use the word "responsibility" as had been used in previous standards, the language was downgraded to a mere "consideration." The other innovation of SAS 82 is to require the auditor to consider the risk of fraud throughout the audit, not just at the planning stage. It enumerates the sources of fraud risk, and categorizes them into the same two types of fraud discussed in Chapter 2: fraudulent financial reporting and misappropriation of assets (Mancino, 1997).

Except for its bold use of the word fraud, SAS 82 sends some mixed messages. It was intended to clarify, but not increase, the auditor's responsibility to detect fraud. To do so, "the ASB believed this obligation [to detect

[6]The use of the term "illegal acts" reflects some of the language in the Foreign Corrupt Practices Act of 1977, which was concerned with U.S. corporations involved in various nefarious dealings with corrupt foreign officials. The use of the term, therefore, may indicate a responsibility for providing reasonable assurance that corporations are complying with the FCPA as well as avoiding the more straight-forward financial statement fraud that is the focus here.

fraud] was so central to an audit that a responsibility statement should be placed in the general standards ... to heighten the auditor's overall awareness throughout the audit" (Mancino, 1997, 32). That responsibility statement is:

> The auditor has a responsibility to plan and perform the audit to *obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud.* Because of the nature of audit evidence and the characteristics of fraud, the auditor is able to obtain *reasonable, but not absolute, assurance* that material misstatements are detected. The auditor has no responsibility to plan and perform the audit to obtain reasonable assurance that misstatements, whether caused by errors or fraud, that are not material to the financial statements are detected. (AICPA, 1997)

The main statement of responsibility, stated in the first sentence, is a paraphrase of the earlier SAS 53, albeit one using the word fraud. This first sentence limits the responsibility to a reasonableness standard and a materiality standard (as is appropriate). Since the last two sentences add no new information, they serve to emphasize the limitations of the auditor's responsibility, thereby undermining somewhat the new focus on fraud. Given the standard-writers' desire to clarify the standard, the redundancy of the second two sentences would normally not merit remark if it were not for the profession's deeply-rooted resistance to taking responsibility for fraud discovery. The point that needs to be clarified to the profession is that they have a responsibility to provide reasonable assurance that the financial statements are free of fraudulent representations. The profession does not need additional reminders of the limitations on that responsibility. Using the professional standards to remind the public that it must be reasonable in its expectations seems an ineffective means of communicating with the non-accountant public.

There has been another round of revisions to the auditing standard on auditors' responsibility, SAS 99, implemented in 2002. It does not change auditors' responsibility to find fraud from that stated in SAS 82. Instead, it further "establishes standards and provides guidance to auditors in fulfilling that responsibility, as it relates to fraud" (AICPA, 2003, 105). Notably, it establishes skepticism as a professional requirement: "Due professional care requires the auditor to exercise professional skepticism.... Because of the

characteristics of fraud, the auditor's exercise of professional skepticism is important when considering the risk of material misstatement due to fraud" (AICPA, 2003, 107). It also explicitly identifies management as particularly likely to be involved in perpetrating material fraud. The statement also sets out particular common-sense steps auditors are to follow, such as having "brainstorming" sessions at the start of each audit about how the "entity's financial statements might be susceptible to material misstatement due to fraud, how management could perpetrate and conceal fraudulent financial reporting, and how assets of the entity could be misappropriated." (AICPA, 2003, 107). The implications of this iteration of the profession's attempt to accept responsibility for finding fraud will be discussed in the context of the discussion of post-Enron reforms in Chapter 9.

This slow evolution towards a more definitive statement of auditors' responsibility to find fraud supports the argument made above that the expectation gap is evidence of a breakdown in competitive behavior—at least along the lines of audit quality. If audit firms that were very good at finding fraud were rewarded by the market, there would be no need to establish a standard, since firms would be vying to best each other in their reputations for toughness. We would not see the current behavior of fierce fighting to keep responsibilities minimal nor would we see firms choosing to interpret each new standard as broadly and loosely as possible.

Furthermore, even as there is some incremental progress on forcing auditors to take responsibility for finding fraud, there is little progress on the more general issue of improving the quality of information disclosed. This becomes a particularly important point, discussed in the next section, because auditors have some measure of control over what constitutes fraud as opposed to legal, but still misleading, treatments of various accounting issues. As one accountant put it:

> It might be well to point out ... that the auditor is not required to state that the principles followed were proper or that, in his opinion, the financial statements give a fair presentation. Thus, it is possible that the individual auditor may actually believe that the statements are not fairly presented. Nevertheless, as long as the accounting practices followed by the company fall within the so-called "generally accepted accounting principles" an unqualified opinion may be rendered. (Hennessy, 1961, quoted by Briloff, 1970, 606)

Influencing GAAP Another front in the effort to limit legal liability can be found in the history of standards setting efforts. The model in Chapter 4 oversimplifies the discussion of a company's outcome by only recognizing two states: good and bad. In reality, there are three: the true outcome is good; bad but can be accounted for technically correctly under GAAP in such a way that it appears to be good; and bad enough that non-GAAP compliant accounting is the only way to make it appear good (i.e. fraud is required).[7] In other words, there is significant flexibility within GAAP for quite different possible methods of accounting for the same item or event. This is necessary because the complexity of the real world may mean that outwardly similar transactions have very different economic implications in different contexts, so codifying accounting rules to the level of detail that would take into consideration all of the possible situations would be an incalculably complex task.

The flexibility in reporting standards leaves open the option to the manager of technically correct but economically misleading reporting. It also offers auditors a way to accommodate their clients' wishes while avoiding potential liability: suits against auditors in particular are much harder to bring if the financial statements are technically correct (Bonner et al., 1998; Carcello & Palmrose, 1994; Palmrose, 1987; St. Pierre & Anderson, 1984). Therefore, auditors have an incentive to ensure that the standards allow for as flexible reporting as possible. And since they have significant, albeit diminishing, influence over the standards setting process, that latitude has been built into the system.

This is not to say that the standards setting process has not involved conscientious members of the profession looking for the most economically accurate way to report a company's position—simply that they have a difficult time winning in arguments that have high stakes for important clients.

This tension was quite visible in a ferocious debate within the profession during the 1950s and 1960s about whether flexibility or comparability should be the dominant goal of GAAP. Flexibilty, as discussed above, would allow for wide variations in reporting choices, and would depend on the good judgment of management and auditors to ensure that the flexibility is not abused. Comparability would set more restrictive standards that would help

[7] This is, of course, only one layer of the oversimplification of the model being addressed. The whole notion of one "true" outcome may in itself be an oversimplification.

make a line in a financial statement more directly comparable to similar entries in a competitor's statement.

Both sides of the debate had legitimate arguments for why one or the other should predominate. The argument for flexibility was primarily that it allowed for the conveyance of the most economically meaningful reporting. The argument for comparability was that users of financial statements were willing to sacrifice a certain amount of nuance for the transparency of uniform standards. It was also thought to be better at preventing abuse of the standards.

An early example of the tension between flexibility and comparability is found in an exchange of memos at LRB&M in 1928. An Office Bulletin draws the New York office's attention to various rules for valuation in *Montgomery's Auditing*.[8] In particular, it states that if a discount offered is less than 2% it can be treated as a cash discount, otherwise it must be treated as a trade discount. One member of the firm, a Mr. Ambler, is unhappy with this arbitrary distinction:

> It is my opinion that this statement places a restriction on the practice of auditing, in that it disregards the facts in particular cases, and also that it requires the preparation of financial statements which will show the financial condition of a trade or business which are not in accordance with the facts....
>
> Based on the above [examples of instances where Mr. Montgomery's rules are not appropriate], I am of the opinion that the auditor should be guided by the intent of the parties, the facts and the particular custom within the trade or business. (Ambler, 1928).

Mr. Ambler sets out the argument for flexibility quite clearly: intent, facts, and custom are all important determinants to the appropriate determination of the financial condition of a business. The reply he got, however, shows some of the benefits of a uniform standard:

> I appreciate the careful consideration you have given to this subject, as indicated in your memorandum of June 9. However, after thinking

[8]This dispute happened before there was any attempt to codify accounting standards across the profession. Instead, each firm used its professional judgment. LRB&M published *Montgomery's Auditing*, an audit textbook (that is still in use—much updated—today) that set forward its approach to accounting standards.

> it over, I am of the opinion that this is one of those cases where a line must be drawn somewhere and that the rule laid down in Colonel Montgomery's book is a practicable one which may well be followed. (Staub, 1928)

Leonard Spacek was the fiery leader of the comparability movement within the profession. In a letter to George May, the standards bearer for the flexibility movement, Spacek wrote with his typical lack of diplomacy:

> I do not want to see accounting principles laid down that are not binding on the accountant. Without that, we do not have accounting principles ... we do not even have accounting. We have a farce to which we try to give substance by making it mysterious and impossible for the public to understand. (Spacek, 1955, quoted in Brewster, 2003, 109).

May and Price, Waterhouse in general took the lead in the other side of the debate—the one that has won more battles than it has lost. Bevis lays out their philosophy in a letter to D.E. Browne of Lockheed Aircraft Corp., a supporter of the firm's position:

> I do not object to increasing the burden of proof on a company or its CPAs for following a method which departs from the consensus, but *I think it vital to our free enterprise system and its financial reporting that the final responsibility for a company's reporting rests with the company that issued the financial statements and the accountants who certified them.* I agree with you completely that, under this system, financial reporting is better across the board than if it followed the common rule book, and I am positive that innovation and progress must always be greater under such decentralized responsibility than if rules are made centrally. This is hard to get across when there are the inevitable few managements who are willing to come close to dishonesty in their financial reporting and accountants who will go along with them, but I believe that we must continue to emphasize the good performance and the progress of the large majority. (Bevis, 1965)

Bevis makes a nod to the weakness of the flexibility side of the debate—its increased vulnerability to abuse—but sees the value of flexibility as too great

to sacrifice to prevent those abuses. Bevis also raises an additional argument for flexibility that was commonly made: a centralized, uniform standards setting process would not allow for the innovation and responsiveness necessary for the rapidly evolving business world.

Bevis's points all raise valid issues. But flexibility may not be a viable option if the auditor has too strong an incentive to allow management's accounting judgments to stand, even if they are not economically justifiable. The conflicts the auditor faces are made clear in following 1988 proposal offered to Marsh & McLennan to become their auditor:

> Every Price Waterhouse audit is led by an engagement partner who has the responsibility and the full decision-making authority to implement this approach and achieve our service goal. *We believe that partner autonomy maximizes creative and individualized client service.* It is this initiative and innovation in serving our clients which allows the most expeditions means to effective problem-solving. We stand alone among the major firms in the scope of authority we give our engagement partners.
>
> The engagement partner is personally involved in every aspect of the audit, from initial planning to ultimate completion. *Both quality and distinctiveness of audit service depend heavily upon this personal involvement, which strengthens dedication to client service and enhances our ability to identify and fulfill client service needs.*
>
> Accounting and financial reporting, although based on accepted principles, remains as much art as science; and auditing, although based on accepted standards, continues to rely heavily on professional judgment. Our view is that neither can be done appropriately without a comprehensive understanding of a client's business and operating environments. Only then can risks be identified, audit efforts directed effectively and satisfactory accounting decisions reached. (Price Waterhouse & Co., 1988b, emphasis added)

Here the connection between auditor autonomy and creativity, along with the reference to an emphasis on "client service," are worrisome. While far from explicit, this passage reads as a veiled promise to work with management to find creative accounting solutions.

In the same proposal, Price, Waterhouse went further than selling a creative approach to accounting. It also touted its influence on the standards

setting process, despite this being no longer in an era where the profession had complete control over the process:

> Through our active involvement in such forums as the Emerging Issues Task Force (EITF) of the FASB, the Business Roundtable and the Financial Executives Institute, our National Office Accounting Services Department is very involved in the process leading to the development of accounting standards. As the FASB releases discussion memoranda and exposure drafts of forthcoming statements or bulletins, our Accounting Services staff reviews and circulates analyses of the drafts to all professional staff. The information is then discussed with those clients that could be affected by the proposals. *In this way, the firm and its clients can respond to FASB proposals prior to the final deliberation process.* Final statements are researched and communicated in the same way, with emphasis on anticipating implementation issues and opportunities. In this way, our clients are kept advised of important pending events that may dramatically affect their financial reporting practices. (Price Waterhouse & Co., 1988b)

By offering guidance to their clients while accounting standards were being considered by the FASB, Price, Waterhouse helped them understand the implications of the change on their desired accounting treatments. The firm then helped clients essentially lobby the FASB for their desired outcome.

Marsh & McLennan was not the only proposal that touted the firm's lobbying abilities. The following excerpt from their proposal to the Fireman's Fund enumerates specific activities, which seem to be predominately obstructive, that they have done in the past:

> We also take a leading role in the setting of accounting standards. We do this by participating on various formal task forces of the AICPA and FASB, including the Emerging Issues Task Force. Some recent examples of these activities include:
>
> - Our representative on the FASB 96 task force has been instrumental in convincing the FASB to reconsider issues of complexity and deferred tax debits.
> - We helped an industry organization respond to regulatory proposals concerning accounting for interest rate swap fees and hedges.

Our advocacy led to significant changes in the proposal and the continuing delay of its issuance in final form.

- We encouraged cessation of a proposed 1988 FASB Technical Bulletin on foreign currency and hedging issues that would have limited hedge accounting by many of our clients. We succeeded by meeting privately with FASB staff members, writing about the issue and chairing a seminar for Board members and staff.
- Our capital markets specialists persuaded the FASB's Emerging Issues Task Force to reconsider an initiative to set specific percentage thresholds for hedge accounting. We succeeded in this effort via our leadership role on a FASB hedging correlation working group.
- Outspoken support of economically appropriate reporting of the results of foreign exchange and interest rate risk management activities. Until such time as the FASB or the SEC issues formal guidance, we will continue to support economically appropriate reporting. (Price Waterhouse & Co., 1988a)

By arguing for unrestrictive rules, the firms get two benefits: first, they are selling an additional service to their clients; second, they reduce the frequency with which clients make material misstatements. The majority of the profession persisted in this tactic despite the fact that it infuriated many users of financial statements and frequently drew fire from Congress and the SEC.

The profession's intransigence frequently made those outside the profession apoplectic. An earnings analysis firm published a "Weekly Staff Letter: A look behind reported earnings" in 1965 complained that financial reporting in the 1960s was as bad as it was in the years before the 1929 crash:

> ...Following the 1929 crash and its regulatory aftermath, shareowners [sic] had reason to believe that, in the future, much greater reliance could be placed on reported earnings. For a number of reasons, however, even today published income statements cannot be accepted at face value.
>
> Although outright misrepresentation is now rare, trends in accounting practices and tax laws have widened management's latitude in

> selecting the policies which determine the amount to be reported as 'earnings per share'. As a result, company reports are often just as hard to evaluate as they were back in the roaring Twenties.... (David L. Babson & Co., 1965)

The newsletter is sharply critical, but the following letter from a reader of the newsletter to an accountant at Price Waterhouse expresses the full frustration some felt with the profession:

> ...You give unqualified opinions too freely, and dodge and weasel behind that awful word 'materiality.' I would guess that all the companies mentioned in this weekly letter [as examples where lack of comparability had caused problems] had unqualified opinions in the years involved and, if so, it's a pretty sorry state of affairs.
>
> ...
>
> PS: A couple of afterthoughts.
>
> Babson is really pretty gentle on you in this [news]letter! They didn't mention
>
> (a) the mess on how to properly report the current costs for future pensions! Some companies are fully funded, others are not at all, and yet I suppose both types get unqualified opinions.
>
> (b) the sloppy policy of putting 'exceptions' to good accounting in footnotes and then giving an unqualified opinion on the theory of 'Oh well, at least we prevailed on the company to disclose it.' (Wood, 1965)

Ironically, both items in Mr. Wood's postscript are still unresolved problems today that continue to cause much anguish for the users of financial statements.

Loss of professional reputation

In addition to legal penalties, the other major bulwark against auditor collusion, tacit or explicit, is the value of the auditor's reputation. This theory was articulated clearly in the specific case of auditing by DeAngelo (1981), but

has been understood by the profession since its origins and has been developed for more general applications by economists (see, for example Shapiro, 1983; B. Klein & Leffler, 1981). While this theory is compelling and supported in some circumstances by empirical evidence, it is not clear to me, after considering the history of the profession, that we properly understand how reputation acts as a controlling mechanism on the behavior of the profession or as a spur to competition on audit quality.

Throughout the PricewaterhouseCoopers archives, there is clear evidence that the firms' reputations were considered vitally important to their success. But what isn't so clear is what the reputation is for: is it for tough audits or for some, more amorphous "professional excellence"? The firms need to maintain some baseline reputation for honest auditing, as was made clear by the collapse of Andersen due to the dramatic and sudden revaluation of its reputation, but it is not clear how events affect more incremental changes in reputation.

Even as Andersen's experience is an object lesson in the value of reputation, there are plenty of counter examples. KPMG narrowly avoided a criminal indictment in 2005, albeit for the sale of illegal tax shelters not for accounting fraud, by agreeing to a deferred prosecution deal with the Justice Department (Johnson, 2005a). While many were nervous that KPMG would meet the same fate Andersen met, it seems to have suffered no significant long-term harm to its client base. There is no reason why the market would show as much restraint as the Justice Department did if its primary concern were reputation. More generally, there have been wave on wave of major audit failures suffered by clients of the large, reputable firms since at least the 1960s. There is significant cynicism within the investor community about the value auditors add. This is inconsistent with the primacy placed on audit reputation in DeAngelo (1981) and others. The nature of the role reputation plays in the auditors' incentives deserves a closer look, therefore.

The public has very little information on the quality of individual audits and only limited ability to interpret the information conveyed about the audit firm in the instances of audit failures. It is possible therefore that, in the absence of better information about the audit intensity, the market might equate excellence in other areas that are easier to observe to higher likelihoods of audit quality. As a result, the reputation that matters to the audit firm could be a function of both its audit-related reputation signals

and its reputation for excellence in other areas.

Originally, the firms clearly thought that fighting law suits were a way to enhance their reputation. For example, Herman Bevis wrote a reporter about Price Waterhouse's legal portfolio and strategy: "Two claims have been asserted against us in the last three years. In both cases, we reviewed our audits and concluded that they would stand up under any test. We then told the plaintiffs that we owed them nothing and that is what they ultimately got—nothing." (Bevis, 1966a). A 1965 editorial in the *Journal of Accountancy*, the AICPA's official journal, also calls for fighting cases in court to clarify the case law: "...the best solution may well be to fight enough cases through the courts to clarify the currently ambiguous law of accountants' liability. The American Institute of Certified Public Accountants will advise any member who intends to resist an unjust claim." (Noyes, 1965)

But some of the legal battles fought in the 1960s did not turn to the accounting profession's advantage, and the profession's strategy seems to have changed since. While I found no internal discussions about changing legal strategy in response to any particular case, it seems likely that the Continental Vending case played a role in the profession's decision to switch strategies and settle all cases rather than allow them to play out in the courts.

The president and chairman of the board of Continental Vending Machine Corporation, Harold Roth, was also an officer and major stockholder of Valley Commercial Corporation, a finance company founded by Roth to finance various operations of Continental and other vending machine companies. It also, for at least five years, loaned money to Roth personally to finance his personal stock market speculations. Continental was a major source of working capital for Valley, and Continental held a "Valley Receivable" account on its balance statement.[9]

Roth had been able to repay his debts to Valley over most of the period in question, and Valley, in turn, paid down most of its receivables at year's end, making it the object of little attention from Continental's auditors, the firm of Lybrand, Ross Bros. & Montgomery. But in 1962, Roth had not paid back his debts by the year end and Valley was not able to pay down its receivables as far as normal when the books were closed. Instead, the Valley Receivable balance was over $3.5 million. The Lybrand auditors insisted on

[9]The facts of the case are taken from Kuhar (1971)

a much closer inspection of Valley's audited financial statements in order to determine the collectibility of the receivable. After some delays, Roth told the auditors that while Valley could not currently repay Continental, Roth owed a similar amount to Valley and could post adequate collateral to cover the debt. Again, after some back and forth, Roth posted collateral that was valued at approximately $3.5 million and Lybrand accepted the validity of the collateral and gave the Continental statements a clean opinion.

The hitch in all of this was that much of the collateral posted was Roth's equity in Continental. The company was doing very poorly and once the 1962 statements were mailed, the value of the Continental equity posted as collateral plummeted and the loan became uncollectible, thereby reducing still further Continental's financial situation. The company quickly declared bankruptcy and an SEC investigation was launched. The Justice Department charged Roth and three auditors from Lybrand (two partners and a senior associate) of conspiracy to defraud and mail fraud. Roth pled guilty and turned state's evidence.

The case against the auditors hinged on the question of whether they should have insisted on the disclosure of Roth's borrowings from Valley in the balance sheet of Continental, and if their lack of such disclosure constituted criminal conspiracy to commit fraud. The case was an important test of auditors' responsibilities, since none of the activity was explicitly illegal and, on the face of it, the loans were adequately covered with collateral and therefore appropriately accounted for in the Continental balance sheet. But the disclosures were sufficient only in a legalistic sense: even though Roth's borrowings were, in a strict sense, legal, they constituted a clear abdication of his fiduciary duty to Continental's shareholders. Further, the collateral that was posted was largely made up of equity in Continental, which was valued according to market prices that were unlikely to hold their value should the market be alerted to the mismanagement and de facto embezzlement that was currently going on at the company. While, under normal circumstances, auditors are not expected to foresee the future, common sense in the specific circumstances would lead to the conclusion that there was, at the least, serious doubt about the real ability of Roth to cover his debts, doubt which should have been disclosed to shareholders.

The accounting profession lined up in support of the three auditors, and the defense called an impressive panel of eight expert witnesses to testify

on their behalf. The group corroborated the defense's claim that professional standards did not require the disclosure demanded by the government. Seven of the eight went as far as to say that such disclosure would have been an improper usurpation of "a function and responsibility of management" (Kuhar, 1971, 591).

But their argument did not, in the end, impress the jury or the 2nd Court of Appeals. The court of appeals denied that meeting professional standards was the only measure of auditors' responsibilities:

> But it simply cannot be true that an accountant is under no duty to disclose what he knows when he has reason to believe that, to a material extent, a corporation is being operated not to carry out its business in the interest of all the stockholders but for the private benefit of its president.... If certification does not at least imply that the corporation has not been looted by insiders so far as the accountants know ... it would mean nothing, and the reliance placed on it by the public would be a snare and a delusion. (425 F.2d at 806)

The Supreme Court denied a writ of *certiorari* on March 30, 1970, upholding the appeals court decision and thereby "putting the profession on notice that it could not rely solely on compliance with standards as a defense in litigation." (Olson, 1982, 16). This decision eroded the profession's monopoly in defining the standards it would hold itself to, and caused enormous concern within the profession.

And while the profession remained absolutely convinced that it was in the right, it also began to realize that the public insistence on the validity of standards that made no intuitive sense to non-CPAs might be harming their reputation. In a memorandum by Herman Bevis on January 8, 1968, entitled "Against what standards should an expert measure defendants' performance in a criminal trial", Bevis attempts to find a way to allow for CPAs to testify as expert witnesses in a criminal trial on behalf of a defendant CPA, saying that nothing he did was criminal, without harming the profession's reputation by making it appear that their standards are so low. (Bevis, 1968).

Similarly, in the annual report to partners in 1971, the Price Waterhouse National Direction, H.P. Hill, warned about the changed reputation of accountants:

> In the reexamination of the basic tenets of our society that has occupied the minds of the American public for the past fifteen years the accounting profession has not been overlooked. Unlike other institutions, however, the criticism does not come from the unwashed generation but from our contemporaries who look at us from established positions in other fields. The attitude of the financial press is hostile, that of trial lawyers opportunistic, of insurers apprehensive, of general business antagonistic, and the general public seems cynical. In general, the accounting profession is in a period where it has to justify its very existence. (Price Waterhouse & Co., 1971)

After the negative publicity that came from the Continental Vending case and others of the same era, the profession may have realized that it could better "justify its very existence" without the glare of publicity or the precedence-setting decisions of non-accountants that comes with fighting battles in court, for almost all suits against auditors have been settled out of court since the late 1970s.[10]

Of course, if one pursues a policy of not fighting cases in court, the risk of "frivolous" or "speculative" suits increases, since even meritless cases can win small settlements if the defendant is leery of going to court. And if a firm is more worried about its reputation than the outcome of any one case, it cannot commit to fighting "frivolous" cases and settling those with merit, since its decision to settle will become an implicit admission of guilt.

But while a strategy of always settling increases direct legal costs by increasing the number of suits, it can create a long term, political advantage on a number of fronts. It ensures that the facts of all cases are left ambiguous, making it easier to put the auditor's role in the case in the best possible light. It helps avoid the risk of courts arbitrating the reasonableness of the profession's standards, keeping the monopoly on standards setting in the profession's hands.[11] Finally, it makes it much easier—because there will

[10]It should be noted that there were broader movements towards the use of settlements, particularly in class action suits, that were happening at the same time. The audit firms' change in tactics, therefore, may be just a symptom of that broader shift. The fact remains, however, that since that period, there has been almost no precedential decisions about auditors' responsibilities coming out of the court system.

[11]This holds even in the light of the Continental decision that auditors can be held to standards other than their own, since those other standards are never established by court precedence and therefore cannot readily influence settlement negotiations.

inevitably be persuasive anecdotes of ridiculous charges made in "strike" suits—to make the case to the public and to politicians that the profession is a victim of a liability crisis and deserving of protection.

This movement out of the courts has helped the profession obscure the specifics of audit failures, making it more difficult for outsiders to pinpoint a firm's failure rate, but one can even argue that a reputation for audit toughness matters very little. The entire profession arguably has had an increasingly poor reputation since at least the mid 1960s when the first major wave of post-war financial scandals broke. Since then there has been little respite from public criticism and scrutiny. At the same time, the firms have exploded in growth and influence, suggesting that their success is not based solely on the absolute level of their reputation for good audits.

What might matter more is the firm's relative reputation for good audits. Andersen collapse could be explained as a result of the firm suddenly appearing *worse* than the other firms.[12] Firms may instead worry about maintaining a reputation at least as good as their competitors, and calculate the cost and benefits of trying to pull ahead of their peers in one dimension of their reputation or another. Because the signal for audit quality is relatively weak, firms may not feel that it is worth much to increase quality marginally, since the effect will likely be washed out by the "noise" in the signal.

As discussed in Chapter 3, the audit industry is quite concentrated, opening up the possibility of oligopolistic behavior. Whether this has led to inflated prices is not clear, but the industry has displayed cartel-like behavior in other aspects of competition. There is some evidence that the large firms have coordinated their activities that might affect their relative reputations for audit excellence. In his history of the AICPA during his tenure as its president, Olson (1982) recounts the story of Coopers & Lybrand breaking ranks with its peers and agreeing to do "reviews" (i.e. abbreviated audits) of quarterly statements, for which audits are not required. The rest of the industry had been reluctant to offer this service, despite demand for it, out of liability concerns. According to Olson, the rest of the large firms were furious with Coopers & Lybrand for getting ahead of the pack. In response to the spat, the AICPA facilitated regular meetings with largest firms to ensure no

[12] Although the firm had a series of closely spaced and highly publicized audit failures, Eisenberg & Macey (2003) show that in a slightly longer run the firm had a similar record—or slightly better one—than the rest of the Big Five.

one got "ahead" of the rest of the profession.

Furthermore, audit reputation is probably heavily influenced by the rate of audit failures experienced by the audit firm. In other words, the firm's reputation is largely influenced by the rate of misstatements that are discovered after the statement has been issued to the market. As was seen in Chapter 4, this rate is the joint probability of a misstatement being introduced, the auditor not causing it to be corrected, and the market discovering the misstatement later. Audit intensity contributes, at least in the compliant manager scenario, to the auditor's ability to force management to issue truthful statements. But auditors can also influence the audit failure rate by choosing better clients, defined as those clients with a lower likelihood of issuing false statements in the first place. Particularly for a reputable firm, for whose services there is great demand, the auditors may exercise some discretion over which clients they agree to take on to ensure that their rate of audit failures remains unremarkable. Each audit firm presumably would like to have a portfolio of clients that is full of companies with low risk of financial statement irregularities and who pay a large fee.[13]

Of course, the low risk companies are presumably aware of their low risk status and therefore are able to bargain their fees lower. Auditors have more leverage to charge higher fees to those companies that present higher audit risk. Presumably, profit-maximizing audit firms would select clients guided by similar calculations as those used in modern portfolio theory (Markowitz, 1952; Tobin, 1958) to build a diversified portfolio of risk. They might also try to actively hedge clients against other clients whose risks move in an inverse relationship.[14]

The Los Angeles Office of Price, Waterhouse implicitly recommends a portfolio management approach to increasing the firm's profitability in its

[13]This issue was also touched on in Chapter 5 in the discussion of problematic assumptions made by empirical researchers. The ability of reputable auditors to select a "better" portfolio of clients can sustain a reputation even if their auditing is of poorer quality than their less reputable competition.

[14]Hedging audit clients might take a number of forms. Since audit failures seem to track market downturns (e.g. managers are most likely to manipulate statements when they can no longer keep up with market expectations, as happens in softening markets), auditing clients in courter-cyclical industries might help manage risk. Other hedges could take the form of have clients who are sensitive to different types of accounting issues—such as diversifying across clients who are most likely to manipulate accounts receivable and those who are likely to manipulate valuation of intellectual property.

1955 letter to the Business Research Committee: "We suggest ... that present clientèle be reviewed and unprofitable jobs eliminated or work standards revised to permit more efficient and effective work with the view of providing manpower for desirable new business." (Price Waterhouse & Co., Los Angeles Office, 1955)

The 1986 "Enhancing Firm Profitability" Price, Waterhouse report discusses clients in terms of portfolio management explicitly:

> If we spend time getting the right kind of revenue-producing new clients, shouldn't we devote some time to look at the clients currently in our portfolio, and evaluate the profitability and revenue production being generated by those clients?
>
> Our new business ventures, the SPUs [Specialized Practice Units], are bringing in lots of new clients; each one should be reviewed, and in a like manner, each of our current clients should be looked at, tested against the profitability model used in each local office, and a determination made as to whether or not that client ought to continue in our portfolio. (Price Waterhouse & Co, 1986)

While this does demonstrate that the firm thinks of their clients in portfolio terms, it is also clear that the firm is more successful in balancing the portfolio through new engagements, rather than shedding old ones who no longer meet the firm's needs.

The problem of balancing the risk and reward is exemplified in a Price Waterhouse Executive Letter from 1961. Throughout Price Waterhouse's history, it has been considered *the* auditor for the most established, largest companies. It consistently audited the largest number of Fortune 100 companies. But it has also agonized over missed opportunities to get involved in new, growth industries and how to capture more market share without tarnishing their white glove image:

> Undoubtedly many of the current speculative issues will furnish the means for a company to grow and to become a successful company of substance. On the other hand, some ventures, because of ill-conceived planning, ineffective management or other reasons, will either stagnate or fail. Obviously, we would not wish the firm's name associated with any filings of the latter type, but at the same time would very much

> like to have as clients the successful type. (Price Waterhouse & Co., 1961)

If reputation for audit effectiveness can be managed through client selection and "cartel" behavior, both auditors' and managements' interests are being served. It allows the audit firms to focus less on the audit and to compete on the other aspects of their service—aspects that are valued directly by the managers to whom they are selling.

Loss of personal reputation

Even if the legal penalties against auditor collusion are not adequate and if the firm's reputation is not as important as it initially appears, many believe that auditors would never collude with management to commit fraud because of their personal ethics. Indeed, the stereotype of an accountant is of someone who is particularly trustworthy and upstanding. It is easy to see that some "bad apples" may exploit that trust, but not that a profession full of upright, trustworthy people would systematically undermine their ethical obligations.

George May, in a 1956 precis for an interview with John Carey, the editor of *The Journal of Accountancy* discusses the classic ethical obligations of an auditor:

> The fundamental requisite of an accountant is intellectual honesty.... [T]here is no call on its members to be altruistic but only a call to observe high standards of rectitude and competence.
>
> ...The functions that justify the grant to accountants of a privileged status is that it affords protection against (a) embezzlement (b) misrepresentation in matters of finance.
>
> This function presents one high obligation: a duty to the unknown investor that is superior to the obligation to the immediate client.... (May, 1956b)

Yet, the profession has moved away from this stand through one piece of intellectual dishonesty: the expectation gap. Generations, now, of accountants have been schooled in the gap, and while most probably still observe

high standards of personal rectitude and competence as an insightful business advisor, they do not accept that their privileged status derives from their obligation to protect the unknown investor against fraud perpetrated by their immediate client, the manager. The expectation gap, born out of political self-interest, has permeated the identity of auditors, causing a cultural shift and allowing them to be blind individually to the fundamental conflicts of their behavior with their obligations to public duty. If an auditor is not supposed to look for fraud, she need suffer no shame should she not find it.

There are three tantalizing memos by Herman Bevis, of Price Waterhouse, from the 1960s, in the PricewaterhouseCoopers archives that worryingly anticipate the shift of the use of the expectation gap from shrewd lobbying tactic to cultural identity. Bevis was afraid that the audit staff may begin to believe in the expectation gap and lose their skepticism, when Bevis wanted auditors to maintain the capacity to find fraud while still convincing the public it was not feasible. Because they are so extraordinary, these memos are quoted extensively in Appendix C.

The first memo, written in 1961, is from Bevis to A.C. Tietjen, a high-level partner within the firm who was charged with writing a "Guide to Practical Business Approach Auditing": the product of the strategy shift, discussed above, from auditing as primarily a monitoring activity to one that provides more value to management. Bevis was writing Tietjen to object to wording in the draft guide that implies auditors have only a limited responsibility to find fraud. The underlined emphasis is original to the memo:

> Reference is made in two or three places to "recognition of the auditor's limited responsibility for fraud detection." While it is proper that the firm and other CPA's educate the <u>outside</u> world as to the limited opportunities for the auditor to detect fraud in the normal recurring examination, I have serious doubts about the advisability of dwelling on this in our <u>internal</u> instructions and advice to our staff. (Bevis, 1961)

Bevis is worried that "our staff members in the field do not appear to be as alert to the possibilities of uncovering fraud as they should be, that they may believe that opportunities for the discovery are never presented to them and, even worse, (based upon the disclaimers to outsiders) they should dismiss

the thought from their minds." He goes on to discuss the ways in which auditing procedures, when combined with skepticism, are effective in finding most fraud.

It is clear in the next excerpt, from the November 7, 1962, Executive Letter for Partners and Managers, that Bevis is still worried that staff will begin to believe that recent public victories that limit the explicit responsibilities to find fraud also limit their real responsibilities:

> Although AICPA Statement on Auditing Procedure No. 30 provides a necessary clarification of the responsibilities of auditors, we must guard against letting it be used to excuse a casual attitude toward detecting defalcation....
>
> [Those] reviewing the internal controls and carrying out the audit programs [need] to record all suspicious circumstances in the working papers and for managers and partners, in reviewing the papers, to be alert to the "red flags"; also clients' suggestions that we deviate from normal auditing procedures should be viewed with suspicion. (Price, Waterhouse & Co., 1962)

Five years later, in 1967, Bevis is still concerned that staff will believe their external communications with clients and the public about their responsibilities. But he is also troubled with how to communicate his concerns to the staff without jeopardizing the firm's ability to claim the lower standard in court. He wrote a letter to John Hupper, of Cravath, Swaine & Moore, asking him to review a statement Bevis would like to issue to the Price Waterhouse staff:

> We are on the horns of a dilemma. On the one hand, we do not wish to do anything which would be holding out to clients and third parties that our annual examinations have the detection of fraud as a planned objective. On the other hand, our staff can convince themselves, because of these statements to external parties, that they should not be alert to fraud clues during the course of their work. It is imperative that we dispel the latter notion in policy statements and in action. I know that we run a risk of having anything in writing possibly used against us, but I am inclined to run this risk in the belief that the benefit of exhortations to the staff will be greater. (Bevis, 1967)

The enclosure of the draft statement first details how the auditor's responsibility to detect fraud is communicated to clients. The statement then draws the following distinction:

> ...WE MUST MAKE A SHARP DISTINCTION BETWEEN UNDERSTANDINGS WITH CLIENT, ON THE ONE HAND, AND THE INQUISITIVE APPROACH OF THE TRUE AUDITOR, ON THE OTHER.
>
> In any examination of financial statements, we must always keep in mind that fraud may exist. Accordingly, the firm expects every partner and staff member to be constantly alert for clues as to possible defalcations and other irregularities. Many of our auditing procedures afford an opportunity to uncover such clues, and our investigations of internal controls often disclose weaknesses which could make them possible.... (Bevis, 1967)

Note that Bevis displays great confidence in the ability of current procedures to be effective in finding fraud. He says that many—not a few—of the procedures afford the opportunity to find fraud and that often—not occasionally—the investigations of internal controls disclose weaknesses that could make fraud possible.

These memos suggest that the expectation gap was not necessarily inevitable, and was certainly not always believed by auditors in private. Clearly, however, Bevis' concerns about the difficulty of maintaining two different stances on auditors' responsibilities were borne out, and the benefits of adhering to the expectation gap stance won out over professional obligations to the unknown investor. Interestingly, since the time that these memos were written, the audit profession has been under fairly constant fire for their performance in preventing fraud. Whether or not this can be entirely blamed on the expectation gap is not clear. It has, however, helped shape an accounting culture that has not been particularly vigorous in its defense of the public interest.

8.3 Conclusion

Complementing the incentives managers offer auditors to either audit ineffectively or to collude is a parallel effort to reduce the penalties associated with

an audit failure. The effort helped reduce all kinds of penalties: legal, professional reputation, and personal reputation. Auditors reduced their legal penalties through lobbying for litigation reform and for loose accounting and auditing standards. They obscured some of the firm level reputation costs by switching strategies from litigating to settling complaints, and their reputation for excellence in other areas may have outweighed the profession-wide loss of reputation for effective audits that began in the 1960s. Accepting completely the faulty logic of the expectation gap into the profession's culture has helped deflect the ethical resistance of many auditors that might otherwise have arisen in the profession's shift away from a monitoring role.

The evidence discussed here demonstrates that some aspects of the auditor-manager relationship that were not addressed by the model in Chapter 4—client selection, reputation for auditing and for management service, ability to influence the audit penalty—are important determinants of auditors' behavior. Yet the modeling exercise was not done in vain, even though it has limited predictive power. It offers some important initial insights that help with the interpretation of the profession's history. First, it offers more information about when the theories of DeAngelo (1981) and Dye (1993) will apply and when they will not. Second, it identifies the manager's ability to finance inducements as a key parameter that determines when auditors and managers will be able to find a way that both are better off when a misstatement goes uncorrected. The availability of cheap—to the manager—compensation for auditor's taking on the risk of an audit failure, such as future valuable revenue streams, also makes it easier for auditors to choose a cooperative, low audit intensity stance from the beginning of the engagement.

I should emphasize that these developments happened through a very slow, evolutionary process, not through some grand plan that understood the effects of every small decision made along the way. To answer the question posed in this dissertation's title, the financial statement audit is very likely broken, but not out of malicious intent. Instead, it has broken slowly through the inexorable pressures of competition in a very peculiar market. Until those pressures are relieved and the related culture is changed, we are unlikely to see significant improvement in the effectiveness of audits in increasing the quality of information in the market and mitigating the principle-agent problems between shareholders and corporate executives.

Chapter 9

Policy recommendations

If the financial statement audit is indeed broken, the question remains what to do about it. Chapter 2 established provisionally that the aggregate costs of fraud are large, though it is a subject that merits further research. Therefore, we as a society should be willing to pay quite a high price to reduce the incidence of fraud. Whether auditors are a potential effective source of that reduction if reforms are made to the profession remains an open question.

Particularly since the 1970s, there has been an almost continuous stream of commissions and committees studying the problems with the accounting profession and recommending possibilities for reform. These reform efforts have taken place both in Congress and within the profession. When surveying this history, it is striking how often the same reforms are suggested and then scuttled or watered down. The political climate in mid 2002, when the WorldCom bankruptcy topped Enron's as the largest in U.S. history, finally overwhelmed the interests that had previously been able to keep Congress from acting decisively.

The Sarbanes-Oxley Act of 2002 was passed with the intention of significantly improving the situation, by reforming both financial statement auditing and other aspects of the financial reporting system. This chapter looks at the prospects of its success, in the light of the analysis done here of the source of the problems. I also discuss further reforms, should Sarbanes-Oxley turn out not to be sufficient.

9.1 Evaluating reforms

Before looking at specific reforms, however, we first must have some idea of what success might look like, particularly given the challenges of conducting a rigorous cost-benefit analysis that were described in Chapter 2. This dissertation has hopefully demonstrated that there are deep cultural and institutional barriers to change that are the result of fundamental misalignments of incentives. Specific audit reforms that might be a good idea in principle may fail in the implementation, therefore, if auditors are unable or unwilling to take their responsibility to find fraud seriously.

Procedural reforms must therefore go hand-in-hand with fundamental reforms that change the incentives dynamics. Because cultural attitudes take a while to change, real reform will not happen overnight. But if Sarbanes-Oxley (or any other reform) is actually effective, we should see a shift in the way auditors view their jobs. The expectation gap should become irrelevant. Auditors should be proud of their fraud detection records and find creative ways to broadcast them to the market. Audit firms should advertise directly to investors on the basis of those fraud detection records and more generally on the fair presentation of their clients financial statements and other disclosures. Research and development into sophisticated fraud detection techniques should be stimulated, and auditors should show a renewed interest, in the course of the statutory audit, in more subtle issues of accurate economic valuation techniques. The "fairly present" clause in the audit opinion should therefore take higher precedence than the "in conformity with GAAP" clause. In response, we should see lower costs of capital, less macroeconomic volatility, and stimulated business innovation. We should also see less need for regulations articulating in extraordinary detail what is and is not allowed.

Unless the fundamental incentives change, however, reforms may end up costing a lot with very little to show for it. To illustrate this point, George May muses in a 1955 letter to Arthur Cannon, an editor at the *Journal of Accountancy*, on the reforms implemented after the McKesson & Robbins fraud in 1939:

> My principal point about the McKesson case is that the SEC drew the wrong lesson from it for regulatory purposes, and that the cost of auditing has been increased enormously by the introduction of proce-

> dures which would not be effective in any case in which a crime was organized as it was in the McKesson case with forgery an important element in it. (May, 1955)

May got it partially right. The costs of auditing increased because of the introduction of additional procedures, but their effectiveness was minimal not because of the forgery involved but because of the continued lack of skepticism. May himself recognized this a year later in the letter to Bevis quoted earlier when he speculated that had it been a different man on the McKesson audit, he would have found the fraud "if he had spent a week on the job" (May, 1956a).

A more current example of the cultural changes necessary before real reform can happen is the reaction to SAS 99. SAS 99 was the most recent attempt, in 2002, by the Auditing Standards Board to close the expectation gap by clarifying auditors' responsibility to find fraud, which was discussed in Chapter 6 in the introduction of the expectation gap debate. This SAS is unequivocal about auditors' responsibilities (with the one exception of its title—"Consideration of Fraud in a Financial Statement Audit"—which should be "The Auditor's Responsibility to Find Fraud" (Zeune, 2003)) and quite thorough in listing the kinds of activities an auditor needs to perform in order to meet her professional responsibilities. As one CPA advocate of closing the expectation gap describes it,

> SAS 99 clearly tells us that auditors have a positive, affirmative duty to detect fraud. You no longer can say fraud detection isn't your job.... [The] opinion that the 'financial statements fairly present' has always been in direct conflict with the profession's assertion that it has no responsibility to detect fraud. To some extent, SAS 99 will correct this conflict. (Zeune, 2003)

But a summary of a focus group of CPAs brought together in 2004 to discuss SAS 99 reveals some of the cultural challenges that face the profession in achieving the standard set by SAS 99. Reacting to the requirement that auditors be skeptical:

> Several participants stated that it was very difficult to be skeptical about clients.... This requirement for skepticism as part of the audit

> process was inherently confusing, since they used to trust their clients, but now they cannot allow their trust to impact the planning and execution of the audit.... This change in mindset literally challenged their cultural values and may impact the future professional relationship between the auditor and the audit client. (Petravick, 2004)

In addition to the difficulties with skepticism, the group discussed how difficult it was to have the required conversations with the engagement staff about fraud risk, since they had no good model for that sort of conversation. They also were not sure how to deal with the possibility that management might override controls. The summary concluded with the assertion that "procedures uncovered few frauds": only 2 out of the 27 participants reported that the new procedures let to the discovery of fraud (Petravick, 2004). But "few" is a relative term: 2 out 27 is over a 7% increase in fraud detection. If this were representative of auditors experiences with SAS 99 in general, for every $1 billion in losses due to fraud, such an improvement in the detection rate would save $74 million.

9.2 Sarbanes-Oxley

As mentioned above, Sarbanes-Oxley finally codified many of the reforms that critics of the profession have been calling for since at least the 1970s, and as such it represents the longest considered and best understood ideas for the auditing profession's reform. In other words, if Sarbanes-Oxley is not a lasting success, there are few ideas with much exposure in the auditing policy community for change except to go back to the pre-2002 status quo.

Recently, however, there has been a developing backlash against Sarbanes-Oxley, and calls for its substantial revision or repeal. One complaint that many critics have is that the law was passed in haste with little critical study and little thought of the possible costs. A typical characterization of the genesis of the act is made in the conclusion of the book by Butler & Ribstein (2006), *The Sarbanes-Oxley Debacle*: "[Sarbanes-Oxley] was suspect from the beginning—enacted in haste in the middle of a regulatory panic with almost no deliberation on even its most important provisions, and little or no credible evidence supporting the need for new regulation of any kind" (Butler & Ribstein, 2006, 100). The notion that Sarbanes-Oxley was "enacted

in haste" may be true in a proximate sense—there was very little debate or study leading up to this particular bill—but it is incorrect when one takes a longer view. None of the reforms enacted in Sarbanes-Oxley are new ideas. Most have been actively debated since at least the 1970s, both by Congress and the profession.

Furthermore, a credible case *can* be built (and I hope I have built it here) that the pre-Sarbanes-Oxley status-quo was not effective and was unlikely to be self-correcting because of fundamentally misaligned incentives. We have had a steady stream of enormously costly financial statement frauds for over forty years, and every time the regulatory reforms that were finally passed with Sarbanes-Oxley were proposed, the profession managed to head them off with promises for self-motivated reform. *These profession-led reforms never worked.* They only created the appearance of improvements. Instead, auditors have gotten less skeptical and more inclined to serve as full-service business advisers to the executive management.

This does not necessarily mean that the reforms included in Sarbanes-Oxley will be effective. But it does mean that change was necessary. As I will demonstrate below, Sarbanes-Oxley is a reasonable starting place in reform efforts, though more radical reforms may be necessary to overcome the enormous cultural inertia and to change the fundamental incentives.

Changing the power to hire and fire

The easiest way to change the incentives that auditors operate under is to change who hires them to an entity that is interested in improving the client company's information quality. This would remove the manager's ability to use the threat of firing to finance part of the inducement to collude. It might also give auditors more immediate positive feedback for improved reputation for audit quality and change the dynamics involved in the initial auditor selection process, which we saw in Chapter 6 to give rise to so many of the distortions in the current auditing culture.

Sarbanes-Oxley removes the power to hire and fire the auditor from the executive and gives it to an independent audit committee. Prior to Sarbanes-Oxley, many companies voluntarily had independent audit committees who had varying degrees of responsibility for choosing the auditor. Some prior research suggests that independent, knowledgable audit com-

mittees can improve the quality of the information disclosed to the market (Agrawal & Chadha, 2005; Abbott et al., 2002; Xie et al., 2003; DeFond et al., 2004; W. Davidson et al., 2004; A. Klein, 2002; Carcello & Neal, 2000). Other research is unable to find a positive effect of independent, knowledgable audit committees (Hayes et al., 2004; Beasley, 1996).

We cannot expect that mandatory independent audit committees will provide the same improvements, however. Those companies that chose to have audit committees can be expected, in most cases, to be run by better managers who used the presence of the audit committee to signal his or her honesty. The SEC can set rules for the definition of "independent," but true independence is a state of mind and an aspect of character. Managers who are intent on exerting control over their auditors through their audit committee can still find people who, while legally independent, are not in fact independent, because of non-familial personal ties or simple lack of interest in their fiduciary duty.

Nonetheless, moving the power to hire and fire to the audit committee is a move in the right direction. It may have enough of an effect to help nudge the audit profession's culture back to prioritizing the protection of investors over a focus on pleasing management. As with all of the Sarbanes-Oxley reforms, it is too early to measure the full effect of the reform.

And this move cannot be considered in a vacuum either. There are a number of other issues that could affect its success. While not addressed in Sarbanes-Oxley, there has been a focus more recently on investor voting rights and related issues that would improve investors' abilities to affect the composition and actions of the board of directors. If these rights are strengthened, and if investors (and the money managers who are often responsible for voting their shares) take advantage of these rights, investors may be able to improve the independence and activism of the audit committee by circumventing—or threatening to circumvent—management.

Similarly, the increased civil and criminal penalties imposed on directors and officers may also improve the activism of the audit committee, thereby spurring a change in attitude in the audit profession. The effects of this reform will depend on the perceived accuracy of the legal system in distributing penalties and how much risk can be passed on to insurance companies.

Independent oversight and quality information

The creating of the PCAOB is one of the most promising elements of the law, though whether it will meet all of its potential is still unclear. The PCAOB has the potential to change the dynamics operating within the profession through a number of different avenues.

First, the PCAOB now has the authority to issue auditing standards. It has accepted provisionally the standards of GAAS, but the Board has begun the effort of reviewing and revising the standards. This transfer of standards to an entity outside of the profession and independent of it is important, because it further limits auditors' abilities to define what constitutes due professional care and therefore the limits of their liability. In a similar vein, the changes in the financing for the FASB may help remove some of the lobbying pressure on the standards-setting processes of that institution.

Second, the PCAOB conducts inspections of firms that practice in front of the SEC. It inspects the Big Four every year. This inspection process has the potential to complement the standards setting, since the PCAOB will be able to work with the firms to ensure that they are interpreting the standards in line with the PCAOB's intentions.

Portions of the inspections reports are made available to the public. This opens up a potential additional source of public information on audit quality, which could improve firms' incentives to compete on audit quality. The first full inspection reports were issued almost a year ago and they do not provide as much information as would be useful in stimulating competition. The report does have a section where it enumerates instances of serious failures to follow auditing standards. These lists of failures are useful to some extent, but they lack any context. The 2004 inspections reported that Deloitte & Touche and Ernst & Young each had 8 serious failures in complying with auditing standards, KPMG had 19, and PricewaterhouseCoopers had 30 (PCAOB, 2005a,b,c,d)

It is impossible to know, however, whether this means that Deloitte conducts better audits than PricewaterhouseCoopers. News reports revealed the number of total audits reviewed for Deloitte & Touche (125 audits, for a rate of 6%) and for KPMG (76 audits, for a rate of 25%), which at least offers a sense of the proportions of failures each firm experienced, but for some reason the same information was not reported for the other two reports

(Johnson, 2005b; Parker, 2005). Furthermore, the relative severity of each reported incident is not clear to those not well familiar with auditing. Some resulted in the restatement of the client's financial statement, though that does not mean that serious breakdowns in the audit process did not happen with the other clients.

The PCAOB's discretion is partially due to the specifics of the law that guides the inspection process, but is also probably in part due to hesitation to publish too much negative information about the Big Four in early years. The regulators do not want to trigger a loss of confidence that leads to another collapse of a large audit firm. They also may want to get some buy-in from auditors before being too public in their criticisms. Hopefully someday, however, the PCAOB's reports will be more useful in distinguishing the relative quality of the various firms.

The PCAOB inspections may also be useful to audit committees as they make auditor hiring and retention decisions. Audit committees can ask their auditor (or prospective auditor) to share the private portions of the report, and some advisors of such committees are already recommending that they do so (Carpenter, 2005).

Frustrating the financing of inducements to collusion

Some of the provisions of Sarbanes-Oxley are targeted at improving auditors' independence. In the context of the model formulated here, they help stymie managers' attempts to finance cheaply their inducements offered to the auditor to encourage her to turn a blind eye to any misstatements she finds. These provisions are those that restrict non-audit services, mandate a "cooling off" period before a client can hire their auditor, and mandate partner rotations.

The non-audit service restrictions are the most controversial of these, though most of the restrictions were in place already, through professional ethics rules or SEC regulations. The restrictions do send an important message that auditors granted the privilege of conducting the statutory audit are not there to be business advisors to management. The law does not restrict all types of non-audit services, however, though it does grant the SEC and the PCAOB the power to further restrict the scope of services.

There are legitimate questions about the narrow cost-benefit calculation of the non-audit service restrictions. Real benefits are foregone with the restrictions, and the banning of some non-audit services to audit clients is unlikely to be a panacea. But it is difficult to see, given the deep-rooted resistance within the profession, to accepting responsibility to view their clients' representations with skepticism that allowing unlimited non-audit services will not hinder the cultural shift necessary to make auditors effective monitors.

Internal controls

The most contentiously debated portion of Sarbanes-Oxley is the Section 404 requirements that companies document their internal controls and that auditors audit them. Much of the direct cost increases resulting from the passage of the Act are due to this section.

I am not particularly qualified to enter into this debate, and so do not wish to dwell on it. But there are some interesting puzzles relating to auditors' responses to the requirements that a worth noting. Auditors have long been required to test internal controls to ensure that they can place reliance on those controls as they conduct their audits. But there was a wide-spread sense that those requirements were largely ignored in many audits.

In the first years that Section 404 has been implemented, auditors have done exhaustive tests of most of the controls of each of their clients, down to those of the most petty transactions. Businesses have complained that the approach is completely unbalanced and inefficient. Furthermore, it is not clear that auditors are not testing minor controls to the exclusion of the ones that actually matter—such as those affecting upper-level management.

If this is the case, it is puzzling to consider what the strategy of the audit firms is to take this approach to interpreting their responsibilities. Some have nicknamed Sarbanes-Oxley the "No Auditor Left Behind" Act, and perhaps the firms' interpretation of the requirements are a fee-grab, trying to bill as many hours as possible, perhaps to make up for the loss of their non-audit services.

But their interpretation is not sustainable. The response by many to

this situation has been to call for the repeal of Section 404, and they may be successful, depending on the political situation in the next year or so. In the interim, the SEC and PCAOB have taken what seems to be the smartest approach, and rather than gut the requirement through weak regulation and enforcement, they are insisting that companies comply with Section 404 and are working instead on ensuring that auditors interpret the requirements reasonably.

9.3 Further possible reforms

If Sarbanes-Oxley is ultimately deemed a failure, there are some other possible reforms that could be considered. Each of these are more radical than Sarbanes-Oxley in that they more fundamentally change the auditor's relationship with the manager and with the shareholder.

Financial Statement Insurance

One very intriguing solution presented in Ronen (2002) and analyzed formally in Dontoh et al. (2004) is the implementation of Financial Statement Insurance. A particularly nice aspect of this suggested reform is that it can be achieved privately, through the markets, without statutory reforms. In essence, Ronen (2002) suggests inserting an insurance company as an intermediary between the company, the auditor, and shareholders, thereby improving the alignment of incentives.

Companies, with the agreement of their shareholders, would purchase insurance that provides coverage to shareholders against losses due to financial statement misrepresentations. The existence of the insurance and the premium amounts would be made public. The insurance company offering the coverage would then hire an audit firm to audit the company to attest to the financial statements accuracy. (This audit would also serve as the statutory audit.) The premiums charged would reflect the insurance company's assessment, based on the auditor's work, of the quality of information contained in the financial statements. The expectation is that companies that choose to purchase this insurance would be signalling their own confidence in the quality of their statements to subject them to such scrutiny. All compa-

nies would then feel the competitive pressure to also send the same signals, thereby improving the quality of information throughout the market (Ronen, 2002).

Auditors' incentives would be radically different. Rather that working for management, they would be representing the interests of a client who has a serious financial interest solely in the quality of the information presented to the market. Audit firms would invest extensively in improving their audit procedures to achieve higher levels of confidence in a cost-effective manner.

One requirement for this scheme to work, of course, is finding insurance companies willing to take on the risk. Professor Ronen is in discussion with some companies who are interested in the idea. It certainly seems like one worth experimenting with.

Implementing truth-inducing mechanisms

Another solution that would not inject additional players into the system is to try to find a way to implement the truth-inducing mechanism suggested by Feess & Nell (2002), discussed in Chapter 4. This would require significant changes in current law, however, including some politically unpopular changes.

Auditors would be held strictly liable for any audit failures. This would mean that they would be held responsible for failures even if they had conducted an audit with due care. The penalties for the failure would need to be scaled to reflect the social harm of the failure. In order to pass on the incentive to management to produce high quality statements, auditors would need to be able to design a contingent contract with their clients where they would be paid the value of any social harm avoided whenever the auditor discovered a misstatement. Companies would need to find ways to link their executives' compensation to the the payments of these contingency fees so that executives personally have incentives to avoid the fees. Finally, auditors would need to be able to insure themselves against the likelihood of failure if they are operating with due care. This would require insurance companies to re-enter the market of insuring audit firms—a market they have mostly abandoned.

These implementation challenges seem daunting, but perhaps a less

perfect form of the mechanism could be devised (e.g. allowing contingency fees, implementing strict liability but with lower damages, etc.) that would significantly improve the system even if there were occasional breakdowns.

Governmental takeover

The government could take over the audit function, as was originally proposed when the Securities Acts were being debated. This could either happen directly and explicitly by making the SEC responsible for auditing financial statements or less directly by requiring the SEC to hire the auditor for each issuer.

This would present the usual problems with motivating government employees and preventing excessive levels of attempts by companies to manipulate the process through political activity. There are similar functions that are carried out fairly successfully by the federal government though. Bank examiners are generally well respected, and no one can say that IRS auditors are not tough, though they are not well loved. The FBI and Secret Service, two agencies who also deal with financial crimes, are able to attract excellent talent who are interested in the public service and glamor aspects of the job.

End mandatory audits

A very different direction to take would be to end the requirement for an audit. If the agency problems are intractable and the financial statement will never be sufficiently effective in the prevention of fraud, then perhaps we should no longer require companies go to the expense. Auditors will have to justify their service on the basis of the private value alone. Regulatory resources could be directed at other, more promising parts of the corporate governance system.

It is conceivable that this could actually increase the public value of any audits that are still conducted. The signalling power of the audit would be strengthened. Honest managers would be eager to hire auditors who could send a strong signal of their honesty or else would dispense with a valueless exercise and find another mechanism to signal their honesty to the market.

On the other hand, the regulatory change could make no difference if every company is unwilling to face the market reaction to foregoing an audit.

A step short of ending the requirement for audits might be to end the franchise for CPAs, particularly if other entities were interested in competing for audit work. Auditors often complain that they are not trained as lawyers, computer scientists, or economists, and that modern business has gotten so complicated that they would need all of these disciplines in order to detect fraud. Perhaps we should take these complaints seriously and allow multidisciplinary consulting firms to try to compete for audit engagements.

9.4 Conclusions

Much of the commentators on the recent financial scandals have acted as if this were a new experience for the U.S., but it is not. We have been dealing with the consequences of massive financial statement frauds continuously for at least 80 years (and probably far longer). The discovery of frauds is cyclical, though, and the length of the cycle just outlives political memory.

If auditors refuse to accept the responsibility to find fraud, we should not be surprised if they do not find it. If they refuse to accept the responsibility for 100 years (the age of the expectation gap), we should expect that the refusal is based on some systematic lack of incentive to take it on. Until that system is changed, therefore, we should not expect lasting improvement.

Sarbanes-Oxley takes a reasonable step towards changing the system, though it is not clear it goes far enough to change the institutions and culture that has grown up under the previous system. It is also too soon to evaluate the long-term effects of the legislation.

Financial statement fraud is enormously costly to a free-market economy. While the U.S. has done well under even the unsatisfactory system pre-Sarbanes-Oxley, there may be huge gains to be made if we can continue to be innovators in improving the quality of information in the market. These potential gains justify experimenting with reform. We should allow Sarbanes-Oxley to take full effect and we should strive to find even better ways to prevent and detect fraud. Fraud is the product of human ingenuity, and it stands to reason that human ingenuity, given the right incentives, can come up with ways to fight fraud effectively.

The SEC's 1940 assessment of Price, Waterhouse's audit of McKesson & Robbins is a fair assessment of so many of the audit failures that have occurred in the 67 years since McKesson:

> [W]e believe that, even in balance sheet examinations for corporations whose securities are held by the public, accountants can be expected to detect gross overstatements of assets and profits whether resulting from collusive fraud or otherwise. We believe that alertness on the part of the entire staff, coupled with intelligent analysis by experienced accountants of the manner of doing business, should detect overstatements in the accounts ... long before they reach the magnitude reached in this case. Furthermore, an examination of this kind should not, in our opinion, exclude the highest officers of the corporation from its appraisal.... Without underestimating the important service rendered by independent public accountants in their review of the accounting principles employed in the preparation of financial statements,... we feel that the discovery of gross overstatements in the accounts is a major purpose of such an audit even though it be conceded that it might not disclose every minor defalcation. (Securities and Exchange Commission, 1940)

Our challenge today is to find a way to make this belief a consistent reality.

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Appendix A

Generally Accepted Auditing Standards

General Standards

1. The audit is to be performed by a person or persons having adequate technical training and proficiency as an auditor.

2. In all matters relating to the assignment, an independence in mental attitude is to be maintained by the auditor or auditors.

3. Due professional care is to be exercised in the planning and performance of the audit and the preparation of the report.

Standards of Field Work

1. The work is to be adequately planned and assistants, if any, are to be properly supervised.

2. A sufficient understanding of internal control is to be obtained to plan the audit and to determine the nature, timing, and extent of tests to be performed.

3. Sufficient competent evidential matter is to be obtained through inspection, observation, inquiries, and confirmations to afford a reasonable basis for an opinion regarding the financial statements under audit.

Standards of Reporting

1. The report shall state whether the financial statements are presented in accordance with generally accepted accounting principles.

2. The report shall identify those circumstances in which such principles have not been consistently observed in the current period in relation to the preceding period.

3. Informative disclosures in the financial statements are to be regarded as reasonably adequate unless otherwise stated in the report.

4. The report shall either contain an expression of opinion regarding the financial statements, taken as a whole, or an assertion to the effect that an opinion cannot be expressed. When an overall opinion cannot be expressed, the reasons therefor should be stated. In all cases where an auditor's name is associated with financial statements, the report should contain a clear-cut indication of the character of the auditor's work, if any, and the degree of responsibility the auditor is taking. (AICPA)

Appendix B

Formal model of auditor-manager strategic interactions

In this appendix, I model the manager's and auditor's decision process as an extended form, single-play, noncooperative game. The game includes three actors: the manager, the auditor, and the market, where the manager and the auditor are the ones making active decisions. Throughout the analysis, I assume that no player is risk averse and all are profit maximizing. The manager and the auditor play with perfect recall.

The game is played out sequentially over time. Figure B.1 illustrates the order of play. Entries above the timeline are events that always happen, regardless of how the game plays out. Entries below the line occur in only some paths of play in the game.

In every game, the manager chooses a probability that the company's outcome in the period is good. This choice is a costly investment for the manager, where a higher probability of a good outcome is costlier to achieve. After that effort has been expended on the part of the manager, the true state of the company is revealed privately to the manager. Then the manager issues financial statements that may or may not accurately reflect the true state of the company.

Because the model's primary purpose is to help us understand the

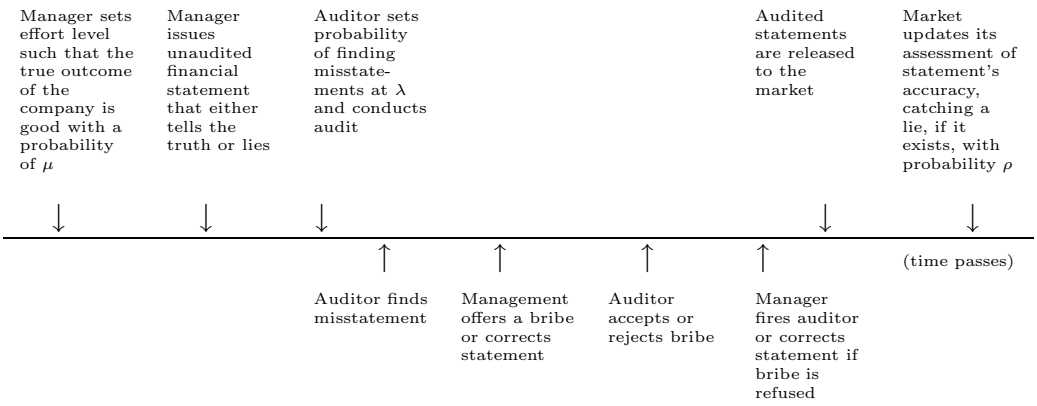

Figure B.1: Timeline of auditing game

auditor's incentives, some of the complexity of the manager's decision process in the early stages of the game is suppressed so as to look at interesting aspects of the auditor's decisions in as simple a way possible. To achieve this end, I am defining a "good" outcome *by construction* as one where the manager cannot improve his expected payoff by reporting anything but the true outcome.

In more formal language, let S_M be the strategy space for the manager, and $u_M(s_i)$ is the manager's payoff for each strategy profile, $s_i = (s_M, s_A)$, played. The strategy s^{truth} is defined as the set of strategy profiles where the probability of the manager reporting the true outcome is $Prob(Truth) = 1$. A company outcome is defined as "good" iff:

$$u_M(s^{truth}) > u_M(s^j) \quad \forall u_M(s^{j \neq truth})$$

This is the case when telling the truth strictly dominates all other strategies for the manager.

Similarly, if the outcome is "bad," the manager can do better, at least in some strategy sets, by misrepresenting the company's outcome. How the manager decides the magnitude of the lie to tell, if he decides to lie, is not modeled here. Presumably, the manager would craft his lie in such a way as to maximize his expected payoff, which would entail maximizing his wage subject to crafting the lie to minimize likelihood of detection and/or penalties, should the lie be detected.

Once the manager has compiled his unaudited statements, the auditor conducts an audit of those statements. In the planning for the audit, the auditor chooses an audit intensity, which is defined as the probability that she will uncover a misstatement, conditional on its existence. A higher audit intensity costs more than a lower intensity. I assume that the audit intensity chosen is not observable or verifiable by anyone outside the audit firm.

After the audit is completed, the financial statements are released to the market. After time passes, subsequent events or new public information is used to update the market's assessment of the validity of the financial statements. The market may or may not ever discover deliberate misinformation, if it exists.

A subset of the possible decisions and events could lead to additional actions by the auditor and the manager. If the true outcome of the company in that period is bad and management decides to try to conceal that fact by issuing misleading financial statements, the auditor could find a misstatement if her audit intensity is greater than zero. If the auditor does find the misstatement, the manager must decide whether or not to offer a bribe and the auditor decides whether or not to accept it. Then, if the bribe is refused, management must decide whether to give in to the auditor's demands to fix the misstatement or to fire the auditor.[1]

Extensive form of game and model parameters

The extensive form of the game is illustrated in Figure B.2, with player payoffs spelled out in Table B.1 and variable definitions collected in Table B.2. At the start of the game, the manager exerts effort to set the probability, μ, that the outcome is good. The outcome is bad with a probability of $(1-\mu)$. The probability distribution of μ and the production function for μ are common knowledge. After the manager has invested in a particular μ at a cost of $C^M(\mu)$, where $C^M_\mu > 0$ and $C^M_{\mu\mu} > 0$, the manager learns of the actual outcome of the company in that period. I assume here that management has perfect information about the true outcome of the company and that infor-

[1]The assumption of discrete, binary options for the financial statements (i.e. good outcome and bad outcome) in the model force this outcome. In reality there is often a negotiation between manager and auditor and the financial statements often end up reflecting a compromise between the two parties.

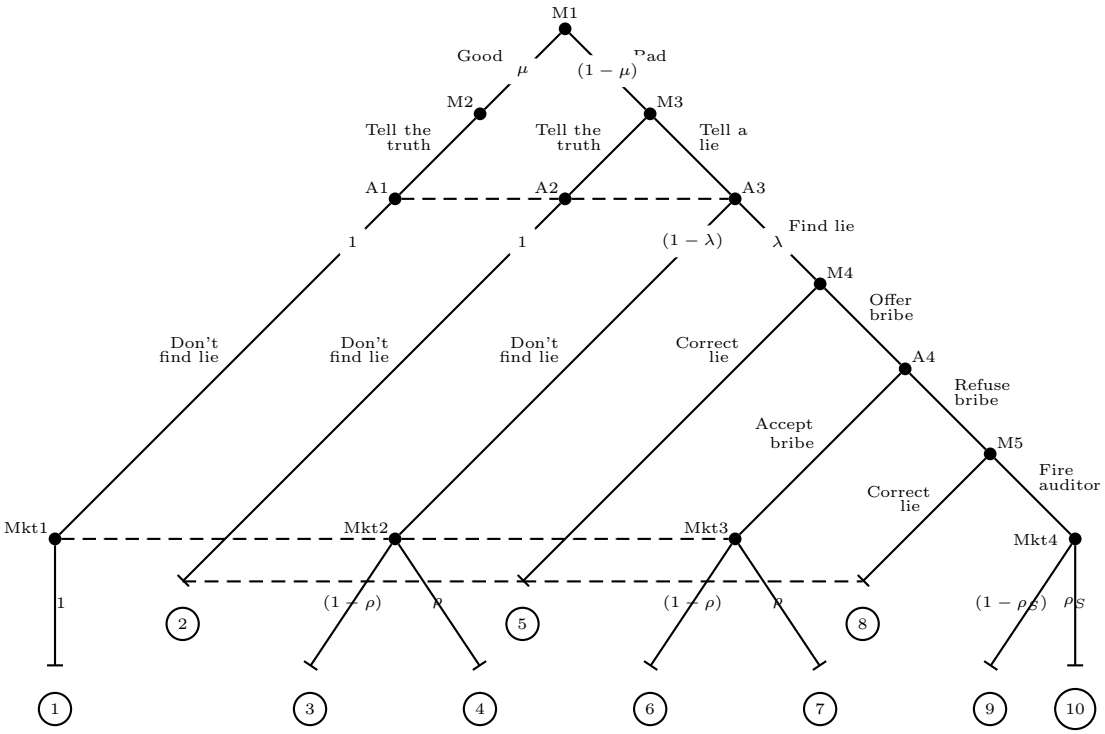

Figure B.2: Auditing game

mation is private and attained costlessly. Management then has to decide whether or not to tell the truth about the outcome of the company in the financial statements. By construction, as discussed above, if the company's true outcome is good, the choice is a trivial one and management tells the truth. The audit confirms management's statements, regardless of audit's intensity[2], and the manager receives a payoff of $W^H - C^M(\mu)$. The auditor's payoff is her fee less the cost of the audit production. The cost of the audit is a function of the audit intensity: $F - C^A(\lambda)$. The fee cannot be contracted as a function of λ because of the assumption that λ is unobservable and nonverifiable. However, since the magnitude of the fee will ultimately play a

[2]I assume there are no false positives that do not get resolved over the course of the audit, so that in this analysis the auditor never commits a Type I error.

Terminal node	Manager payoff	Auditor payoff
1	$W^H - C^M(\mu)$	$F - C^A(\lambda)$
2	$W^L - C^M(\mu)$	$F - C^A(\lambda)$
3	$W^H - C^M(\mu)$	$F - C^A(\lambda)$
4	$W^H - C^M(\mu) - P^M$	$F - C^A(\lambda) - P^A$
5	$W^L - C^M(\mu)$	$F - C^A(\lambda)$
6	$W^H - C^M(\mu) - kB$	$F - C^A(\lambda) + B$
7	$W^H - C^M(\mu) - kB - P^M$	$F - C^A(\lambda) + B - P^A$
8	$W^L - C^M(\mu)$	$F - C^A(\lambda)$
9	$W^S - C^M(\mu)$	$rF - C^A(\lambda)$
10	$W^S - C^M(\mu) - P^M$	$rF - C^A(\lambda) + R$

Table B.1: Payoff table

role in the auditor's decision to accept the engagement, it will reflect an ex ante assessment of the likely level of λ. For the purposes of this initial analysis, however, it is treated as exogenous to the strategic interactions between auditor and manager once the engagement has been entered into.

If the true outcome is bad, management's decision is no longer trivial. If he tells the truth, the auditor's move does not affect the players' payoffs. The manager's payoff is now $W^L - C^M(\mu)$, where he gets a wage $W^L < W^H$, less the cost of his investment $C^M(\mu)$. The auditor's payoff is still $F - C^A(\lambda)$, regardless of the level of λ chosen. If the management decides to lie, and issues a statement that depicts the company's outcome as good when it is actually bad, the game gets more complicated.

As implied above, the auditor can choose a varying level of λ, where λ is equal to the probability the auditor will detect a misstatement, conditional on the existence of a misstatement.[3] I assume that $\lambda \in [0, 1]$, and is limited only by cost, not technical feasibility. As with $C^M(\mu)$, $C^A_\lambda > 0$ and $C^A_{\lambda\lambda} > 0$.

If management decides to misrepresent the company's true state, with a probability of $(1 - \lambda)$ the auditor will not catch the misrepresentation and the incorrect financial statement will be issued to the marketplace. The

[3]For the sake of simplicity, I assume that there is either one or no misstatement.

Variable	Definition
Probabilities	
μ	Probability of a good client company outcome (from management's perspective)
λ	Probability of auditor finding misstatement conditional on its existence
ρ	Probability of market finding misstatement conditional on its existence
Payoff components	
$W^{H,S,L}$	Wage management receives (amount depends on client company outcome)
$C^{M,A}$	Cost of effort exerted by manager as a function of μ or by auditor as a function of λ
F	Fee auditor receives for audit
$P^{M,A}$	Penalty assessed manager and auditor respectively when a misstatement is discovered by market
B	Bribe
R	Reputational reward for auditor when market discovers misstatement after auditor is fired
Scalars	
k	Proportion of B deducted from manager's payoff
r	Proportion of F auditor recovers when fired

Table B.2: Definitions of variables

management will receive an initial payoff of $W^H - C^M(\mu)$, on the basis of the contents of the financial statements, and the auditor will earn $F - C^A(\lambda)$ for the audit. At a later date, however, the market may receive additional information about the validity of the financial statements and will discover the misstatement with a probability of ρ. If the financial statements are found to be misleading by the market, both management and auditor are assessed a penalty. P^M and P^A respectively.[4] If the misstatements are never found, the management and auditor keep their initial payoffs. Therefore, the expected value of the payoffs when a management cheats and the auditor misses the cheating are $W^H - C^M(\mu) - \rho P^M$ for management and $F - C^A(\lambda) - \rho P^A$ for the auditor.

If the auditor does find the misstatement, management must decide whether to correct the misstatement or offer the auditor a bribe. If the management makes the correction, the payoffs are the same as if management told the truth in the first place: management receives $W^L - C^M(\mu)$ and the auditor receives $F - C^A(\lambda)$.[5]

The magnitude of any bribe offered by the manager to the auditor is endogenously determined. If the management decides to offer a bribe, management must therefore first decide how large a bribe to offer. The decision of the bribe's size is determined by what the management believes about the final steps of the game and will be discussed once those steps have been laid out.

It is important to note that the bribe, (B), may or may not cost the management what is paid to the auditor—in many instances, some or all of the bribe could be financed through some form of misappropriating the company's resources, either through direct, illicit transfers or through padded fees paid to the auditor. In other cases, there may be losses that occur through an inefficient transfer (e.g. costs associated with keeping the bribe secret), thereby causing the bribe to cost more to the management than it benefits the auditor. Unlike the previous literature, I account for

[4] I will leave the nature of this penalty vague at this point—the possible nature of these penalties will be discussed in later chapters. The placeholders P^M and P^A do, however, include an inter-temporal discount factor to simplify the notation.

[5] I assume that, given this is a single period game and given that auditors observe client confidentiality if the manager acquiesces to changes demanded by the auditor, the manager suffers no consequences from getting caught by the auditor except for receiving the payoff associated with reporting a poor outcome.

that difference in the private costs and benefits of the bribe by multiplying the auditor's benefit from the bribe by a scalar $k \in \mathbb{R}^+$ when deducting the cost of the bribe to the manager, rather than the usual $k \in [0, 1]$ applied to the manager's cost of the bribe when modeling the auditor's benefit from the bribe (Olsen & Torsvik, 1998; Laffont & Tirole, 1991). This is to allow the bribe to be both more costly and less costly to management than the value of its benefits to the auditor, and it particularly allows for the case where $k = 0$ and the bribe does not cost management anything at all and is instead limited only by the company's budget constraint. A full discussion of the possible nature of the budget constraint is not included in this analysis, though aspects of the question will be addressed in some of the historical and policy discussions of later chapters. I do however include the possibility that the company's budget constraint is binding in the equilibrium analysis. The maximum amount the company can afford to pay the auditor (above and beyond the basic audit fee) is designated as B^{Max}.

If the auditor decides to accept the bribe, the misleading financial statements are issued, the bribe is paid, and the market may or may not eventually discover the misstatement. In this case, the expected value of the payoffs are: $W^H - C^M(\mu) - kB - \rho P^M$ for the manager and $F - C^A(\lambda) + B - \rho P^A$ for the auditor. Note that as discussed earlier, the penalty for the auditor, P^A, is the same regardless of the path taken to reach the point where the market discovers the misstatement. This is a somewhat strong assumption and will affect the equilibrium outcomes, but it is a useful counterpoint to Dye (1993), DeAngelo (1981), and others whose arguments rest on the assumption that the penalties will be different.

If the auditor rejects the bribe, the management can then choose to either correct the misstatement or fire the auditor.[6] If the management chooses to correct the misstatement, then the payoffs for the two players is the same as the other instances where management ends up revealing the bad outcome to the market.

If the manager fires the auditor, he then gets a clean opinion from another auditor[7] but may bear some sort of penalty for that switch in his

[6] A third possibility, accepting an adverse opinion, is assumed away here because of regulatory restrictions on listing on major stock exchanges with an adverse opinion.

[7] Attaining such a clean opinion may be a complicated procedure where management plays a similar game with another audit firm, but for this analysis, I assume that such an

initial compensation. This penalty comes about because markets (and the board of directors) are aware of the switch but cannot determine whether that switch is due to management avoiding an adverse opinion or to other, legitimate causes. Therefore, the management's reward in the case of a switch is W^S instead of W^H, where $W^S \leq W^H$, with a net payoff in the first period of $W^S - C^M(\mu)$. The auditor, if fired, may not recover all (or any) of the audit fee but has already expended the cost of the audit. The reduction of the audit fee is modeled as rF, where $r \in [0, 1]$ and F is the original fee. In the second period, if the market discovers the fraud, the management receives a penalty and the auditor may receive a reputational reward (R), where $R \geq 0$, for the market learning the real cause of her firing.

As before, if the market does not discover the fraud, the players are left with their initial payoffs. Because the market receives an additional signal about the interaction of management and auditor through the switch, however, I do not assume that the probability of the market finding the misstatement after it has been released is the same in this case as it is in the others. An auditor change may invite closer scrutiny of regulators or other players and increase the probability that the misstatement will be found after the statements have been released to the market. Therefore, the probability of discovery by the markets when the auditor is fired is designated as ρ_S and I assume that $\rho \leq \rho_S \leq 1$. The expected payoffs for the players if the management fires the auditor for refusing the bribe is therefore: $W^S - C^M(\mu) - \rho_S P^M$ for the management and $rF - C^A(\lambda) + \rho_S R$ for the auditor.

Equilibrium strategies

The equilibrium concept used to analyze the possible equilibrium strategies employed by the two players is a *sequential equilibrium*. A sequential equilibrium requires that the strategy profile and system of beliefs are consistent with each other and that they satisfy sequential rationality at every information set (Kreps and Wilson, 1982).

The game is solved in reverse order, starting with the decision whether or not to fire the auditor, given that she has refused a bribe (node M5 in Figure B.2). At each step, the auditor and manager consider their *expected* payoffs, prior to the market's move, since the market's "move," similar to

opinion can be found but that the market is aware that an auditor switch has been made.

	(no move)
fire	$W^S - C(\mu) - \rho_S P^M, \quad rF - C^A(\lambda) - \rho_S R$
no fire	$W^L - C(\mu), \quad F - C^A(\lambda)$

Figure B.3: Firing subgame in normal form.

moves of nature in other games, is not strictly a strategy, since the values of ρ and ρ_S are not responsive to the decisions made by the players.

Firing stage If the game reaches node M5, the remaining plays are a proper subgame with perfect information. The manager must simply maximize his expected payoff by deciding whether to retain the auditor and acquiesce to the auditor's demands to correct the misstatement, or to fire the auditor and issue the misleading statements (audited by another auditor—how the manager achieves that audit is not considered here).

The normal form of the firing subgame is presented in Figure 1. (In this and all subsequent normal form representations, the manager's possible moves are listed down the left column and the auditor's possible moves are listed across the top row.)

The manager will fire the auditor if the expected value of the payoff from firing the auditor is greater than the (certain) value of the payoff from correcting the statement. If the following "firing condition" is true:

Condition 1. $W^S - W^L > \rho_S P^M$

then the decision to fire the auditor strictly dominates retaining her. If the expected cost ($\rho_S P^M$) of firing the auditor strictly exceeds the benefits ($W^S - W^L$), then the opposite strategy, retaining the auditor and correcting the misstatement, strictly dominates. The only instance in which strict dominance does not apply is in the unlikely scenario where $W^S - W^L = \rho_S P^W$.[8]

[8]Because the policy relevance of considering the equilibriums associated with an exact equality of payoffs is essentially nil, I will not carry the feasible equilibriums in that situation through the analysis. However, in solving this subgame, all possible pure and mixed strategies would qualify as equilibriums if $W^S - W^L = \rho_S P^W$.

Bribing stage Moving up the game tree to the next stage (nodes M4 and A4), the decision to try to bribe the auditor, and with how much, is more complicated than the first step of the backward induction. Determining the plausible equilibrium strategies at this stage do depend on the requirement of sequential rationality.

Node M4 in Figure B.2 depicts the manager's decision as binary, offer bribe/correct lie, to simplify the initial exposition of the game. In reality, the manager has a discreet choice, to correct the lie, versus a continuous set of choices, to offer bribe of magnitude B where $B \in [0, B^{Max}]$. B^{Max} is the feasible upper limit on the bribe size. The question, therefore, becomes, is there a value, or range of values, of B where the manager wants to offer a bribe the auditor is willing to accept?

Because the choices at this stage of the game depend on the choices that will be made if the game continues to the point where the manager needs to decide whether to fire the auditor, there are two possible normal forms of the bribing subgame. The relevant game depends on whether Condition 1, the firing condition, holds true. The two forms are described in Figures B.4(a) and B.4(b)

I begin with the analysis of the game if the firing condition holds. In this situation, the manager has a dominant strategy at the bribing stage, which makes the analysis simpler.

Proposition 1. *In the bribing subgame in Figure B.4(a), where the firing condition holds true, there exists at least one* $B \in [0, B^{Max}]$ *such that the manager's strategy of choosing "Bribe" with* $Prob(Bribe) = 1$ *is a strictly dominant strategy.*

Proof. The assumption that the firing condition holds means that $W^S - W^L > \rho_S P^M$. Adding $W^L - C(\mu) - \rho_S P^M$ to both sides of the inequality shows that strategy profile (bribe, fire; reject bribe) is an improvement over either (correct lie, fire; accept bribe) or (correct lie, fire; reject bribe): $W^S - C(\mu) - \rho_S P^M > W^L - C(\mu)$.

Set $B = 0$. If $B = 0$, the manager's payoff in (bribe, fire; accept bribe) is $W^H - C(\mu) - \rho P^M$. The definition of ρ_S asserts that $\rho_S \geq \rho$ and the definition of W^S asserts that $W^H \geq W^S$. Therefore, $W^H - C(\mu) - \rho P^M \geq W^S - C(\mu) - \rho_S P^M$. And since $W^S - C(\mu) - \rho_S P^M > W^L - C(\mu)$, strategy profile (bribe, fire; accept bribe) also improves on both (correct

	Accept bribe	Reject bribe
Bribe	$W^H - C^M(\mu) - kB - \rho P^M,$ $F - C^A(\lambda) + B - \rho P^A$	$W^S - C(\mu) - \rho_S P^M,$ $rF - C^A(\lambda) - \rho_S R$
Correct lie	$W^L - C(\mu), \quad F - C^A(\lambda)$	$W^L - C(\mu), \quad F - C^A(\lambda)$

(a) Normal form of bribing subgame, for all values of $B \in [0, B^{Max}]$, when firing condition holds true (i.e. $W^S - W^L > \rho_S P^M$).

	Accept bribe	Reject bribe
Bribe	$W^H - C^M(\mu) - kB - \rho P^M,$ $F - C^A(\lambda) + B - \rho P^A$	$W^L - C^M(\mu),$ $F - C^A(\lambda)$
Correct lie	$W^L - C^M(\mu), \quad F - C^A(\lambda)$	$W^L - C^M(\mu), \quad F - C^A(\lambda)$

(b) Normal form of bribing subgame, for all values of $B \in [0, B^{Max}]$, when firing condition *does not* hold true (i.e. $W^S - W^L < \rho_S P^M$).

Figure B.4: Bribing subgames in normal form.

lie, fire; accept bribe) and (correct lie, fire; reject bribe) for at least one $B \in [0, B^{Max}]$. Therefore, if the firing condition holds, the manager has no incentive to deviate from the strategy (bribe, fire; *), regardless of the auditor's strategy. □

The auditor's decision process is more complicated, and introduces another condition that will determine which strategy profile is the equilibrium outcome.

Proposition 2. *In the bribing subgame in Figure B.4(a), where the firing condition holds true, the strategy profile (bribe, fire; accept bribe) will be the equilibrium strategy if the following condition holds true:*

Condition 2. $\rho P^A + \rho_S R - (1-r)F \leq \min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max})$

Furthermore, the bribe offered will be $B \in [P^A + \rho_S R - (1-r)F, \min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max})]$.

Proof. Given that the manager's strategy will be (bribe, fire; *) regardless of the auditor's strategy when the firing condition holds true (Proposition 1), the auditor need only choose the strategy (accept bribe|bribe, fire) or (refuse bribe|bribe, fire) that nets her the greatest payoff. The auditor will choose (accept bribe|bribe, fire), if $F - C^A(\lambda) + B - \rho P^A > rF - C^A(\lambda) + \rho_S R$. By rearranging terms, the auditor will therefore choose (accept bribe|bribe, fire) if $B > \rho P^A + \rho_S R - (1-r)F$.

The manager is willing to offer a bribe any size that maintains (bribe, fire) as a strictly dominant strategy and that does not motivate the auditor to accept the bribe unless the manager does better with strategy profile (bribe, fire; accept bribe) than with profile (bribe, fire; reject bribe). For the manager not to wish to change his strategy to (correct lie, fire) if the auditor chooses (accept bribe), the following must be true: $W^H - C(\mu) - kB - \rho P^M > W^L - C(\mu)$. For the manager to be happy the auditor accepts the bribe offered, the following must be true: $W^H - C(\mu) - kB - \rho P^M > W^S - C(\mu) - \rho_S P^M$. Given that $W^S - C(\mu) - \rho_S P^M > W^L - C(\mu)$ if the firing condition holds true, only the second constraint, $W^H - C(\mu) - kB - \rho P^M > W^S - C(\mu) - \rho_S P^M$, is binding. By rearranging terms, the manager will be willing to offer a bribe, $B \in [0, \min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max})]$.

Therefore, there is a value B such that $B \geq \rho P^A + \rho_S R - (1-r)F$ and $B \leq min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max})$ iff $\rho P^A + \rho_S R - (1-r)F \leq \min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max})$.

If $B \leq \frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M)$, the manager would prefer for the strategy profile to be (bribe, fire; accept bribe) since $W^H - C(\mu) - kB - \rho P^M > W^S - C(\mu) - \rho_S P^M$. Therefore B will be set such that $B \in [P^A + \rho_S R - (1-r)F, \min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max})]$. □

Turning now to the analysis of the bribing subgame when the firing condition does *not* hold true, there is no longer a clear dominant strategy for the manager to follow. Instead, both players will receive the same pair of payoffs for all strategies except (bribe, correct lie; accept bribe): the manager receives $W^L - C^M(\mu)$ and the auditor receives $F - C^A(\lambda)$.

Proposition 3. *The strategy profile (bribe, correct lie; accept bribe) will be the equilibrium strategy profile for the bribing subgame iff the following condition is met:*

Condition 3. $\rho P^A \leq \min(\frac{1}{k}(W^H - W^L - \rho P^M), B^{Max})$

Furthermore, the bribe offered will be set such that $B \in [\rho P^M, \min(\frac{1}{k}(W^H - W^L - \rho P^M), B^{Max})]$. *If Condition 3 does not hold, the manager will be indifferent to offering a bribe that is rejected by the auditor (i.e.* $B < \rho P^A$*) and correcting the lie.*

Proof. If the firing condition does not hold, the auditor will reject all bribe offers that do not improve on her payoff of $F - C^A(\lambda)$ that she gets when the lie is corrected (either before or after a bribe is proffered). Therefore for the auditor to accept a bribe, $F - C^A(\lambda) + B - \rho P^A > F - C^A(\lambda)$ must be true. Simplifying the expression, the auditor will accept the bribe iff $B > \rho P^A$.

For the manager to offer a bribe large enough that the auditor is willing to accept it, $W^H - C^M(\mu) - kB - \rho P^M > W^L - C^M(\mu)$ must be true. Simplifying the expression, the manager is willing to pay B such that $B \in [0, \min(\frac{1}{k}(W^H - W^L - \rho P^M), B^{Max})]$.

Therefore, there is a feasible B such that the equilibrium strategy profile for the bribing subgame is (bribe, correct lie; accept brobe) iff $\rho P^A \leq \min(\frac{1}{k}(W^H - W^L - \rho P^M), B^{Max})$. Directly following, the B chosen if Condition 3 holds is $B \in [\rho P^M, \min(\frac{1}{k}(W^H - W^L - \rho P^M), B^{Max})]$. □

Intuitively, whether or not the firing condition is met, the manager will offer a bribe that the auditor accepts if the manager can "afford" a bribe that is large enough to compensate the auditor for the risks she is taking. The off-the-equilibrium-path values matter, however, in setting the parameters that determine when (bribe, *; accept bribe) is the equilibrium strategy profile.

The subgame discussed so far is a game of perfect information, played sequentially, so there are dominant pure strategy equilibria that determine unambiguously the outcome of the game if the node M4 is reached (i.e. if the auditor discovers a misstatement).[9] Which equilibrium is dominant depends on the values of various parameters. Therefore, the rest of the game can be analyzed looking at the three possible outcomes reached by the bribing subgame—correcting the lie, bribing the auditor, or firing the auditor—irrespective of the path taken to get there. In other words, it does not matter which of the "correct lie" terminal nodes (5 or 8) is reached; nor does it matter to the rest of the analysis whether the firing condition is met if the auditor is successfully bribed.

The rest of this analysis, therefore, will look separately at three "scenarios". The first considers the scenario where the equilibrium strategy profile is either (correct lie, correct lie; refuse bribe) or (offer bribe, correct lie; refuse bribe): where the manager corrects the lie found by the auditor. I call this scenario the "compliant manager" scenario. The second considers the scenario where the equilibrium strategy profile is either (offer bribe, fire; accept bribe) or (offer bribe, correct lie; accept bribe). This is the "auditor collusion" scenario. The final scenario is the one where the equilibrium strategy profile is (offer bribe, fire; refuse bribe). It is where the manager fires the auditor if the auditor discovers the misstatement. I call it the "opinion shopping" scenario.

Compliant manager scenario In this scenario, neither the bribing condition nor the firing condition is met, and the game ends with the manager agreeing to correct the misstatement if the course of play results in the auditor finding a misstatement. Figure B.5 repeats, in a reduced form, the extensive

[9]This statement is not completely precise, since in an equilibrium where a bribe is offered and accepted, there may be more then one value of the bribe that could achieve that equilibrium.

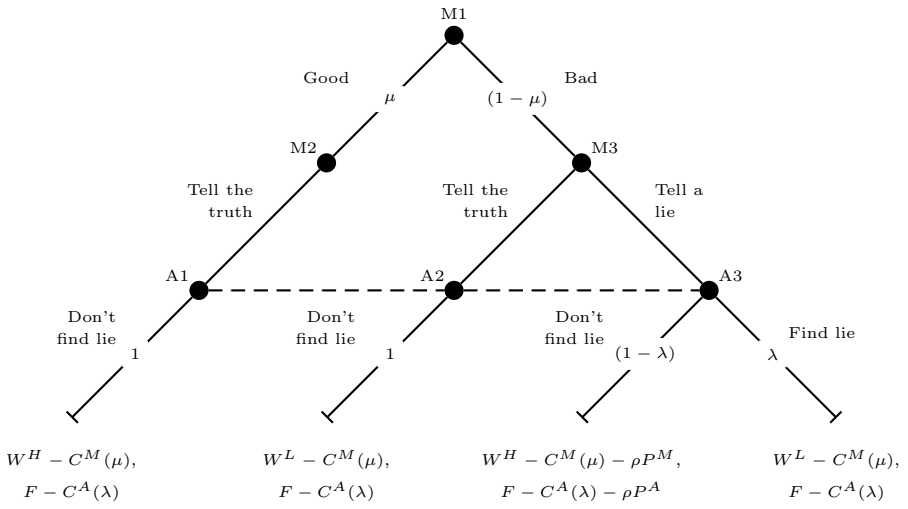

Figure B.5: Reduced extensive form auditing game if the bribing subgame resolves in the "compliant manager" scenario

form game tree displayed in Figure B.2. Figure B.5 suppresses the bribing subgame, along with the market moves, and replaces it with the expected payoffs that will result from parameter values that lead to the "compliant manager" scenario.

The play of this portion of the game is affected somewhat by the construction of the definition of "good" and "bad" outcomes. In order for the manager's strategy to always tell the truth to be the strictly dominant strategy for all "good" outcomes and for it to not be the strictly dominant strategy for all "bad" outcomes, the manager's expected payoff for telling the truth must be less than the expected payoff for lying. For that to be the case,

$$W^H - C^M(\mu) - \lambda(W^H - W^L) - (1-\lambda)\rho P^M > W^L - C(\mu).$$

More succinctly, that means that $W^H - W^L > \rho P^M$.

Proposition 4. *Given that $W^H - W^L > \rho P^M$ by construction, the manager can* always *do at least as well by lying if there is a bad outcome. Therefore, he will never tell the truth if the outcome is bad.*

Proof. Assume that the manager will tell the truth with a probability of

$\alpha \in [0,1]$ in the instance where the company's outcome is bad. To conform to the assumption of sequential rationality, the manager will chose a value of α that maximizes his expected payoff given that he has reached the node M3 (i.e. a bad outcome has been realized). His expected payoff is

$$\Pi^M = \alpha[W^L - C^M(\mu)] + (1-\alpha)[W^H - C^M(\mu) - (\lambda(W^H - W^L) + (1-\lambda)\rho P^M)].$$

The derivative of his payoff with respect to α is:

$$\Pi^M_\alpha = -(1-\lambda)(W^H - W^L + \rho P^M) \leq 0 \quad \forall \quad \lambda \in [0,1].$$

Since the manager's marginal payoff is monotonically decreasing for all values of λ, a corner solution prevails, and the manager will select $\alpha = 0$ and always lie about his bad outcome (except in the unlikely case when $\lambda = 1$ in which case, the manager is indifferent to which value of α he chooses). □

Given that the manager's strategy (tell truth|bad outcome) is strictly dominated, regardless of the level of audit intensity, we can determine the players' ex ante payoffs, given that the conditions are met for the "compliant manager" scenario. For the two players, the ex ante payoffs are therefore:

Manager's Payoff 1. $W^H - C^M(\mu) - (1-\mu)[\lambda(W^H - W^L) + (1-\lambda)\rho P^M]$

Auditor's Payoff 1. $F - C^A(\lambda) - (1-\mu)(1-\lambda)\rho P^A$

The first two terms of the manager's payoff are the payoff if there is a good business outcome or the manager gets away with lying in the financial statements. The final term is the expected cost to the manager of getting caught, weighted by the probability the manager will try to cheat: the first term within the brackets is the cost of getting caught by the auditor times the probability of getting caught by the auditor and the second term is the cost of getting caught by the market times the probability of first not getting caught by the auditor and then getting caught by the market. The auditor's payoff is similarly straightforward: it is the audit fee less the cost of the audit and less the cost of the market finding a misstatement times the probability that there is a bad business outcome (and therefore the manager introduces a misstatement into the financial statements), the auditor fails to find the misstatement, but the market does manage to find it.

Given that I am assuming that the players are well informed about the parameters of their own and their opponent's payoffs, if the expected

value of the payoff is less than the player's reservation payoff, the player will refuse to play the game. The auditor can refuse to play by resigning from an audit (or refusing to accept the client in the first place). The manager can refuse to play by resigning as manager of the client company, hiring a different auditor before the start of the audit, or, in some cases, taking the company private.

If the players decide to move forward with the game, we can now determine how the manager and the auditor will set their individual effort levels: the manager will choose μ and the auditor will choose λ. Because the audit must, by definition, follow the determination of the true outcome of the company, management always has the first player advantage and can choose his effort level based on his assessment of how the auditor will respond to his effort. The auditor can only maximize her payoff subject to her assessment of the manager's investment decision. Auditors can never do better than react to management's choice of μ, since they have no credible way of committing to an alternative value of λ. Even in a repeated game, auditors cannot use a reputation for a different value of λ, as long as the assumption that λ is not observable or verifiable by an outside party holds true. If there were a way for auditors to commit to a value of λ before the start of the game, they would generally choose a higher value for λ than described below, though a detailed discussion of their first-move choices of λ is beyond the scope of this paper. The strategies of both players are determined by backward induction, so I begin by looking at the auditor's decision, taking the value of μ as given.

The ex ante expected payoffs are what the auditor uses to set her optimal audit intensity, λ. For payoffs given in this scenario, the auditor sets λ such that:

Auditor's Optimal Choice 1. $\quad C_\lambda^A = (1-\mu^*)\rho P^A$

where μ^* is the manager's optimal value of μ. The dynamics of this scenario are well understood in the literature and the profession: the auditor sets her audit intensity proportionate to her estimation that the company has a poor outcome and therefore the manager could be lying in the financial statements, $(1-\mu^*)$, and the expected cost to her of missing a misstatement, ρP^A.[10]

[10]For almost all allowable values of the parameters, the above equation is the optimum, since most allowable values of the left-hand side of the equation will result in $C_\lambda^A > 0$.

Given that the manager can be secure in his first-move advantage, he optimizes his expected payoff by treating λ as a function of μ. In scenario 1, management sets μ such that:

$$C_\mu^M = \lambda(W^H - W^L) + (1-\lambda)\rho P^M - (1-\mu)\lambda_\mu[(W^H - W^L) - \rho P^M]$$

This expression for C_μ^M can be rearranged and simplified to:

Manager's Optimal Choice 1. $C_\mu^M = \lambda\xi(W^H - W^L) + (1-\lambda\xi)(\rho P^M)$

where

$$\xi = 1 + \frac{(1-\mu)}{\lambda}\frac{\partial\lambda}{\partial(1-\mu)}$$

or

$$= 1 + \eta_{\lambda,1-\mu}$$

where $\eta_{\lambda,1-\mu}$ is the elasticity of the auditor's effort level to an increased risk of a poor business outcome and therefore an increased risk of the existence of a misstatement. This result sets the optimal value of μ higher than it would be if the manager did not take into consideration his effect on the auditor's effort level. How much higher depends on the elasticity of effort.

Opinion shopping scenario If the auditor refuses the bribe offered by management, and the manager fires the auditor in order to get a clean opinion from a more willing auditor, the expected payoffs are illustrated in Figure B.6 (similar to that in Figure B.5. Since Proposition 4 still holds true, the manager will always lie if his company's outcome is "bad." The logic of how the players select μ and λ is the same as in the first scenario. Therefore, the players' ex ante expected payoffs are:

Manager's Payoff 2.

$$W^H - C^M(\mu) - (1-\mu)[\lambda(W^H - W^S - \rho_S P^M) + (1-\lambda)\rho P^M]$$

The only exception to this are the unlikely cases where $\rho = 0$, $P^A = 0$, or $\mu = 1$. In such instances, λ would clearly be set to 0.

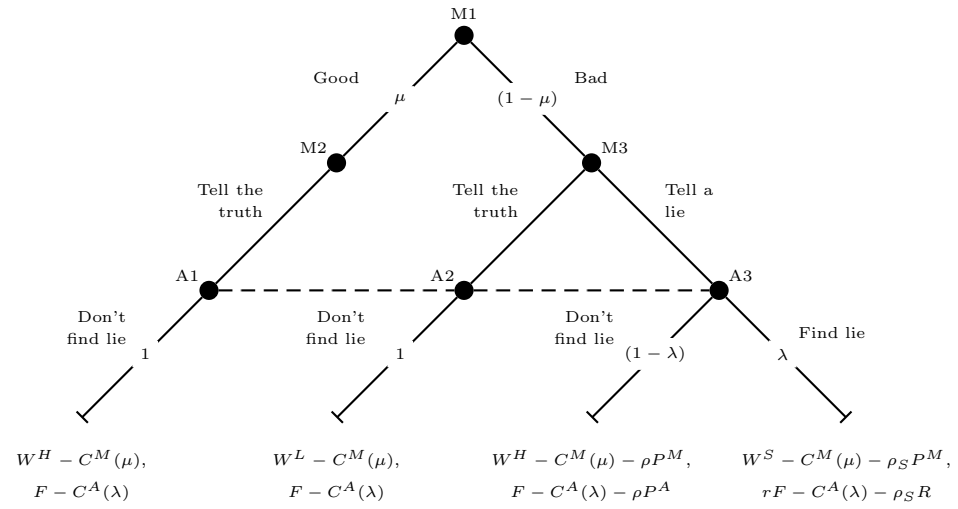

Figure B.6: Reduced extensive form auditing game if the bribing subgame resolves in the "opinion shopping" scenario

Auditor's Payoff 2. $F - C^A(\lambda) - (1-\mu)[\lambda((1-r)F - \rho_S R) + (1-\lambda)\rho P^A]$

For this set of payoffs, the auditor sets her optimal λ such that:

Auditor's Optimal Choice 2. $C^A_\lambda = (1-\mu^*)(\rho P^A + \rho_S R - (1-r)F)$

The auditor's audit intensity will decrease relative to that in the first scenario due to the fear of being fired, unless the auditor believes that there is a significant expected payoff to the market determining she had been fired because she refused to give ground to her client, $\rho_S R$. Again, auditors seem to be aware of this dynamic and frequently claim that they are "damned if you do, damned if you don't", since they lose a client, and often their fee, when they find a misstatement and get sued by shareholders if they don't find the misstatement. Furthermore, since C^A_λ is assumed to be positive, if $(1-r)F > \rho P^A + \rho_S R$, there is no solution to the equation above and the auditor's best choice will be the corner solution where $\lambda = 0$.

The manager optimizes his level of effort, taking into consideration the auditor's response to his choice in the same way he did in the first scenario. His optimal μ is therefore set such that:

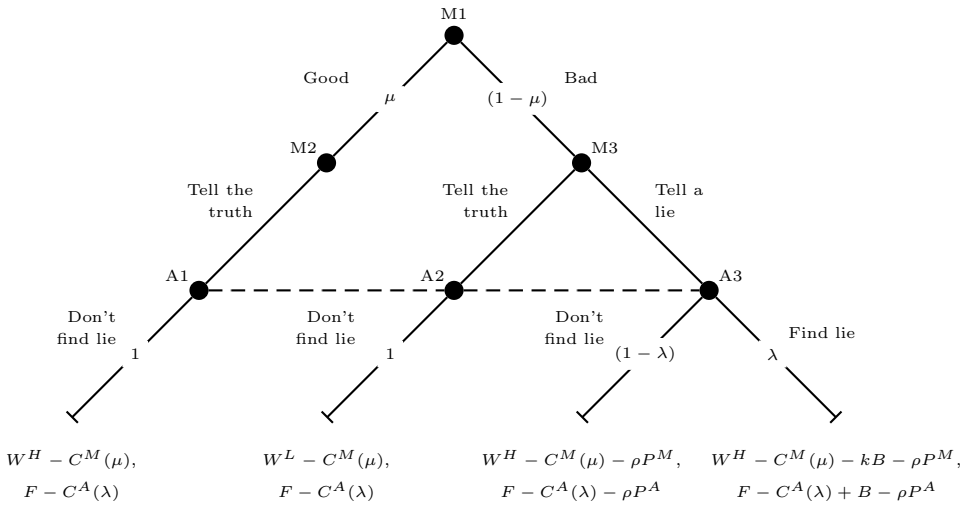

Figure B.7: Reduced extensive form auditing game if the bribing subgame resolves in the "collusive auditor" scenario

Manager's Optimal Choice 2. $C^M_\mu = \lambda\xi(W^H - W^S - \rho_S P^M) + (1 - \lambda\xi)\rho P^M$

where ξ is defined the same way as it was in the compliant manager scenario. The interpretation of the manager's optimal effort in scenario 2 is similar to that in scenario 1. Because in this scenario condition 1 is met, the first term on the left-hand side of the manager's optimum in 2 is smaller than the parallel term in scenario 1. This means that the manager will set his effort level, μ, lower than he would if he could not fire his auditor.

Collusive auditor scenario As in the previous two scenarios, the collusive auditor scenario's expected payoffs are illustrated in Figure B.7. The logic used to solve the game under this scenario is the same as in the other two scenarios. Proposition 4 still holds true, so the players' ex ante expected payoffs are:

Manager's Payoff 3. $W^H - C^M(\mu) - (1-\mu)[\lambda(kB) + \rho P^M]$

Auditor's Payoff 3. $F - C^A(\lambda) + (1-\mu)(\lambda B - \rho P^A)$

For this set of payoffs, the auditor sets her optimal λ such that:

Auditor's Optimal Choice 3. $C_{\lambda}^{A} = (1 - \mu^{*})B$

This scenario is noteworthy in that the auditor's decision is no longer driven by the cost of getting caught, but instead by the size of the bribe on offer.[11] Certainly, the cost of getting caught is implicitly included here, since the bribe must be greater than the expected value of the cost of getting caught. But the dynamic has changed from one of the auditor trying to protect herself from the fury of the market to one of pursuing a share of the rents that the management is appropriating.

In this scenario, management will set μ such that:

Manager's Optimal Choice 3. $C_{\mu}^{M} = \lambda\xi(kB) + (\rho P^{M})$

where again ξ is the same as it was defined in the first scenario. Important to note is that in the special case where $k = 0$ the manager will set his effort level at the same, lower level he would set if there were no auditing at all. If k is positive, the manager's effort will increase, but given that $kB < W^{H} - W^{L} - \rho P^{M}$ for the "collusive auditor" scenario to be the equilibrium scenario, it would not increase to the level where it would be if the auditor were incorruptible.

B.1 Policy Implications

This model provides a framework for understanding more fully the possible effects of a policy change on audit intensity, manager effort levels, and information quality in the market. The strategic interactions described in the game allow us to consider more than the intuitive first-order effects of, for example, a change in the magnitude of a penalty. Moreover, we can consider more precisely the socially desirable levels of auditing. In addition to considering the private benefits from the audit intensity, we can account for the positive externalities associated with an equilibrium strategy by constructing a measure of information "quality," defined as the ex ante probability that a company will release an accurate picture of its financial position.

[11] Similarly to the situation in the compliant manager scenario, there will be a solution to the auditor's optimum in collusive auditor scenario except where μ=1. In this instance, once again, λ would clearly be set to 0, and the management would never have need to bribe his auditor.

Pr=	Compliant Manager	Opinion Shopping	Collusive Auditor
true outcome disclosed	$1-(1-\mu)(1-\lambda)$	μ	μ
bad outcome disclosed	$(1-\mu)\lambda$	0	0
false & discovered	$(1-\mu)(1-\lambda)\rho$	$(1-\mu)(\lambda\rho_S+(1-\lambda)\rho)$	$(1-\mu)\rho$
false & not discovered	$(1-\mu)(1-\lambda)(1-\rho)$	$(1-\mu)(\lambda(1-\rho_S)$ $+(1-\lambda)(1-\rho))$	$(1-\mu)(1-\rho)$

Table B.3: Summary of information quality under each scenario

Information quality

Information quality can be thought of as the ex ante probability, θ, that any financial statement, given a set of equilibrium conditions, will report the true outcome. The value of information quality depends on the value the market participants put on that information. Note that market participants may be shareholders, prospective shareholders, employees, management of competitors, or anyone who values accurate information about the company for any reason. Let v_i be the amount market participant i is willing to pay to have $S^r = S^t$, where S^r is the reported state of the company and S^t is the true state of the company. The market therefore values a particular level of information quality as

$$V = \theta \sum_{i=1}^{N} v_i.$$

If θ is the ex ante probability of a true report and if the equilibrium conditions in the compliant manager scenario apply, then $\theta = 1-(1-\mu)(1-\lambda)$. In the other scenarios, $\theta = \mu$.

Table B.3 spells out the probability of any engagement falling into a variety of categories, conditional on which equilibrium conditions hold. Note that the market cannot differentiate between the contribution of μ and the contribution λ to the quality of information in the marketplace unless ρ is known, since only rates of discovered fraud and honestly disclosed "bad"

outcomes are seen by the market.[12]

Socially optimal outcome

The equilibrium strategies solved in the first part of this paper solve for the privately optimal strategies for the two active players. They say nothing about what is socially optimal. This section looks at how society's interests compare with the equilibrium outcomes and which levers might be available to policy makers to align social and private interests.

There are four components to this problem that a social planner would need to consider to maximize overall wealth. There are the individual payoffs of auditor and manager, the profits of the company that has hired the manager, and the aggregate value attached to the quality of information released by the company by all market participants.

$$\Pi_{society} = \Pi_{manager} + \Pi_{auditor} + \Pi_{company} + V$$

where V is the value of information quality above and beyond the value realized by the auditor, manager or company.

The profit of the company for these purposes can be thought of being some generic function of μ, $f(\mu)$, less the expected value of the payoffs to auditor and manager. I am assuming that the wages and fees are a frictionless transfer of wealth from company to manager and auditor and that penalties are a frictionless transfer from manager and auditor to the company.[13] The portion of the bribe not paid by the manager is paid for by the company, and again I am assuming a frictionless transfer for simplicity. The only exception to all the elements of the auditor and manager payoffs being straight transfers is in the opinion shopping scenario. The reputation benefits the auditor receives when the market discovers she was fired for trying to get the manager to correct a misstatement is gathered from the auditor's entire future portfolio. In general, the social optimum analysis of the opinion shopping scenario is more complex and less satisfying than the other scenarios,

[12] And it is possible that the market cannot tell which outcomes are "bad" in a manager's eyes, thereby making restatements the only group that the market can distinguish.

[13] This is ignoring the reputational penalties that are transfered, most likely with friction, to other clients, current and future. Assuming those penalties away helps make this analysis tractable and concise.

because the scenario has suppressed the complication of the manager finding a second auditor to issue a clean opinion.

Leaving aside the problems with the opinion shopping scenario, in general the only portions of the social objective function that are not canceled out as transfers between the different groups within the objective function are the costs expended by the manager and auditor to produce μ and λ, respectively, the profit made by the company and the value of the information quality.

Compliant Manager Scenario If the compliant manager equilibrium conditions hold, the social objective function is

Social Objective Function 1.

$$\Pi_{society} = -C^M(\mu) - C^A(\lambda) + f(\mu) + (1 - (1-\mu)(1-\lambda)) \sum_{i=1}^{N} v_i$$

If a hypothetical social planner was able to set the values of μ and λ (thereby by-passing the strategic interactions between the two players), the optimal investment decisions of both players are defined implicitly by

Optimal Manager Effort 1. $C^M_\mu = f_\mu + (1-\lambda) \sum_{i=1}^{N} v_i$

This result demonstrates that the optimal investment of manager effort is greater than it would be if the manager were compulsively honest and therefore the quality of information were not linked with the the company's outcome.

Optimal Audit Intensity 1. $C^A_\lambda = (1-\mu) \sum_{i=1}^{N} v_i$

The audit intensity is only valuable to the extent there is an incentive for the manager to lie.

Opinion Shopping Scenario The opinion shopping scenario is more complicated. To help keep it simple, I assume here that, as in the other scenarios, all components of the two players payoffs except for their cost functions are frictionless transfers between the various players. The information quality

metric and company profits are constructed the same way as well. But none of these capture the value of the market observing an auditor change: even though it occurs when the information contained in the financial statement is misleading, it is nonetheless valuable to have a clear indicator that there is a problem with the statement. To account for this, I construct another element V_s, which is similar to the information quality metric and captures the expected value market participants gain from observing a switch:

$$V_s = (1-\mu)\lambda \sum_{i=1}^{N} v_i^s$$

where presumably the value of observing a switch is no greater than being told the correct information in the financial statement, so $v_i \geq v_i^s$.

With this additional component, the social objective function is

Social Objective Function 2.

$$\Pi_{society} = -C^M(\mu) - C^A(\lambda) + f(\mu) + \mu \sum_{i=1}^{N} v_i + (1-\mu)\lambda \sum_{i=1}^{N} v_i^s$$

The optimal investment levels are defined by:

Optimal Manager Effort 2. $C_\mu^M = f_\mu + \sum_{i=1}^{N} [v_i - (1-\lambda)v_i^s]$

Once again, the optimal investment level for the manager is greater than it would be were he compulsively honest.

Optimal Audit Intensity 2. $C_\lambda^A = (1-\mu)\sum_{i=1}^{N} v_i^s$

For every value of μ, the optimal audit intensity here is less than or equal to the optimal audit intensity in the compliant manager scenario, since they contribute only to the possibility of an auditor switch, not directly to financial statement quality.

Collusive Auditor Scenario In the final scenario, the social objective function is:

Social Objective Function 3.

$$\Pi_{society} = -C^M(\mu) - C^A(\lambda) + f(\mu) + \mu \sum_{i=1}^{N} v_i$$

The optimal value of manager effort is defined by

Optimal Manager Effort 3. $C^M_\mu = f_\mu + \sum_{i=1}^{N} v_i$

Note that the difference is the greatest in this scenario between the optimal effort investment and what would be optimal were the manager compulsively honest. The solution for the auditor is a corner solution

Optimal Audit Intensity 3. $\lambda = 0$

In this case, the auditor adds no social value.

One interesting result of the part of the analysis is that regardless of the equilibrium strategy, if the manager has an incentive to lie, the optimal investment in manager effort will appear to the company and manager as excessive. If policy makers were to be successful in achieving these optimal results, they should expect to hear complaints from corporate interests that the regulations or risk of penalties create an onerous burden on the executive and are not cost-effective. The constituency that benefits from information quality is quite diffuse and many realizing the benefits may not be able to trace their improved fortunes to its origin in the manager's increased efforts. As a result, there are significant political economy barriers to achieving good policy in this arena.

Centrally planned audit intensity The above discussion of the socially optimal levels of μ and λ is useful but artificial. In the U.S. at least, there is no attempt for a central benign planner to set manager effort levels. There is, however, an attempt through generally accepted audit standards to approximate, at least, a centrally planned audit intensity. In this case, we can look at how optimal audit levels change once managers' effort levels are set privately and therefore respond to the audit intensity.

In this case, auditors contribute value through two mechanisms. They add to managers' incentives to exert effort and they contribute directly to

information quality in the compliant manager equilibrium scenario. To determine the optimal level of auditing in this case, we can optimize the social objective function with respect to λ treating μ as a function of λ. Generically, the first order condition is:

$$C_{\lambda}^{A} = \frac{\partial \Pi_{society}}{\partial \lambda} + \frac{\partial \Pi_{society}}{\partial \mu}\frac{\partial \mu}{\partial \lambda}$$

If μ is produced at the socially optimal level, the second part of the right hand side will zero out, and the optimal audit intensity will be the same as in the previous section. Manager effort is likely under-produced, since even if the manager's contract is well designed, it will be designed by the company, which will not consider the positive externality created by the contribution manager effort makes to information quality. In such a case,

$$\frac{\partial \Pi_{society}}{\partial \mu} > 0.$$

If λ is not responsive to the manager's choice of μ,

$$\frac{\partial \mu}{\partial \lambda} > 0$$

as well, and the optimal audit intensity is greater than it would be if we could set μ at the socially optimal level.

This is the case even in the instance of the collusive auditor scenario where in the initial analysis the optimal intensity was zero. Instead, the optimal audit intensity would be:

$$C_{\lambda}^{A} = (-C_{\mu}^{M} + f_{\mu} + \sum_{i=1}^{N} v_i)\frac{kB}{C_{\mu\mu}^{M}}$$

The socially optimal level of audit intensity in all equilibria will be reached when the private optimization calculations equal the social optimization calculations.

Figure B.8 offers a visual representation of both of the mechanisms where the auditor has an effect: the incentive effect and the information quality effect. Increasing the incentive effect will push the dotted line that divides "good" outcomes from "bad" to the right, increasing the fraction of "good" outcomes. The information quality will increase by growing the size of "true outcome reported" circle. It will do this both through an increase in good outcomes and an increased fraction of bad outcomes reported honestly.

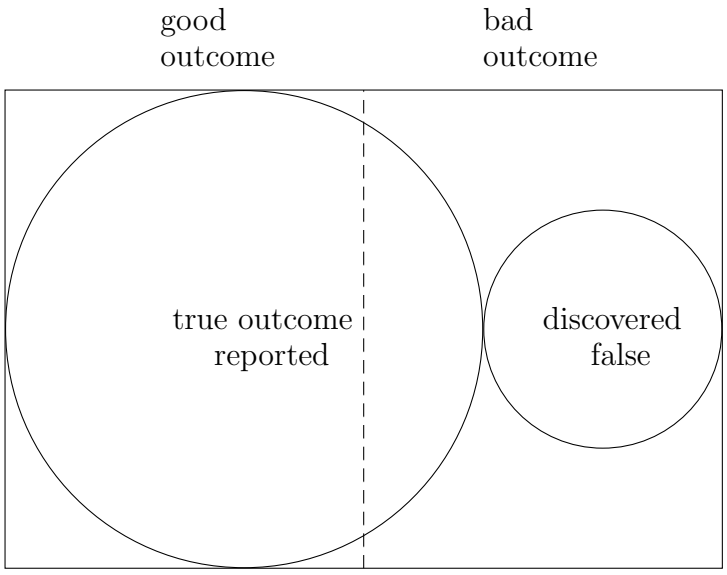

Figure B.8: Diagram of company outcomes and information quality

Optimal equilibrium conditions The social planner need not stop at determining the optimal audit intensity given an equilibrium outcome. Which outcome is the equilibrium is, of course, of great policy interest as well. Table B.4 summarizes the various equilibrium conditions that must hold for each of the three scenarios to be the result of the players' equilibrium strategies.

While I will not prove it formally here, it is fairly clear that the socially optimal equilibrium outcome is the compliant manager scenario. Society gets an automatic extra benefit for every level of audit intensity greater than zero through the improved quality of information. The incentive effects are greater as well (holding all else constant).

There are several avenues to achieving the an equilibrium that results in the compliant manager. Policy makers could raise penalties, improve post-release detection rates, increase the scrutiny of the manager for making an auditor change, and restrict financing mechanisms for bribes. Changes in any combination of these tactics would tend to push auditor-client pairs that are

	Compliant Manager	Opinion Shopping	Collusive Auditor Fire / No Fire
Firing condition $W^S - W^L > \rho_S P^M$	False	True	True / False
Bribing condition (a) $min(\frac{1}{k}(W^H - W^S - (\rho_S + \rho)P^M), B^{Max}) \geq \rho P^A + \rho_S R - (1-r)F$	False	False	True / Indet.
Bribing condition (b) $min(\frac{1}{k}(W^H - W^L - \rho P^M), B^{Max}) \geq \rho P^A$	False	False	Indet./ True
"Bad" outcome possible $W^H - W^L > \rho P^M$	True	True	True

Table B.4: Summary of conditions met under each scenario

on the margins of an equilibrium strategy towards the "compliant manager" scenario—or towards the scenario where the manager never has an incentive to lie and therefore the audit adds no value.

But given the potential significant heterogeneity in auditor and manager characteristics, chances are that a blanket policy change, such as a change in penalties for getting caught in a lie, will have very different effects on different auditor-client pairs, depending on their original equilibrium strategies and how close they are to shifting strategies. To see the complexity of the consequences of a policy change, I look at one example, the issue of proportionate liability.

Proportional liability

A major legal question being debated today since PSLRA implemented a proportionate liability standard in 1995 is how to determine the proportion of damages that is assigned to auditors (or other gatekeepers). Determining the correct course from an incentives perspective is not a straight-forward task, but the model presented here can help at least in defining the issues.

How the penalty apportionment affects the decisions of the two players is critically dependent on their equilibrium strategies. A marginal change in the apportionment of the total plaintiff award (which will have countervailing effects on the penalties recognized by each player) will have either a marginal effect on the optimization decisions made by each player, which can be understood through a comparative statics analysis, or it will shift the entire game to a new equilibrium strategy.

If some large portion of the total damages were charged to the manager, and if it were to have the effect of making $W^H - W^L < \rho P^M$, therefore removing the incentive for the manager to lie in the first place, that would clearly be an efficient solution and would allow us to do away with the requirement for an external audit (since there would be no fraud to find).[14]

However, through damage caps, liquidity constraints, risk aversion, or other barriers, it may not be possible to ensure that $W^H - W^L < \rho P^M$. Living, therefore, in a world in which we need to introduce auditors, the question becomes how to best motivate both actors to perform their jobs in as efficient manner as possible through the manipulation of penalty sizes exacted on one actor or the other.

Compliant manager comparative statics If the conditions are such that the "compliant manager" equilibrium conditions are met, and that the parameters are such that there is room for the penalty parameters to change without shifting the game to a different equilibrium strategy, a comparative statics analysis of a change in the proportion of a total penalty on the investment decisions of both players can help us understand the optimal proportion

[14] As with this entire paper, I am only considering the auditor's role as monitor of the information quality released by the executive manager. Should the auditor provide other services, as is likely the case, there would still be a role for external auditing, though perhaps one that could be taken care of entirely through private contracting.

of penalties. To look directly at the effects of proportional liability, I re-write P^M and P^A such that $P^M = \alpha P$ and $P^A = (1-\alpha)P$, where P is the total damages awarded to plaintiffs and α is the fraction of those damages assigned to the manager.[15]

Manger's response The effect of an incremental change in α on the manager's effort level is:

$$\mu_\alpha = \left. \frac{\rho P \left((1-\lambda) - \frac{(1-\mu)\rho(1-\alpha)P}{C^A_{\lambda\lambda}} - (W^H - W^L - \rho\alpha P)\frac{(1-\mu)}{C^A_{\lambda\lambda}} \left(2 - \frac{(1-\mu)\rho(1-\alpha)PC^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} \right) \right)}{C^M_{\mu\mu} + (W^H - W^L - \rho\alpha P)\frac{\rho(1-\alpha)P}{C^A_{\lambda\lambda}} \left(2 - \frac{(1-\mu)\rho(1-\alpha)PC^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} \right)} \right|_{\lambda=\lambda^*}$$

Taking advantage of the fact that the expression is evaluated at λ^*, we can use the implicit definition of λ^*, $C^A_\lambda = (1-\mu)\rho(1-\alpha)P$ to respell the expression more succinctly:

$$\mu_\alpha = \left. \frac{\rho P \left((1-\lambda) - \frac{C^A_\lambda}{C^A_{\lambda\lambda}} - (W^H - W^L - \rho\alpha P)\frac{(1-\mu)}{C^A_{\lambda\lambda}} \left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} \right) \right)}{C^M_{\mu\mu} + (W^H - W^L - \rho\alpha P)\frac{\rho(1-\alpha)P}{C^A_{\lambda\lambda}} \left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} \right)} \right|_{\lambda=\lambda^*}$$

Auditor's response The auditor is affected by a change in α through two avenues: a direct reduction of her own penalty ($(1-\alpha)P$ and a potential change in the manager's effort level, μ. Therefore, the total effect on the auditor from a change in α is:

$$\frac{d\lambda}{d\alpha} = \frac{\partial\lambda}{\partial\mu}\frac{\partial\mu}{\partial\alpha} + \frac{\partial\lambda}{\partial\alpha} = -\frac{\rho(1-\alpha)P}{C^A_{\lambda\lambda}}\mu_\alpha - \frac{(1-\mu)\rho P}{C^A_{\lambda\lambda}}.$$

Directions of responses The signs of both expressions are indeterminate and depend in large part on the exact nature of the *auditor's* cost function.

[15]This analysis ignores the effects insurance might have. The presence of insurance, particularly insurance purchased by the company to cover the manager's liability, and the related moral hazard that attends insurance may well change the results presented here significantly.

To gain some traction on this problem, therefore, I consider two plausible functional forms for the auditor's cost function. The function is either a logarithmic function of the form

$$C^A(\lambda) = c - b\ln(1-\lambda) \tag{B.1}$$

or the related rational algebraic function

$$C^A(\lambda) = c + \frac{b}{(1-\lambda)^n} \tag{B.2}$$

where $n \geq 1$.

Equation B.1 properties

$$\frac{C^A_\lambda}{C^A_{\lambda\lambda}} = 1 - \lambda$$

and

$$\frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} = 2$$

Equation B.2 properties

$$\frac{C^A_\lambda}{C^A_{\lambda\lambda}} = \frac{1-\lambda}{n+1}$$

$$\frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} = \frac{n+2}{n+1}$$

The possible combinations of responses of the players to a change in α, given the auditor's cost function is of either of the above types, are summarized in proposition 5.

Proposition 5. *Plausible conditions could exist such that the two players would respond to an increase in α in any of the following combinations:*

- $\mu_\alpha > 0$ *and* $\lambda_\alpha < 0$
- $\mu_\alpha = 0$ *and* $\lambda_\alpha < 0$

- $\mu_\alpha < 0$ *and* $\lambda_\alpha < 0$
- $\mu_\alpha < 0$ *and* $\lambda_\alpha = 0$
- $\mu_\alpha < 0$ *and* $\lambda_\alpha > 0$

Proof. The combination of $\mu_\alpha \geq 0$ and $\lambda_\alpha > 0$ is *not* a possible response, since $\forall \mu_\alpha \geq 0$,

$$-\frac{\rho(1-\alpha)P}{C^A_{\lambda\lambda}}\mu_\alpha - \frac{(1-\mu)\rho P}{C^A_{\lambda\lambda}} < 0$$

by the assumption that $C^A_{\lambda\lambda} > 0$ and the definitions of μ, ρ, α and P.

The pair $\mu_\alpha > 0$ and $\lambda_\alpha < 0$ will result when the auditor's cost function is of the form (B.2) above and

$$n + 1 > \frac{W^H - W^L - \rho\alpha P}{\rho(1-\alpha)P}.$$

If $\mu_\alpha > 0$, then $\lambda_\alpha < 0$ for the same reasons discussed above. An auditor cost function of the form (B.2) will ensure that the denominator is unequivocally positive, since

$$1 \geq 2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2} > 0$$

and all of the other components of the denominator are positive either by definition or by the conditions necessary to have the compliant manager scenario be the dominant equilibrium strategy. The condition $n + 1 > \frac{W^H - W^L - \rho\alpha P}{\rho(1-\alpha)P}$ ensures that the numerator is positive.

The pair $\mu_\alpha = 0$ and $\lambda_\alpha < 0$ results when the auditor's cost function is the form B.1 above. It is easy to see that $\mu_\alpha = 0$ by substituting in the expressions for $\frac{C^A_\lambda}{C^A_{\lambda\lambda}}$ and $\frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}$ given above. If $\mu_\alpha = 0$, then

$$\frac{d\lambda}{d\alpha} = -\frac{(1-\mu)\rho P}{C^A_{\lambda\lambda}}$$

which is clearly negative.

The manager's response to an increase in penalty proportion is negative when the auditor's functional form is of type (B.2) and

$$n + 1 < \frac{W^H - W^L - \rho\alpha P}{\rho(1-\alpha)P}.$$

by the same logic discussed above when the response was positive. In that case, the auditor's response to a change will also be negative if

$$-\mu_\alpha < \frac{1-\mu}{1-\alpha}.$$

If that is not the case, $\lambda_\alpha \geq 0$. □

These results are interesting because of their very indeterminacy. It is clear that because of the strategic interactions between auditor and manager that understanding the first-order, intuitive effects of a change in proportion of penalty are not sufficient to understand the behavior of the two players. If policy makers increase the proportion of the penalty assigned to the manager in an attempt to eliminate the incentive to lie and they are not successful in causing a change in equilibrium strategy, they may end up reducing both players' investments and *lowering* overall welfare!

Given that understanding the effect of a change in penalty proportion is tricky because of the countervailing forces, there is more to be learned by considering the related problem of the effect on each player's choices of raising first the manager's penalty and then the auditor's penalty.

An increase in the manager's penalty has straightforward, clear consequences: the manager will increase his efforts and the auditor will, in response, decrease her audit intensity. The manager's response is

$$\mu_{P^M} = \frac{\rho(1-\mu) + (1-\lambda)\frac{C^A_{\lambda\lambda}}{P^A}}{(W^H - W^L - \rho P^M)\frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}} > 0$$

The sign of the expression is clearly positive, since every component of the expression is positive, either by definition, assumption, or equilibrium condition.

Unlike in the proportional liability question, the auditor's response is only affected through the manager's changed behavior. Since the manager increases μ and $\lambda_\mu < 0$,

$$\lambda_{P^M} < 0.$$

If we look instead at a marginal increase in the auditor's penalties, we also get fairly unambiguous results. This time, both players will increase

their investments. The manager's effort change is:

$$\mu_{P^A} = \frac{(1-\mu)\rho(W^H - W^L - \rho P^M)\left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)}{C^M_{\mu\mu}C^A_{\lambda\lambda} + \rho P^A(W^H - W^L - \rho P^M)\left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)} > 0$$

as long as the auditor's cost function is of the types considered above. The auditor's overall change in λ is also positive in response to an increase in P^A:

$$\frac{d\lambda}{dP^A} = \frac{\partial\lambda}{\partial\mu}\frac{\partial\mu}{\partial P^A} + \frac{\partial\lambda}{\partial P^A} = \frac{(1-\mu)\rho C^M_{\mu\mu}}{C^M_{\mu\mu}C^A_{\lambda\lambda} + \rho P^A(W^H - W^L - \rho P^M)\left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)} > 0$$

again, as long as the auditor's cost function is of the types considered above.

Therefore, if policy makers are confident that most or all auditor-client pairs are operating under the compliant manager scenario and that the manager's penalty, for whatever reason, cannot be set high enough to preclude the need for auditors, increasing auditor penalties is a more unambiguously effective way to improve the information quality and company profits. This conclusion is parallel to those drawn by DeAngelo (1981) and Dye (1993), since both authors predict that larger firms' effective penalties are larger, due either to larger risk of litigation or to increased reputational capital on the line, and therefore the information quality of the resulting engagements are higher.

Collusive auditor scenario The picture changes, however, if the compliant manager strategy is not the equilibrium strategy. The comparative statics for the opinion shopping scenario are complex and highly indeterminate, so I will not go through the analysis here. The analysis of the collusive auditor scenario is relatively straightforward, however, and illustrative.

Policy makers following the rule of thumb proposed above that raising penalties on auditors is the more effective approach to improving information and corporate profits will cause very different responses in those cases where the collusive auditor strategy is dominant. Increasing penalties on auditors will only cause them to demand larger bribes from management—which may come primarily out of the pockets of shareholders—until the equilibrium strategy shifts to one other than the collusive auditor strategy. While increasing auditor penalties might be effective in forcing a change in strategies,

the most effective way is to shift more of the liability on to the manager, since an increase in α will decrease the amount the manager is willing to pay by $\frac{\rho P}{k}$ (recall that $k \in [0,1]$) whereas it will only lower the amount the auditor is willing to accept by ρP.

As with the compliant manager scenario, looking at the penalties for manager and auditor separately is more illuminating. An increase in the manager's penalty causes an increase in the manager's effort and a decrease in the audit intensity:

$$\mu_{P^M} = \frac{\rho}{C^M_{\mu\mu} + \frac{kB^2}{C^A_{\lambda\lambda}}\left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)} > 0$$

$$\lambda_{P^M} = -\frac{B}{C^A_{\lambda\lambda}}\mu_{P^M} < 0$$

An increase in the auditor's penalty will depend on how responsive B is to the increased risk. If for some reason the manager is already offering more than the minimum required to gain the auditor's cooperation, $\frac{\partial B}{\partial P^A}$ may equal zero. If the constraint is binding but the equilibrium strategy does not change, $\frac{\partial B}{\partial P^A} > 0$. The comparative statics for the two players are therefore:

$$\mu_{P^A} = \frac{k\lambda + \frac{(1-\mu)kB}{C^A_{\lambda\lambda}}\left(3 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)}{C^M_{\mu\mu} + \frac{kB^2}{C^A_{\lambda\lambda}}\left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)}\frac{\partial B}{\partial P^A} \geq 0$$

$$\frac{d\lambda}{dP^A} = \frac{\partial\lambda}{\partial\mu}\frac{\partial\mu}{\partial P^A} + \frac{\partial\lambda}{\partial P^A} = \frac{(1-\mu)C^M_{\mu\mu} - kB\left(\lambda + \frac{(1-\mu)B}{C^A_{\lambda\lambda}}\right)}{C^M_{\mu\mu}C^A_{\lambda\lambda} + kB^2\left(2 - \frac{C^A_\lambda C^A_{\lambda\lambda\lambda}}{(C^A_{\lambda\lambda})^2}\right)}\frac{\partial B}{\partial P^A}$$

The sign for the change in λ will depend on whether the increased bribe or the increased manager effort (and resulting reduced likelihood that there is a misstatements to find) dominate the auditor's response. In the special case where $k = 0$, the manager will not respond to an increase in auditor penalties and the auditor will increase her audit intensity (assuming B is adjusted to accommodate the increased risk).

In general, the lesson from this comparative statics exercise is that policy changes will have heterogeneous effects, depending on the equilibrium strategies employed by auditor-client pairs and on the specific parameters of

each game. Changing policy to correct the suboptimal incentives in one pair may worsen the incentives for another pair. Having audits performed by large firms with more to lose may in many cases have the positive social effects that DeAngelo (1981) and Dye (1993) predict, while at the same time *worsening* the social consequences of the audit in the instances where a manager draws heavily on his company's resources to induce collusion in his auditor.

Appendix C

Excerpts from the PricewaterhouseCoopers' archives

The PricewaterhouseCoopers archives were donated by the firm to the Columbia University Rare Books and Manuscripts Library in 2000, and are available to the research public on-site at the library. The materials may be copied, subject to certain restrictions, but the originals may not be removed. The archives consist of 148 linear feet of material in 98 record cartons and 4 flat boxes.

According to the archive documentation:

> The documents from the offices Price Waterhouse & Co. have been collected by Price Waterhouse Library and Information Center, with additions from May family, files from the office of H. W. Bevis and historical research files from Winthrop Group. Coopers & Lybrand materials include records created by Lybrand, Ross Brothers & Montgomery, Coopers Brothers and other firms that have subsequently merged to form Coopers & Lybrand. James Mahon files were donated to Coopers & Lybrand by Mahon family. Audiovisual materials and large collection of first editions and periodicals was collected by the C&L librarian and then preserved by Catherine "Millie" McGovern, C&L manager and event coordinator. Historical research files for C&L centennial (1998) were created by The Business History Group.

I spent a month at the library reviewing some of the material in the archives. While time restrictions prevented me from looking through all of the material, I used the finding aid prepared by the curators of the archive to identify those boxes that contained material relating to auditing, firm policies or manuals, and the correspondence of firms' leaders. I limited my search to materials dated the 1920s or later. The finding aid is a good but imperfect documentation of the archive. As a result, some of the material used here was found in folders stored in the same boxes as the folders I identified as being of interest, but that I had not flagged as interesting in advance. This suggests that there is likely material in the archive that relates to the issues discussed in the dissertation that I was unaware of and that was not filed next to the more clearly labeled files of interest.

Due to my limited time with the archive, I chose not to look at the extensive interview material collected by both Price Waterhouse and Coopers & Lybrand for retrospective histories commissioned by the firms. While this material is no doubt quite interesting, I decided that I would focus on primary material generated during the course of the day-to-day operations of the firms, as they are more likely genuine expressions of the concerns of the firms. Furthermore, Brewster (2003) used this material extensively in his book, and therefore highlights of it are already available to the interested reader.

Below are more extensive quotes from some of the most interesting material in the archives.

C.1 Speeches to the Annual Partners' Meetings given by John Biegler, 1971-1979

1971 Our profession is on the threshhold [sic] of a brand new era. We are being called to account for our excesses and omissions of the past and, luckily, the profession as a whole still has time to change its ways to recover the public esteem and confidence that I sincerely and regretfully believe it has lost.

...

...The excesses of practice expansion, foolish pursuit of growth for

growth's sake, the bending of principle by our profession to accommodate management's interests rather than that of the investing public all are coming home to roost. You heard earlier this week a tabulation of lawsuits against major firms. I hope it wasn't lost on you, but there is a correlation between the offenders of the past and the defendants of today.

...

In the past we too have been guilty of excesses. In part this may have been because of a misunderstanding of our goals. Let no man in this room carry away from this meeting any misapprehension that the most important measure of a successful practice office will be the net profit figure or the increase in chargeable hours or the number of new clients gained.

...

The primary goal of this firm has always been professional excellence. The partners of this firm are expected to be professionals first and administrators second.... Professional excellence is not subject to numerical measurement, and except by inference it won't appear in any of the firm's operating statements. Notwithstanding the impossibility of direct expression in numerical terms, professional excellence will be judged by the quality of our practice as best we can perceive it from the internal and external indicators available to us. (Biegler, 1971)

1972 The theme of the meeting was growth....

....I think that the goals I see can be simply stated....

First, the goal of professional excellence. This means unswerving adherence to the highest possible standards of performance; it means quality work for quality clients and the broadest possible scope of professional services in order that we may meet the changing needs of these clients. I am sure we all agree that professional excellence is the one goal which overrides all others.

The second goal is one of continuing growth of the firm....

The third goal is one of profitability....

The fourth goal that I see is maintenance of our preeminent position as independent accountants of major international businesses whether

they be headquartered in this country or some other part of the world.... (Biegler, 1972)

1973 First let us consider what the theme of the meeting was this year. Was it the continuing pursuit of professional excellence in the conduct of our practice? Was it the need for continuing growth of the practice? Or was it the necessity of meeting our profitability goals through conducting our affairs in an orderly and businesslike manner? I suggest that if you look back over all of the sessions ... you will find that the theme was really a combination of all three of these things. And rightly so, since only through balanced emphasis on these three essential elements of our practice can we hope to continue to build for the future and thus insure that Price Waterhouse maintains its preeminent position as the leader of the accounting profession.

Two years ago in this very room I reminded the partners that irrespective of what the other firms in the profession might or might not do, and irrespective of how they might conduct themselves, we, Price Waterhouse, were going to observe our own high standards of performance and conduct....

The partners' response to my plea for professional excellence was immediate.... In case after case, I saw proposals by some of our clients to follow marginal accounting practices being dealt with in a firm manner. In more than one instance we found it necessary to part company with a client having unacceptable ethical standards....

And yet, I have been surprised to discover since that meeting two years ago that there were a few partners who seem to have misread my message. Apparently they thought I was saying to them that we should so concentrate our efforts to serve our existing clients and protect our reputation that continuation of the never-ending process of building and renewing our practice should take a back seat....

I was sufficiently concerned with this reaction to my 1971 remarks that I deliberately placed the emphasis of my remarks at the close of last year's meeting on the need for the firm to continue to expand both in the size and the scope of its professional practice....

The effects of my remarks were once again very immediate. The partners pitched in with the task of sharpening up their skills at practice development....

And yet, I have discovered since last year's meeting that there were a few partners who once again apparently misread my message. They thought I was saying 'the lid is off.' The way they apparently heard it, growth and profits was the name of the game, and that emphasis on quality of professional service, and in particular quality of clientèle, was now to shift into the background in order that we might seek out every chargeable hour we could get our hands on....

I am thoroughly convinced that there is absolutely no inconsistency between these three major goals of professional excellence, growth and profitability. These goals can be viewed as being parallel and mutually supporting—not mutually exclusive.... (Biegler, 1973)

1974 [This speech was very similar to the plan laid out in 1972, with the exception that the four steps had multiplied to 10 steps—but overall still emphasizing the need for professional excellence, growth, and profitability.] (Biegler, 1974)

1975 ...[The] year brought with it the unsettling effects of a protracted legal controversy over the expulsion of a partner, unfavorable publicity to the firm as a result of disclosures of improper payments by a few of our clients, and the concerns of a growing number of troublesome practice situations. All of this took place against the larger background of increasing dissatisfaction on the part of the public, the press, government, and even some corporate directors with the manner in which the profession is carrying out its role as independent auditors....

...[It] is my judgment that we may have reached a critical period in our long history—a period in which our willingness to reassess our traditional attitudes and our approach to the way we go about our professional business could spell the difference between a Price Waterhouse which continues to be the leader in the profession and a Price Waterhouse which is just another big accounting firm.

...[All] of us agree that our #1 objective as partners is to zealously guard our firm's established reputation for professional excellence. We would also agree that the only way we can do this is through absolute adherence to the standard of top quality service to all of our clients. How are we really doing in adhering to this difficult standard?

From where I sit, I would have to tell you quite candidly that we are

not doing as well as we should and must. In too many cases our review of troublesome practice situations leads us to the conclusion that the situation might never have occurred if there had been greater partner involvement during all stages of the particular examination under scrutiny. The Auditing Standards Reviews, our primary monitoring device with respect to quality control, still disclose entirely too many instances where the available evidence points to insufficient partner involvement, starting with lack of adequate involvement in the planning process, little evidence of participation by the partner in the field work, and even less evidence of partner review of the working papers....

....

Of course, the profitability of an office as compared with standard is not the whole story when it comes to evaluating our performance as businessmen. We must also look to our practice development performance as measured by the growth rate percentage, and as good businessmen we must constantly strive to improve our PAD rate.[1] It seems to me that the performance of each office from a business point of view can be pretty well evaluated on an on-going basis by close attention to each of the three factors I have just mentioned—office contribution to profit as compared to standard, growth rate and PAD rate.... Both Tom Ganner and I, as well as the other members of the Policy Committee, will be monitoring these three figures, office by office, as well as on a firmwide basis, with particular care during the coming months.... (Biegler, 1975)

1976 ...The past twelve months have also seen the stage set for an intensive public examination of the role and methods of operations of the major accounting firms. It is fair to say that we are rapidly reaching the stage where all of our affairs are going to be conducted in a goldfish bowl—and I regret in an adversary atmosphere where structural flaws in our organization, weaknesses in the implementation of prescribed procedures, and failures in our professional performance will be highlighted and perhaps even be exaggerated beyond recognition.... The way we respond to these efforts will be critical—if we can demonstrate that we are truly independent of our clients, if we can demonstrate that we instinctively put the public interest ahead of the client's interest, if

[1]The "PAD rate" is never defined in the speech and does not appear elsewhere in firm documents. From the context, it most likely is an acronym for utilization rates or the like.

we can demonstrate by word and deed that we really are dedicated to professional excellence, we will ultimately carry the day—if we do not, we will find our stature further diminished in the eyes of the public.

...

As your Senior Partner, I also take final responsibility for maintaining—and sharpening—the competitive edge. While much fine progress has been made, I must tell you that I am still not completely satisfied that the partners are doing as much as they could to maximize either the firm's growth or its profitability. ...

I have suggested to the Policy Committee that, as part of our general program of reorganization, we take a fresh, hard look at the firm's systems for recognizing partner performance. I intend that this be done in a broad-based way, including partner career path aspects as well as related compensation aspects.

It may be that the time is right for considering a more methodical way of recognizing, in profit-sharing structures, the many different areas and levels of partner responsibility that already exist and to give even sharper focus to individual partner performance. The time may, indeed, be past when, for our common good, we can live any longer with any partner's inability—or unwillingness—to do what is necessary. (Biegler, 1976)

1977 The 1977 fiscal year of this firm is now history. It may well be that, when the long history of the firm and the profession is written, the past twelve months will merit being singled out as representing a very critical turning point for us. In any event, I suspect that never in the memory of any of the active partners of this firm has there been a year of greater challenge or perhaps for some even greater personal trial....

...It is vitally important that when we reflect on the main issues we covered here in the past two days we do so with a sense of balance. I have emphasized the need for this sense of balance, or perspective, if you will, in nearly every one of the eight partners' meetings I have been honored to chair.... This year I would like to remind partners that even the best defense simply will not win the ballgame.

Much of our meeting has been devoted to various serious challenges facing our profession and our firm....

But even if we can perfect all of our defenses, the goal we have set for ourselves can only be reached if at the same time we strengthen our attack as well. I refer to the many opportunities for increasing the firm's developmental efforts—today, tomorrow and in the years to come.... (Biegler, 1977)

1978 ...We cannot be complacent, but we can certainly feel proud. We have been through some very heavy weather, but we have made our way through it successfully and been sobered and strengthened by the experience. ...

...The profession frankly has tended to produce a little too little a little to late. We have too often simply reacted to outside pressures. We should become more of a self-activating profession, moved to identify and correct our shortcomings by our own restless perfectionismnot because politicians threaten less workable remedies.

I believe that the hope of maintaining a free society may rest on our ability to become a self-correcting society, and the profession as a whole—and our firm in particular—has a special responsibility and opportunity to lead in this endeavor.

Otherwise, any change which renders present practices inadequate will become an excuse to make government bigger. And, in a rapidly changing society, government responsibility could quickly become total. (Biegler, 1978)

C.2 Liability crisis excerpts (1926-2006)

N.B.: Not all of the following excerpts are from the PricewaterhouseCoopers archives. They are included here to give the reader the full sweep of the liability crisis rhetoric up to the present day.

1926 Letter from Sir Nicholas Waterhouse to George O. May

[Representatives of the Institute] are taking this opportunity [of a government committee looking to improve the Companies Act] of attempting to put some limitation on the measure of damages that

> can be brought against an accountant in cases where a client has a grievance for the non-discovery of some fraud or peculation, the suggestion being that in no case should the damages be more than say five times the annual audit fee. It is not intended of course that the limitation of penalties should apply in the case of an auditor who gave a certificate which he knew to be untrue or in any other way was acting fraudulently. I do not know what chances there are of any legislation in this direction but I sincerely hope some good may come of the Institute's recommendations. (Waterhouse, 1926)

1934 Letter from George O. May to the Honorable James Landis of the Federal Trade Commission

> Today, accountants feel, I think, that the courts do not understand accounts and are apt to reach the most extraordinary conclusions in relation to them. To an accountant, the [decisions of recent courts] afford ample evidence of the fact that frequently not even the fundamental character of the accounting problem is appreciated. In these circumstances, and with the law conferring jurisdiction on courts of every kind and quality and imposing liability bearing no relation to the injury caused even though there is no suggestion of anything more vicious than honest error, it seems to me that hesitation to accept the responsibilities of the Act on the part of the accountant is (if he has the prudence which is the first requirement of his profession) inevitable. (May, 1934b)

1959 J.S. Seidman "What is the Future of the Accounting Profession?"

> The legal responsibility of CPAs today seems so broad that it could be disastrous. Complete insurance protection is virtually impossible and the cost of available insurance is mounting. Will legislation come about to keep the CPA's liability within realistic bounds? Otherwise, will the huge risk make public accounting practice uneconomical and reduce the number of CPAs engaged in it? Will the government then have to fill the void? (Seidman, 1959, 31)

1968 A statement of Lybrand, Ross Bros. & Montgomery upon the criminal convictions of three of their auditors for their role in the Continental

Vending scandal

"If this decision were to stand, the risks assumed by professional auditors would become virtually intolerable. This would necessitate a drastic revision of the auditor's role, which would have grave consequences for the interests of the business community and investors." (Kaplan, 1968).

1975 "Who Judges the Auditor, and How?" from *The Journal of Accountancy*

> The inequity of the auditor's being judged by the general public rather than by those who might qualify under the definition of 'one that is of equal standing with another' is evident from the imperfect and, in some respects, unrealistic impression of the auditor's role held by the public. Gross misconceptions of the auditor's duties and responsibilities are evident in polls taken expressly to determine what others know and think about the auditor. (K. I. Solomon et al., 1976)

1992 The Liability Crisis in the United States: Impact on the Accounting Profession

> The present liability system has produced an epidemic of litigation that is spreading throughout the accounting profession and the business community. It is threatening the independent audit function and the financial reporting system, the strength of U.S. capital markets and the competitiveness of the U.S. economy. (Arthur Andersen et al., 1992)

2006 Serving Global Capital markets and the Global Economy: A View from the CEOs of the International Audit Networks

> Meeting [the responsibilities to serve as a force for stability and integrity in the financial markets] will require, among other things, our continued ability to attract men and women of skill and integrity to our profession. We presume, therefore, that the liability and regulatory system governing the auditing profession will be reformed in a way that protects investors without putting the financial well-being of our networks at risk unfairly. It is well known that the liability exposure

> of all current lawsuits outstanding against our networks substantially exceeds our combined capital. Our firms are not and can never be the insurers of last resort for the capital markets, where capital flows *each day* are orders of magnitude larger than our combined capital bases, and where the market value of *each* of many large enterprises easily exceeds our combined capital by many times. A regulatory and judicial system that clearly penalized those at fault rather than a system that inappropriately puts entire firms at risk would provide the proper incentives to discourage negligent or fraudulent audits without destroying the networks themselves. (Emphasis in the original, DiPiazza et al., 2006, 6-7)

C.3 "Expectation gap" memos by Herman Bevis (1961-1967)

Given how institutionalized the concept of an "expectations gap" has become, it is worth quoting Bevis extensively in three letters or memos written during his tenure as senior partner of the firm. The first memo, written in 1961, is from Bevis to A.C. Tietjen, a high-level partner within the firm who was charged with writing a "Guide to Practical Business Approach Auditing", and include Bevis' comments on a draft of the guide. Five of his points object to wording in the guide that imply auditors have only a limited responsibility to find fraud. The underlined emphasis is original to the memo:

> I am making a few observations on the basis of glancing through the rather voluminous file which you sent me on the above subject [of a Guide to Practical Business Approach Auditing].
>
> ...
>
> 2. <u>Detection of Fraud</u> Reference is made in two or three places to "recognition of the auditor's limited responsibility for fraud detection." While it is proper that the firm and other CPA's educate the <u>outside</u> world as to the limited opportunities for the auditor to detect fraud in the normal recurring examination, I have serious doubts about the advisability of dwelling on this in our <u>internal</u> instructions and advice to our staff.

> 3. I think that there would be general agreement that our staff members in the field do not appear to be as alert to the possibilities of uncovering fraud as they should be, that they may believe that opportunities for the discovery are never presented to them and, even worse, (based upon the disclaimers to outsiders) they should dismiss the thought from their minds. If there is any substance to any part of my fears, then I think that we must do some serious stocktaking.
>
> 4. I throw out for consideration and discussion these thoughts: that we tell our staff that opportunities for the discovery of fraud do arise during the conduct of the normal recurring audit; that the good auditor should develop a mental approach and a skill to recognize these opportunities; and that this approach to his work in no way enlarges the firm's responsibility to outside parties for the discovery of frauds that were not presented by the transactions test checked.
>
> 5. I believe that the foregoing is actually implied in many of the detailed schedules where typical frauds are alluded to, but that it does not quite achieve a frame of mind on the part of the staff member which would result from a direct charge to him to recognize and follow up the opportunities for discovery.
>
> ...
>
> 9. ...At the top of the page, reference is made to "accountants' limited responsibility ... [sic]" I think any client considers it a sign of weakness to be informed by the auditor of the extent to which the latter is limiting his responsibility, because this sounds like avoiding responsibility. On the other hand, it is quite in order for the auditor to explain to his client the lack of opportunity for making discoveries. (Bevis, 1961)

What is striking about this memo is Bevis' delineation between what is "proper" to tell the outside world and to what standards, within the firm, the auditor should hold himself. He is clearly worried that the firm's employees will begin to believe what they are to tell the outside world. Also striking is Bevis' clear belief that, unlike what the profession's rhetoric would suggest, current auditing procedures, coupled with an alert and skeptical mind, are capable both in principle and in practice of discovering fraud.

It is clear in the next excerpt, from the November 7, 1962, Executive Letter for Partners and Managers, that Bevis is still worried that staff will

begin to believe that recent public victories that limit the explicit responsibilities to find fraud also limit their real responsibilities:

> Although AICPA Statement on Auditing Procedure No. 30 provides a necessary clarification of the responsibilities of auditors, we must guard against letting it be used to excuse a casual attitude toward detecting defalcation. We need as much as ever to be alert for suspicious circumstances and to extend our auditing procedures when necessary.
>
> Several recent instances have underlined the need for those reviewing the internal controls and carrying out the audit programs to record all suspicious circumstances in the working papers and for managers and partners, in reviewing the papers, to be alert to the "red flags"; also clients' suggestions that we deviate from normal auditing procedures should be viewed with suspicion. (PW & Co., November 7, 1962)

Five years later, Bevis is *still* concerned that staff will believe their external communications with clients and the public about their responsibilities. But he is also troubled with how to communicate his concerns to the staff without jeopardizing the firm's ability to claim the lower standard in court. In 1967, he wrote a letter to John Hupper, of Cravath, Swaine & Moore, asking him to review a statement Bevis would like to issue to the Price Waterhouse staff. The letter is quoted in full (with emphasis added):

> I am enclosing a draft of a possible statement which I have in mind issuing to our staff. Before doing so, I would like to have your comments. To relieve your mind, this may be done any time during the next two or three months!
>
> We are on the horns of a dilemma. On the one hand, *we do not wish to do anything which would be holding out to clients and third parties that our annual examinations have the detection of fraud as a planned objective.* On the other hand, *our staff can convince themselves, because of these statements to external parties, that they should not be alert to fraud clues during the course of their work.* It is imperative that we dispel the latter notion in policy statements and in action. I know that we run a risk of having anything in writing possibly used against us, but I am inclined to run this risk in the belief that the benefit of exhortations to the staff will be greater.

> I am sending this to you, rather than Ros, because *I would like to have the material reviewed primarily from the standpoint of its disadvantages if ever it were produced in litigation.* (However, I certainly have no objection to bringing Ros' long experience to bear on the problem.) My own experience has been that general firm statements have never been a factor during discussions of threatened or actual litigation. These have been confined almost exclusively to the facts in the particular case, plus a little bit of reference to professional literature.
>
> Sincerely yours.

The enclosure of the draft statement is 3 pages, the first two detail how the auditor's responsibility to detect fraud is communicated to clients, including:

> With respect to examinations of financial statements made in accordance with generally accepted auditing standards, our responsibility is that described in Chapter 1 of "Statement on Auditing Procedure No. 33". Paragraph 5 to 8, inclusive, of this chapter deal specifically with detection of fraud, including defalcations and other similar irregularities. While the techniques employed in keeping a client aware of our responsibility is left to the judgment of the individual partner, it is the firm's stated policy that understandings on the subject of fraud detection should be accomplished only by referring to this chapter.

The report then draws the following distinction (quoted in full, with italicized emphasis added):

> HOWEVER, WE MUST MAKE A SHARP DISTINCTION BETWEEN UNDERSTANDINGS WITH CLIENT, ON THE ONE HAND, AND THE INQUISITIVE APPROACH OF THE TRUE AUDITOR, ON THE OTHER.
>
> In any examination of financial statements, we must always keep in mind that fraud may exist. Accordingly, the firm expects every partner and staff member to be constantly alert for clues as to possible defalcations and other irregularities. *Many of our auditing procedures afford an opportunity to uncover such clues, and our investigations of internal controls often disclose weaknesses which could make them*

possible. The discovery of irregularities, if indeed they do exist, enhances the value of the services we render to our clients even if it is not part of our commitment to them. (Bevis, July 14, 1967)

Zeff (2003b)