AN ECONOMIC ANALYSIS OF AUDITOR INDEPENDENCE FOR A MULTI-CLIENT, MULTI-SERVICE PUBLIC ACCOUNTING FIRM

by

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October 20, 1997

A report prepared for the American Institute of Certified Public Accountants in connection with the presentation of the White Paper *Serving the Public Interest: A New Conceptual Framework for Auditor Independence* (ACIPA, 1997) to the Independence Standards Board.

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EXECUTIVE SUMMARY

This paper provides an economic analysis of multi-client, multi-service accounting firms. The objective is to aid in the development of a new framework for auditor independence. We adopt the modern theory of the economics of organization, which views organizational structures and relationships as the results of efforts to create and deliver value. We see auditor independence as a property of auditors' interests, both at a personal level and at the level of the accounting firm.

A proper assessment of auditors' interests requires a holistic approach. That is, in assessing auditor independence, we must examine the totality of auditors' interests. We identify and analyze a complex web of institutional and personal incentives that affect auditors' interests. Our major findings are:

- **Auditors' liability is significant and provides incentives to maintain auditor independence.**

  Auditors' actual and potential losses from litigation play a large role in determining auditors' incentives. Losses from litigation contributed to the 1990 bankruptcy of Laventhol & Horwath, at one time the seventh largest accounting firm. In 1993, the six largest accounting firms (hereafter, the Big Six) incurred more than $1 billion in costs of judgments, settlements and legal defense. Although rarely alleged to be a cause of loss, auditor independence is an issue in litigation. Impairing independence at the level of the accounting firm would invite an avalanche of litigation.

- **Auditors' investments are substantial and provide incentives to maintain auditor independence.**

  Auditors have many investments that they must protect by safeguarding their independence.

  - Accounting firms invest in their reputations, part of which is a reputation for independence. Honest clients want independent auditors. A crucial feature of the modern, multi-client accounting firm is that any threat to the firm's independence threatens its entire stream of audit revenues. These revenue streams are substantial. For example, the aggregate audit revenues of the Big Six in 1996 exceeded $6 billion.

  - Auditors have financial capital invested in their firms. The total partners' capital in the Big Six is in excess of $3.5 billion.

- Auditors have investments in technology and audit methodology. In the last year alone, four of the Big Six spent more than $170 million on audit technology and methodology.

♦ **Accounting firms earn substantial and growing revenues from supplying non-audit services.**

The Big Six's revenues from non-audit services in 1996 exceeded $9.0 billion, $5.6 billion of which came from supplying consulting services. $1 billion of their consulting revenues came from their SEC audit clients. Consulting revenues account for all of the real growth in the revenues of the Big Six since 1990.

♦ **There is a strong intuitive case for economies of scope between auditing and non-audit services.**

Economies of scope are cost efficiencies obtained by delivering multiple services through one firm.

- Because auditing, tax work and consulting generate knowledge of clients' organizations, processes, and problems, it is intuitive that there exist economies of scope in auditing and these non-audit services. Auditors and tax professionals typically help each other in performing their services. Many accounting firms stress the sharing of information between their auditors and consultants.

- Auditors often rely directly on the work of tax professionals. Also, experience in specific cases is suggestive of economies of scope in auditing and consulting.

- While quantitative estimates of economies of scope are not available, the success of accounting firms in competing in consulting markets is testimony to their existence.

♦ **There is no evidence that the supply of non-audit services threatens auditor independence.**

The supply of non-audit services is not a significant factor in auditors' losses in litigation or in pricing their liability insurance. There is no evidence that investors are concerned that the supply of non-audit services impairs independence.

- Of 610 claims against the Big Six tracked by an insurance broker, at most three involved even an allegation that the supply of non-audit services impaired auditor independence.

- Auditors' insurers do not include clauses in insurance contracts restricting the supply of non-audit services, and they do not consider the supply of non-audit services as a risk factor in determining prices for the Big Six's liability insurance.

- There is no evidence that shareholders, managers, auditors or investors had any reaction to the SEC's required disclosures about non-audit fees that were in force from 1978 to 1982, at which time the requirements were rescinded.

♦ **Trends toward increasing globalization and the rapid rate of change in information technologies will place new demands on accounting firms and the practice of auditing.**

Improvements in information technology and low transportation costs are changing business practices. These trends have fundamental implications for auditing, as clients change the way they capture, process and distribute information. They are also likely to create new opportunities for accounting firms to benefit from economies of scale and scope. In assessing the efforts of accounting firms to compete in this environment, it is vital that we fully recognize their attempts to craft their organizations and their relationships in ways that protect their independence, deliver value to their clients, and benefit the public.

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1. OBJECTIVE AND INTRODUCTION

1.1. Objective

The objective of this paper is to provide an economic analysis of multi-client, multi-service accounting firms to aid in the development of a new conceptual framework for auditor independence. The analysis adopts the modern theory of the economics of organization.[1] The basic tenet of this theory is that organizational structures in a capitalist society are the result of efforts to craft economies and deliver value. Regulation that best serves the public interest is that which reinforces value creation and checks abuses.

The demands of the economic environment, economies of scope and scale, and the expectations of society as imposed through legal liability are important determinants of the organization of the auditing industry. A new conceptual framework for auditor independence should be grounded in a thorough understanding of these economic realities. The current approach to auditor independence is not based on a consistent view of the incentives of accounting firms flowing from their economic environment. It does not pay consistent attention to efficiencies of scope and scale. It too often is based on the appearance of independence assessed in a piecemeal fashion, as opposed to being based on the totality of incentives for independence. It is not surprising, then, that current independence rules have been characterized as inconsistent, outmoded, and, most importantly, costly.[2]

One of the greatest sources of dissatisfaction with current independence rules relates to the provision of non-audit services to audit clients. The economic success of accounting firms in supplying non-audit services is testimony to the value created by offering multiple lines of service. Despite repeated contentions that the supply of non-audit services threatens auditor independence, we find no evidence of it in litigation against auditors, the pricing of auditors' liability insurance, or in investor reaction to disclosures about non-audit services.[3] We conclude that these contentions are based on the appearance of threats to auditor independence, and do not take into account the totality of an accounting firm's incentives to create economic value and to maintain its independence.

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[1] See Williamson, Oliver, *The Economic Institutions of Capitalism*, The Free Press: New York, 1985.

[2] See, for example, Elliott, Robert, K. and Peter D. Jacobson, 1992, "Audit Independence: Concept and Application," *The CPA Journal*, 34-39, and Wallman, Steven M.H., 1996, "The Future of Accounting, Part III: Reliability and Auditor Independence," *Accounting Horizons*, 10(4) 76-97.

[3] We examine the relevant evidence in detail in Section 6.

1.2. **Organization of the Paper**

To introduce our analysis, we provide some background in the remainder of this section. We turn in Section 2 to a brief description of the audit process and the environment within which auditing takes place. Sections 3, 4 and 5 take up crucial areas of auditors' incentives: legal liability, investments in reputations and expertise, and the supply of non-audit services, respectively. Two important trends affecting the auditing industry, globalization and rapidly changing information technology, are discussed in Section 6. Brief concluding remarks are offered in Section 7.

1.3. **Background**

1.3.1. General Economic Background

By almost any measure, the world's financial markets today are more active, more influential in human affairs, and more efficient in allocating resources than at any other time in history. Worldwide financial markets allow investors across the globe to shift financial resources and spread risks quickly and efficiently.[4] Information is the life-blood of these markets. Forward-looking information allows market participants to assess the risks and returns of potential investments. Backward-looking information allows them to monitor the uses of resources and to construct appropriate incentives for proper stewardship. Financial information is a vital element in maintaining the level of public confidence that is required for active and vibrant capital markets.[5]

Much of the valuable information of use to capital markets begins in the hands of managers and must be reported by them.[6] Yet managers' financial interests and their undiversifiable human capital can lead to erroneous, manipulated, and consciously or unconsciously misstated financial reports. Intended or not, these actions divert resources to management's personal use. Financial markets impose a premium for this risk, which managers have incentives to reduce. One way to do this is to provide financial disclosures about the use of

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[4]For example, according to International Monetary Fund statistics, cross-border U.S. equity and bond transactions have increased approximately fifty-fold since 1980, and the daily turnover on world currency markets now exceeds the global stock of foreign exchange reserves (*The Economist*, September 20, 1997, p.24).

[5]The value of informing investors through disclosure forms a cornerstone for the regulation of financial markets. Perhaps the most famous words in this respect are those of Louis D. Brandeis who recommended adequate publicity "… as a remedy for social and industrial diseases. Sunlight is said to be the best of disinfectants; electric light the most efficient policeman." (L. D. Brandeis, *Other People's Money and How the Bankers Use It*, 1914, p. 93).

[6]For an analyses of companies' incentives to disclose financial information, see Dye, Ronald, "Disclosure of Nonproprietary Information," *Journal of Accounting Research*, Spring 1985, and Dye, Ronald, "Mandatory Versus Voluntary Disclosures: The Cases of Financial and Real Externalities," *The Accounting Review*, Jan. 1990, pp. 1-24.

resources. In turn, it is then often helpful to employ auditors to provide assurance that managements' financial reports are reliable. Even before independent audits became mandatory, a great many companies obtained them.[7] Today, many private debt agreements call for periodic, audited financial statements.[8]

At this simple level, it is apparent that auditors' interests cannot be co-extensive with managements' interests. For if they were, an external auditor's report would be ineffective in monitoring management.

1.3.2. Auditors' and Managers' Interests

While it is clear that auditors' and managers' interests cannot be co-extensive, should we expect them to in no way to coincide? From an economic perspective, the answer is clearly no. Both auditors and managers have strong incentives to issue accurate financial reports. Managers have fiduciary duties to shareholders, reputations to protect, internal controls to limit their actions, legal and regulatory reporting requirements to follow, and peers to monitor their behavior. Also, as stated above, financial markets set the cost of capital as a function of the quality of the information disclosed.[9] Managers have many incentives to ensure the integrity of financial reports.

Similarly, auditors have duties of care to follow in performing audits, reputations to protect, internal policies and control mechanisms to limit their actions, liability to consider, professional and governmental regulations to obey, and peers to monitor their behavior. Auditors are held accountable for their reports in many ways.

Auditors and managers have many other common interests. For example, both have interests in ensuring the client's internal control systems are functioning well. By far the most cost effective way to conduct an audit is to examine a sample of records kept by reliable accounting systems that are under management's supervision. In addition, an effective audit requires an understanding of the client that is most efficiently acquired from management.

[7]Before federal securities laws mandated independent audits, 94% of the companies traded on the New York Stock Exchange issued audited financial statements. See Arthur Andersen & Co., et al., *The Public Accounting Profession: Meeting the Needs of a Changing World*, Jan. 1991.

[8]Society's interests sometime go beyond those of individual managers and auditors, and government regulations, state laws, and exchange listing requirements call for audits of financial reports. But beyond this, individuals may find that the potential gains from subverting their professional responsibilities outweigh the costs, and they may sacrifice their personal integrity and issue fraudulent financial reports. Fraudulent financial reporting can shake the public's faith in the fairness of markets. This can disrupt the functioning of financial markets and impose costs on all honest market participants. Therefore, the public has a legitimate and important interest in monitoring and regulating the behavior of managers and auditors.

[9]See Botosan, Christine A., 1997, "Disclosure Level and the Cost of Equity Capital," *The Accounting Review*, 72(3), 323-347.

Auditors and managers have common interests in the viability of the client. Managers have a strong interest in maintaining the financial health of the firms for which they work. Auditors are interested in having financially healthy clients.[10] Both have likely invested in a specialized relationship that benefits both parties from its continuation.[11]

Auditors and managers have common interests in assuring that the terms of the audit engagement provide appropriate economic incentives to perform all necessary, and no unnecessary, audit work. These incentives will be strengthened by giving the auditors a tangible stake in assuring the reliability of the financial statements.[12]

While each of these factors gives auditors and managers common interests, there are important places where their interests diverge. Auditors' interests center on accuracy and reliability. Their interest in reported financial results is secondary. For example, it might not matter to the auditors whether a client's reported income is $1 billion or $2 billion. The auditor wants the most appropriate figure under generally accepted accounting principles. On the other hand, managers' interest in reported results is often very high, and may overwhelm their interest in accuracy. Managers will almost always prefer, other things being equal, a reported income of $2 billion to a reported income of $1 billion. The divergence of interests allows auditors to enhance the market's perceptions of the integrity of financial reports.[13]

1.3.3. Auditor Independence

There is a history of trying to characterize the extent of the necessary divergence of interests in qualitative terms. In particular, the concept of auditor independence has been used to describe the boundaries of sufficient and insufficient divergence of interests. The complexity and partially overlapping composition of auditors' and managers' interests make this description a challenging and, very likely, an on-going activity. One recent effort in this regard produced the

[10]Prospering clients usually mean a safe, growing base of audit fees. Also, business failure often brings a flurry of litigation in which auditors and managers are accused of common misdeeds.

[11]Levinthal, Daniel A. and Mark Fichman, "Dynamics of Interorganizational Attachments: Auditor-Client Relationships," *Administrative Science Quarterly,* 33, 1988, pp. 345-369, estimate the hazard rates, which are the probability laws that govern the dissolution of auditor-client relationships. Their estimated rates increase for the first four years of the auditor-client relationship, and decrease after that. The decrease of the hazard rates is consistent with the build-up of relationship-specific capital.

[12]See Antle, Rick, "The Auditor as an Economic Agent," *Journal of Accounting Research*, Autumn 1982, Part II, Antle, Rick, "Auditor Independence," *Journal of Accounting Research,* Spring 1984, and Antle, Rick and Richard Lambert, "Accountants' Loss Functions and Induced Preferences for Conservatism," in *Economic Analysis of Information and Contracts: Essays in Honour of John E. Butterworth* , G. A. Feltham, A. H. Amershi and W. T. Ziemba, eds., (Kluwer, 1988).

[13]See Antle, Rick and Barry Nalebuff, "Conservatism and Auditor-Client Negotiations," *Journal of Accounting Research, Supplement* 1991, pp. 31-54.

definition of independence which we adopt. For our purposes, the Special Committee on Assurance Services' definition of independence is "… an absence of interests that create an unacceptable risk of bias with respect to the quality or context of information that is the subject of an audit engagement."[14]

With this background, we begin our in-depth analysis of auditor independence with an examination of the audit process and the environment within which auditors work.

2. THE AUDIT PROCESS AND ITS ECONOMIC ENVIRONMENT

2.1. Auditors' Products

In the abstract, an auditor's product is simply information - an assurance about the financial statements - and the perceived statistical properties of that assurance determine its economic value. To elaborate, public financial reports convey information to many audiences faced with several potential decisions. Investors might be deciding how much and at what prices to purchase a company's common stock. Shareholders might be deciding whether to vote for a candidate for a directorship. Bank loan officers might be assessing the riskiness of a loan to the company in order to settle on an appropriate interest rate.

We adopt an economist's view of decision-making. The decision-maker begins with a set of prior beliefs and basic preferences over the potential outcomes of the decision. He or she acquires and processes information helpful in improving the decision. In particular, the decision-maker combines relevant information with prior beliefs to form a better assessment of the likelihood of possible consequences. The audit report's statistical properties[15] come into play in the process of combining relevant information with prior beliefs. For example, if the decision-maker processes information in a Bayesian fashion,[16] the joint probability distribution of the

[14]Obtained from the American Institute of Certified Public Accountants (AICPA) web site at <http://www.aicpa.org/assurance/scas/comstud/assind/index.htm> as of August 8, 1997.

[15]Precisely what aspects of the perceived statistical properties of the audit report are important varies with the particular decision-maker and the particular decision problem at hand. For example, an investor interested in assessing the value of a stock will be primarily interested in the perceived statistical properties of forward-looking information about future cash flows, given how the firm will be managed. A shareholder interested in assessing management's stewardship will be primarily interested in the perceived statistical characteristics of backward-looking information. (See Gjesdal, Frøystein, "Accounting for Stewardship," *Journal of Accounting Research*, Spring 1981, pp. 208-231.) Further, in assessing stewardship, it is important to compare what actually happened with what should have happened under good stewardship. (See Holmström, Bengt, "Moral Hazard and Observability," *The Bell Journal of Economics*, 1979.) Comparing what actually happened with what should have happened is where the statistical characteristics of the audit report come in.

[16]Bayes' Theorem shows how the laws of probability dictate updating beliefs with new information. It states that a decision maker updates his or her probability about event x, $P(x)$, given new information y, which occurs with probability $P(y)$, according to the formula $P(x|y) = P(x,y) / P(y)$, where $P(x,y)$ is the joint probability of receiving both x and y. The important point for our purposes is the crucial role played by the joint probability in this formula.

relevant information is involved in revising beliefs to make the best decision. In an economic view of decision making, the statistical characteristics of the audit report determine its value.

The importance of this observation is that it focuses attention on the informational properties of auditors' outputs. Auditors' incentives, personal characteristics and circumstances are relevant only insofar as they impact the information in auditors' reports. To address the effects of these factors on auditors' reports, we view auditors' decision processes in the same way we view other decision-makers' processes.[17] Auditors gather information, update their beliefs, and then make decisions as a function of their incentives. We describe this process in more detail below.

2.2. **The Audit Process**

2.2.1. Audit Teams

Auditing involves gathering and processing information in order to express an opinion about financial statements. For all but the smallest clients, this is done by a team of individuals with varying experience and rank within the accounting firm. The lowest ranking members of the team (hereafter, staff) are recent college graduates, some of whom may not have completed the CPA examination or experience requirements. The highest ranking member of the team is a partner of the accounting firm (lead or engagement partner), who has many years of audit experience and is always a CPA.[18] Between the engagement partner and the staff are individuals with varying experience (hereafter, seniors and managers), almost all of whom are CPAs.

At lower levels, the tasks on an audit are highly structured. Everyone on the audit follows an audit program, which is typically derived from tailoring a template supplied by the accounting firm. Auditors are required by generally accepted auditing standards to plan their work adequately,[19] and structured audit programs have been in use in the major accounting firms for many years.[20] Of course, changes in technologies, clients' innovations in business practices, new transactions, and a host of other factors make the development and application of audit programs an ongoing task.

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[17]See Antle, Rick, "The Auditor as an Economic Agent," *Journal of Accounting Research*, Autumn 1982.

[18]For SEC registrants, there must also be a concurring partner.

[19]AU Section 150.02.

[20]The standardization of audit work has led to claims that auditing is becoming an industry rather than a profession. One consequence is that price competition for audits has at times been fierce. For example, a study by Maher, Michael W., Peter Tiessen, Robert Colson, and Amy J. Broman, "Competition and Audit Fees," *The Accounting Review*, Jan. 1992, pp. 199-211, reports that real audit fees declined significantly between 1977 and 1981.

Higher ranking members of the audit team supervise the lower ranks, review the audit work, and make important accounting and auditing judgments.[21] Managers and partners also negotiate with the client on accounting and auditing matters and on audit fees, and market the accounting firm's other services to the client. The work at higher levels, particularly at the level of the engagement partner, involves significant judgment.

We view our characterization of the basic elements of the audit team's task as follows. The team applies a set of information processing rules to the evidence and assertions of importance to the audit at hand to generate an audit report. The team possesses a unique set of personal characteristics and relationships among its members, and has some level of resources and technology at its disposal. The audit team is usually composed of individuals who bring it specialized expertise, some by technique, some by experience, and some by knowledge of the client. The team's behavior is also affected by its incentives, and this is the point at which independence arises. Therefore, we will discuss the teams' incentives in some detail.

2.2.2. Auditors' Incentives

The audit team's incentives may be thought of as some combination of the incentives of the team's members. In the modern economy, the totality of an auditor's incentives are determined by a constellation of factors arising from three basic sources:

1. Institutional incentives from the environment
2. Institutional incentives from the accounting firm's governance structure[22]
3. Individual factors.

To elaborate, we give some examples of the factors arising from each of these three sources.

- **Institutional incentives from the environment:**

    1. A complex, dynamic web of professional relationships with clients.
    2. Competition in the markets for audit services.
    3. Competition in the markets for non-audit services, especially consulting and taxation advice.

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[21]In addition to those directly assigned to the audit team, the larger accounting firms typically make available partner-level specialist groups to assist the engagement partner with complex accounting and auditing matters.

[22]Throughout the paper, we use the term "governance structure" to encompass all the devices used to organize and mediate economic relationships. Our use of this term is in the tradition of the economics of organization.

4. Professional regulations, including codes of professional conduct, professional standards, and administrative disciplinary processes administered by peer professionals.

5. Government regulations and private sector standards subject to regulatory oversight.

6. Legal liability, including federal and state securities laws and liability insurance polices.

· **Institutional incentives from the accounting firm's governance structure:**

7. The firm's choice of particular auditing and non-auditing services to offer.

8. The firm's internal control practices.

9. The firm's compensation policies and practices.

10. A complex, dynamic web of professional relationships with other members of the team and the firm.

· **Individual factors:**

11. Each auditor's sense of professionalism.

12. Each auditor's web of personal relationships.

13. Each auditor's personal investment and economic situation.

14. Each auditor's family situation.

These factors operate differently across the different members of the team. For example, the work of any auditor on the team might be compromised by a close familial relationship with key client personnel. An audit junior is more likely to have incentives determined heavily by the accounting firm's internal control and compensation policies, and is not likely to have many incentives tied to the accounting firm's web of relationships with the client. An audit partner has more flexibility in dealing with internal control policies and is less likely to simply take them as a fixed incentive, but a partner has much more responsibility at the level of the web of relationships with clients.

We see the incentives as operating on two levels: personal and institutional. Personal-level incentives involve the incentives of individual auditors. These include their personal relationships, investments and individual legal liability. Personal-level incentives include the compensation of individual auditors and their professional relationships with other members of the accounting firm. Institutional-level incentives involve forces that affect the accounting firm. These include pressures from competition, professional and governmental regulations applied at the firm level, and firm-level liability.

The firm's governance structure is the vehicle through which institutional-level incentives are translated to personal-level incentives. In assessing auditors' independence, we seek to differentiate the firm's incentives to maintain good governance from the individuals' incentives to comply with the firm's interests. This allows us to obtain some separation between the problem of individuals' incentives to impair independence[23] and the problem of the accounting firm in maintaining a governance structure which adequately protects its independence.

We will not comment extensively on independence concerns arising from personal-level incentives, such as members of the audit team owning the common stock of audit clients or having a close familial relationship with important client personnel.[24] Independence at this level is, we believe, best handled through a combination of accounting firms' internal quality controls, compensation policies and practices, safeguards, requisite training and proficiency, and professional regulations. Since the first four of these–quality control, compensation, safeguards and training–are largely internal governance matters, we would expect each firm to devise economically efficient means of implementing them through its governance structure. Therefore, most of our effort and analysis is directed at institutional-level independence issues.

In analyzing auditor independence in terms of the totality of auditors' institutional-level incentives, there are three main areas that should be considered. One is auditors' professional and legal liability. Another is auditors' incentives to protect their investments in reputational and intellectual capital. The third is the supply of non-audit services to clients. We discuss auditor's liability in the next section, then turn to the role of investments in reputation and intellectual capital, and finally to the supply of non-audit services.

3. AUDITORS' LIABILITY

Auditors' liability is important to consider when assessing independence because it is significant in amount and can impose costs on firms that impair their independence. This section examines the significance of litigation first, then discusses the incentives to maintain independence resulting from liability.

[23]In economic terms, we are concerned here with the problem of free-riders who take advantage of the difficulties in organizing collective actions.

[24]We do not intend to imply that the current rules on familial relationships and ownership of common stock should not be re-examined. Particularly in the context of a large accounting firm, ownership of common stock by one partner of the firm who is not involved in the audit and with appropriate safeguards in place should not impair the independence of the entire firm with respect to that client.

3.1. **Amount and Cost of Litigation**

Auditors face significant monetary costs through their liability. While we do not have data for all accounting firms, Mayer, Brown & Platt have compiled the costs to the Big Six[25] firms of protecting their practices from 1990 to 1993, and their results are in Table 3.1.[26]

Table 3.1
Big Six Accounting Firms
Accounting and Audit Practice Protection Costs[27]
(in millions)

Practice Protection Costs	*1990*	*1991*	*1992*	*1993*
Gross accounting and auditing revenues[28]	$5,275	$5,319	$5,470	$5,588
Costs of judgments, settlements and legal defense	$367	$485	$783	$1,082
Insurance premiums, net of recoveries	37	(8)	(185)	(416)
Net audit practice protection costs	$404	$477	$598	$666
Net costs as a percent of revenues	7.7%	9.0%	10.9%	11.9%

The Big Six firms' gross losses from litigation in 1993, $1.082 billion, were an astonishing 19.4% of their revenues. Legal liability costs helped drive Laventhol & Horwath, at one time the seventh largest accounting firm, into bankruptcy. When it filed for Chapter 11 on November 21, 1990, Laventhol & Horwath (with revenues in 1990 of more than $345 million) was the largest professional services firm ever to go bankrupt.[29]

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[25]The Big Six are the six largest U. S. accounting firms: Arthur Andersen LLP, Coopers & Lybrand LLP, Deloitte & Touche LLP, Ernst & Young LLP, KPMG Peat Marwick LLP and Price Waterhouse LLP.

[26]Source: Mayer, Brown & Platt, letter of June 3, 1994, to Mr. Walter Schuetze, Chief Accountant, Securities and Exchange Commission.

[27]All our data, both in the tables and the text, are for the United States only.

[28]These figures for revenues were taken directly from the Mayer, Brown & Platt letter and differ slightly from the gross revenue figures from the SECPS that we use later in the paper. The Mayer, Brown and Platt revenue figures were compiled to be consistent with the cost figures reported later in the table. These data, unlike the SECPS data, are not derived from the firms' own fiscal accounting periods. The Mayer, Brown & Platt data are the best revenue estimates against which to compare litigation costs. In any event, the differences among these numbers and the ones we rely on more heavily later are slight. Using the revenue data from Table 4.1, net costs as a percent of revenues are 7.7%, 9.1%, 11.1%, and 11.9% in 1990-93, respectively.

[29]See Weber, Joseph, M. Galen, C. Yang, and D. Greising, "Behind the Fall of Laventhol," *Business Week*, 54, 1990, p. 54.

To get an idea of the importance of legal liability to individual partners, we examine per-partner losses in settlements and litigation relative to per-partner average earnings for the Big Six firms. Data[30] are contained in Table 3.2.

Table 3.2
Awards and Settlements and Average Earnings per Big Six Partner
1990-1992
(in thousands)

Year	Amount of Awards and Settlements Paid per Big Six Partner	Average Earnings per Big Six Partner	Awards and Settlements as a % of Average Earnings
1992	$186	$212	88%
1991	$38	$190	20%
1990	$20	$206	10%

Even at the lowest of the three per-partner figures of 10 percent, litigation provides a substantial influence on partners' behavior. At 88 percent of the average partner earnings, the influence of litigation is overwhelming. Having experienced a year in which the Big Six incurred such heavy litigation losses as 1992, nearly all audit partners will be cognizant of the possibility of litigation for a long time.

We attempted to compile dollar amounts similar to those in Table 3.2 for more recent years, but time pressures prevented it. Instead, we obtained data from Minet, Inc., (hereafter, Minet) an insurance advisor and broker for the Big Six firms, on the numbers of claims filed against the Big Six accounting firms in the United States from 1990 to the present. Minet data (collected on a policy year basis) show that legal liability remains a strong force on auditors. The Minet data are presented in Table 3.3.[31]

Table 3.3
Number of Claims/Suits against Big Six Firms: 1990-1996

[30]Source: "A Disproportionate Burden of Liability," Tables VII and VIII.

[31]These data were taken from Minet's Statistical Database. Minet believes that since 1993, the Big Six firms might not have reported small settlement payments to their insurers. If true, this would at least partially explain the decrease in claims reported since 1993.

Policy Year	Claims/Suits
1995-96	109
1994-95	124
1993-94	126
1992-93	145
1991-92	140
1990-91	203

3.2. **Liability Provides Incentives to Maintain Independence**

While a comprehensive and scientifically rigorous analysis of auditors' losses in litigation is beyond the scope of this paper, it is clear that the possibility of litigation plays a large role in determining auditors' incentives. Further, although many public accountants contend the primary reason behind their losses is the failure of the clients' businesses, as opposed to audit failures, data from Minet indicate that a significant amount of litigation does not involve insolvent clients. From 1987 to 1993, the percentages of claims against Big Six firms involving insolvent clients are shown in Table 3.4.[32]

Table 3.4
Claims against Big Six Firms Involving Insolvent Clients: 1987-1993

Year	Percentage of Claims Involving Insolvent Clients
1993	48
1992	34
1991	47
1990	58

[32]These data were compiled from Minet's Risk Management database, which contains 610 matters against the Big Six firms in the United States. The Risk Management database includes all reported matters on which there is sufficient information in addition to every reported matter with an incurred loss of at least $1,000,000.

1989	41
1988	46
1987	60

Aside from whether the losses from litigation are deserved or excessive, the point here is that the possibility of litigation exerts powerful effects on auditors' behavior. Auditors losses in litigation are not due only to the business failures of their clients. Although it is somewhat rare, plaintiffs do specifically allege lack of auditor independence as a cause of loss. According to data from Minet's Risk Management database, plaintiffs alleged that lack of independence/objectivity was a cause of loss in 9% of claims against Big Six accounting firms in the United States since June 1, 1972.

Combining the very large potential losses in litigation with the observation that independence issues are sometimes alleged to be a cause of loss, it seems clear that an accounting firm that engages in an institutional level of lack of independence would face an avalanche of litigation. We conclude that the possibility of litigation provides accounting firms with powerful incentives to avoid systemic independence violations.

4. AUDITORS' INVESTMENTS

Auditors have incentives to preserve their independence beyond those forced on them by the liability system. Auditors have investments in their firms' reputations for independence and in their stock of expertise which would be put at risk should they impair independence. We observe auditors taking steps to protect these investments. This section discusses these investments, beginning with reputations.

4.1. Auditors' Reputations

Competition in the markets for their services induces auditors to invest in their reputations, of which a reputation for independence is a part. It is hard to imagine anything but a corrupt Board of Directors allowing the company to hire a non-independent auditor. Engaging in an institutional-level abrogation of independence would put the firm's entire stream of audit revenues at risk.[33] This is a crucial feature of the multi-client nature of the practices of almost all modern accounting firms. With one client, the threat of a loss of revenue might be used to gain

[33]The non-audit revenues might be at risk as well, if the audit reputation provides a positive spillover onto non-audit services.

power over the auditor and impair auditor independence. With multiple clients, an abrogation of independence with one client threatens the revenue stream derived from the entire client pool.[34]

As a conservative estimate of the total amount of audit revenue obtained by the auditors of public companies in the United States, we examined the Big Six firms' reports to the AICPA SEC Practice Section (SECPS). Even considering only these six accounting firms, the revenue streams are substantial. As indicated in Table 4.1, audit revenues in the U.S. for the Big Six firms topped $6 billion in 1996. In terms of constant 1996 dollars, the Big Six firms' revenues have been hovering just over $6 billion for several years.[35]

Table 4.1
Big Six Firms' Audit Revenues: 1990-1996

Year	Big Six Total Audit Revenues (millions of nominal $)	Big Six Total Audit Revenues (millions of 1996 $)
1996	6,136	6,136
1995	5,839	6,011
1994	5,856	6,200
1993	5,603	6,083
1992	5,405	6,044
1991	5,266	6,067
1990	5,225	6,272

[34]Economic analyses of independence often focus not on revenues but on quasi-rents, which are the excess of revenues over costs in a given period that allow relationship-specific capital to generate a return. See DeAngelo, Linda, "Auditor Independence, "Low Balling," and Disclosure Regulation," *Journal of Accounting and Economics*, 1981. There are no data on quasi-rents, so we state our analysis in terms of revenues.

[35]Nominal revenue figures were taken from the firms' reports to the SECPS. These are restated using the Consumer Price Index from the Bureau of Labor Statistics (BLS). In particular, we extracted Series ID CUUR0000SA0, U.S. City Average, All items, on Sept. 26, 1997, from the BLS Web Site, accessible at <http://stats.bls.gov/datahome.htm>.

It is clear that the present value of this revenue stream is a very large number, and that it represents a substantial "bond" to insure that accounting firms protect their independence. For example, estimating the stream of audit revenues to be flat at $6 billion per year in perpetuity and using an interest rate of 10%, the total present value of the Big Six revenue stream is $60 billion. Of course, costs must be deducted from this revenue stream to get the net value of future profits at risk. We offer this examination of their revenues as a reflection of the size of the market.

4.2. **Partners' Capital**

Another, much more conservative measure of the amount that would be put at risk by compromising independence is the total partners' capital in accounting firms. As a conservative estimate of this capital, we obtained estimates for the Big Six firms in the U.S. In each of the firms, the total partners' capital as of the latest fiscal year end was in the hundreds of millions of dollars. The total partners' capital in the Big Six firms as of the latest fiscal year end for each firm was in excess of $3.5 billion.[36]

This is a very conservative measure, since it represents only the partners' total current financial investment. It does not consider the devastating effects on the value of their human capital, should they lose their rights to conduct audits. The bankruptcy of Laventhol & Horwath establishes that, at a minimum, the partners stand to lose their total capital in the firm, should the firm sacrifice its independence.

4.3. **Investments in Audit Methodology and Technology**

Accounting firms also have an incentive to protect their substantial investments in audit methodology and technology. We asked the Big Six firms how much they spent on improving audit methodology and technology in the most recent fiscal year. Four of the six had that amount available, and the total of the four was in excess of $170 million.[37] Two of the six were able to provide figures for the total investment in audit methodology and technology over the last five years. These two firms alone spent in excess of $500 million over this period.

In more qualitative terms, we asked each of the Big Six firms to describe their recent investments in audit technology and methodology. Based on their responses, it is apparent to us that the industry is making substantial investments in software and data/knowledge bases. We will comment more on this trend in Section 6. Our purpose here is to note the firms' interest in protecting these investments. Investments in audit technology and methodology are specific to the auditing industry. That is, it is unlikely that they would be of much use to anyone other than

[36]Compiled from data supplied to Fried, Frank, Harris, Shiver & Jacobson.

[37]Compiled from data supplied to Fried, Frank, Harris, Shiver & Jacobson.

an accounting firm, and perhaps not even to another accounting firm. The firms have powerful incentives to protect these investments by policing themselves.

4.4. Protection of Investments through Internal Controls and Safeguards

Accounting firms protect their investments in many ways, the most important of which are the accepted control procedures they apply within their organizations. Accounting firms have in place elaborate safeguards to insure the independence of their individual auditors with respect to their clients. These safeguards include careful selection and training of audit personnel, tracking of personal investments, consultation requirements, national-level consultation functions, partner rotation, second partner reviews, and client acceptance and retention policies.

5. THE SUPPLY OF NON-AUDIT SERVICES

The independence implications of auditors supplying non-audit services to audit clients have long been a source of dispute and controversy. Independence concerns led the SEC to issue ASR 250 in June 1978, requiring proxy-statement disclosures about audit fees and fees for non-audit services paid to the accounting firm. Serious doubts about the usefulness of these disclosures led to the withdrawal of ASR 250 after only three years, but the issue of auditor supply of non-audit services to audit clients has not gone away. In fact, the growth of such services has led to renewed interest in their implications for auditing.

This section examines the economics of accounting firms' supply of non-audit services to audit clients. We begin with an examination of the significance of these services, then turn to the crucial issue of economies of scope with audit services. Finally, we seek to understand whether there appears to be any harm in the supply of such services by examining the relation between the supply of non-audit services and the practice protection costs paid by Big Six firms.

5.1. Significance of Non-audit Services

Revenues from non-audit services are a significant and growing portion of the revenues of accounting firms. For the Big Six, Table 5.1[38] shows that total revenues from consulting had virtually equaled those from auditing in 1996. Given the trends of the two revenue streams, consulting revenues very likely now exceed those from auditing. Revenues from tax services have grown somewhat, but seem to behave much more like audit fees in terms of growth than do the consulting fees.

[38]Compiled from data submitted by the Big Six firms to the SECPS.

Table 5.1 **Breakdown of Big Six Fees by Source**[39]							
Year	Audit		Tax		Total Consulting		Total Revenues
	millions of 1996$	%	millions of 1996$	%	millions of 1996$	%	millions of 1996$
1996	6,136	40	3,439	23	5,582	37	15,156
1995	6,011	44	3,104	23	4,431	33	13,546
1994	6,200	50	2,868	23	3,346	27	12,413
1993	6,083	51	3,022	26	2,732	23	11,838
1992	6,044	52	3,044	26	2,622	22	11,710
1991	6,067	52	3,027	26	2,583	22	11,676
1990	6,272	53	3,113	26	2,482	21	11,867

Table 5.1 also shows that consulting revenues have grown substantially as measured by their fraction of total Big Six fees. Combining tax and consulting fees, we see that 60 percent of the revenues of the Big Six firms in 1996 were from the supply of non-audit services.

Because there appears to be little controversy in accounting firms' supply of tax services, we focus on consulting services. One important fact not revealed by our analysis to this point is the extent of consulting services supplied to audit clients. While we do not have the data to answer this question for general audit clients, the Big Six firms' reports to the SECPS separate consulting fees for SEC audit clients from those of all other consumers of consulting services. Table 5.2[40] shows that auditors supply a substantial amount of consulting services to their SEC audit clients.

[39]The percentages are stated in terms of percentages of total revenues.

[40]Compiled from data submitted by the Big Six firms to the SECPS.

Table 5.2 Composition of Big Six Consulting Fees: SEC Clients & All Other[41]					
Year	SEC audit clients		All other clients		Total Consulting
	millions of 1996$	%	millions of 1996$	%	(millions of 1996$)
1996	1,024	18	4,558	82	5,582
1995	708	16	3,723	84	4,431
1994	583	17	2,763	83	3,346
1993	497	18	2,236	82	2,732
1992	438	17	2,184	83	2,622
1991	350	14	2,233	86	2,583
1990	431	17	2,050	83	2,482

Table 5.2 also shows the percentage of total consulting revenues obtained by supplying consulting services to SEC audit clients and all other clients. It is apparent that the proportion of consulting services supplied to SEC audit clients has been fairly constant. Therefore, the growth in the consulting revenues of the Big Six firms has not been the result of a disproportionate growth in the consulting services consumed by their SEC clients. This suggests that the growth in consulting revenues has been driven by the value of those services in the market, and not by increasing attempts to undermine the independence of auditors by tying lucrative consulting contracts to audit outcomes.

In the next subsection, we discuss the ties between auditing and non-audit services, particularly consulting. From a policy perspective, it is very important that we understand as much as possible about why auditing and consulting services are linked. The most cynical view is that clients demand consulting from their accounting firms as a way of creating additional means through which to influence the audit. If true, we would expect to see a relation between audit failures and the supply of non-audit services. We would also expect to see a tie between audit-practice protection costs and the supply of non-audit services. We find in subsection 5.3 that neither is in fact the case.

An alternative perspective is that accounting firms supply consulting services because they have a comparative advantage at doing so. The validity of this view turns on the existence of economies of scope between audit and non-audit services. The evidence supporting this view is currently mostly of a suggestive nature, and is discussed in the next subsection.

[41]The percentages are stated in terms of percentages of total consulting revenues.

5.2. **Economies of Scope with Audit Services**

5.2.1. Potential Sources of Economies of Scope

Cost advantages obtained by producing different products or delivering different services within one firm are economies of scope. There has never been much debate about whether there are economies of scope linking tax and audit services.[42] The relation between auditing and consulting is another matter. One problem in this area is that consulting services are varied and hard to categorize. But regardless of the nature of the consulting services they provide, the success of accounting firms in establishing rapidly growing consulting operations is itself testimony to the comparative advantage these firms have in this arena.

Ideally, we would like to have rigorous, econometric measures of the economies of scope among various types of services offered by accounting firms. Lacking this quantitative evidence, we identified two possible sources of economies of scope and sought to understand whether the practices of accounting firms were consistent with economies arising from these sources.

One potential economy of scope is the use in consulting and auditing of the same information. Both auditing and consulting involve learning about the client, and it might be the case that this learning can be done once and applied to both areas. The Big Six firms have described to us their practices of sharing information across auditing and consulting teams.[43] Therefore, it is possible that the accounting firms' enjoy learning-based economies of scope by doing both auditing and consulting, as opposed to doing only one or the other.[44]

Another possible source of economies of scope is information about the value of consulting projects that is obtained in the course of doing an audit. The audit team, in its study of client business practices and systems, might learn that the client could benefit from a certain type of consulting service. The audit team could create value, then, by informing its firm's consulting

[42]Audits invariably involve issues of taxation, as taxes are important factors in calculating net income. Good tax advice depends on an intimate knowledge of financial affairs, a great deal of which is acquired in the process of doing an audit. A thorough understanding of the client's records is important in supplying both auditing and tax services.

[43]Some of the firms have formally organized client service teams that are charged with the responsibility of making sure there is full communication among auditors and non-auditors. Others have a partner who is the "point person" for a given client. All described ways in which they sought to make sure information obtained in consulting was used in doing the audit.

[44]There are some examples that are quite suggestive of economies of scope from learning about the client. One accounting firm related an interesting experience about one client's warranty costs. Because of its efforts in auditing warranty reserves, the client asked the audit team to assist with a project aimed at improving and distributing information about product quality within the client company. The audit team, by virtue of its work in auditing the warranty reserves, understood the drivers of product quality and the specific information that would be of use in assessing those drivers. Further, the development of information about quality by the client led to improvements and efficiencies in future audits of warranty reserves.

practice and the client of this potential for the profitable performance of the service. Accounting firms' policies stress the use of audit information to deliver value to clients by pointing out possible improvements in their business practices, some of which can be obtained by employing the accounting firms' own consulting experts.

5.2.2. Social Cost of Foregone Economies of Scope

Economic welfare is enhanced when the most efficient supplier of a good or service is allowed to fulfill the demand for that good or service. To the extent that there are economies of scope between audit and non-audit services, a social cost is imposed when an accounting firm is not allowed to supply consulting services. The magnitude of the social cost depends on the extent of the economies of scope. If the most efficient supplier is prohibited from fulfilling demand, the next most efficient supplier has a profit opportunity. That next most efficient supplier will use more of society's resources to fulfill demand, imposing a social loss. It is also likely that demand will drop. Projects that are profitable when done by the most efficient supplier may be unprofitable when done less efficiently. The social loss in this case is the net value of the foregone project.

In a free market system, the market participants themselves judge which projects add net value and how the gains to that added value are to be split. Because they can capture the value produced, the market participants have incentives to seek out profit opportunities and agree on how to divide the gains. Accounting firms and audit clients have incentives to find opportunities to profit by economies of scope and to exploit those opportunities. This creates social value.

Accounting firms also have incentives to weigh the gains derived from exploiting economies of scope against any the costs of independence safeguards, and to craft their organizations to minimize these costs. In a competitive market for audit services, accounting firms have appropriate incentives, from a social point of view, to make the proper tradeoffs between exploiting economies of scope and the costs of designing and maintaining organizational structures to safeguard independence. Restricting accounting firms' ability to take consulting assignments will only improve social welfare if there are social costs not weighed in the firms' cost-benefit calculus. This seems unlikely. The market for audit services is by all accounts active and competitive. The identity and quality of service of the larger accounting firms is well-understood, as are their incentives to protect their reputations and minimize their exposure to liability.

At the individual level, however, a given CPA might well not make an appropriate tradeoff between independence costs and other benefits. The reason is simply that an individual participant in an accounting firm can impose externalities on other members of the firm. Misdeeds by one individual can impair the reputation of an entire firm, so monitoring of individual behavior by the firm is warranted and routinely done.[45] It is difficult to tell directly, however, whether this monitoring is sufficient to curb systemic independence violations. In the next subsection, we examine the practice protection costs of the Big Six firms for evidence that they are incorrectly assessing potential independence costs in their supply of non-audit services.

5.3. **Relation between Non-audit Services and Audit Practice Protection Costs**

This subsection examines the relation between the costs of protecting audit practices and the supply of non-audit services. We explore two facets of this issue: losses from litigation and the costs of liability insurance.

5.3.1. Non-audit Services and Losses from Litigation

The first striking fact about the relation between the supply of non-audit services and losses from litigation is the paucity of specific examples in which the supply of non-audit services was shown to cause damages. In Minet's risk management database[46] of 610 claims against auditors, there are only 24 claims in which the claim mentions that the auditor also supplied consulting services. In 19 of those cases, it does not appear that independence was an issue. In two of the remaining five cases, there were allegations of a lack of independence, but the allegations were not directed at the supply of consulting services. This leaves us with only three out of 610 cases in which there were allegations that independence was somehow impaired by the supply of consulting services.

We supplemented the Minet database with informal queries of attorneys whose practices involve knowledge of claims against the Big Six. We again failed to uncover any specific instances in which the supply of non-audit services led to an audit failure.

For a more quantitative picture of the relation between the supply of non-audit services and audit failures, Table 5.3 reports the consulting fees of the Big Six firms, broken down into SEC clients, other clients and total fees, against the number of claims against Big Six firms from the Minet statistical database. Clearly, consulting fees have been going up while the number of claims and/or suits has been declining. Figure 5.1 contains a graph of these data, which reveal that the effects of consulting fees on claims, if they exist and if they are positive, are heavily outweighed by the main factors that drive litigation and consulting fees.

[45]Professional organizations like the AICPA also have an interest in monitoring and disciplining their members.

[46]The following data were supplied by Minet.

Table 5.3 **Number of Claims/Suits against Big Six Firms and Big Six Consulting Fees: 1990-1996**[47]				
Policy Year	Number of Claims/Suits	Total Big Six Consulting Fees from SEC audit clients	Total Big Six Consulting Fees from all other clients	Total Big Six Consulting Fees
1995-96	109	1,169	4,165	5,334
1994-95	124	875	3,184	4,059
1993-94	126	720	2,401	3,121
1992-93	145	595	2,068	2,663
1991-92	140	490	1,996	2,486
1990-91	203	452	1,863	2,315

The lack of specific instances in which the supply of non-audit services undermined independence and the opposing time trends of consulting fees and the number of claims against Big Six firms, are evidence that the supply of non-audit services has not compromised auditor independence. There are two more sources of evidence on this issue. One is the pricing of auditors' liability insurance. The other is the reaction to the SEC's requirement in Accounting Series Release (ASR) 250 that firms disclose information about fees for auditor-supplied, non-audit services. These disclosures were made in their proxy statements from September 30, 1978 through February 1982, when the requirement was removed. We examine this evidence in the next two subsections.

5.3.2. Non-audit Services and the Pricing of Liability Insurance

To facilitate their purchase of liability insurance, Minet develops risk profiles of the Big Six firms. Minet stated that it does not consider the supply of non-audit services to be a relevant factor in the development of these risk profiles. Further, Minet does not use the supply of non-audit services, either to audit clients or others, as a predictive variable in estimating the Big Six firms' litigation losses. Their loss estimation is based on the experience of the individual firms,[48] tempered with general economic variables on a judgmental basis. There are no known covenants in existing liability insurance contracts which restrict an accounting firm's ability to offer non-audit services.

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[47]The fees are averages of the fees in the two years indicated in the "Policy Year" column. Fees are measured in millions of constant 1996 dollars.

[48]Minet's use of the experience of the individual firms is consistent with the importance of the firms' reputations.

Auditors' insurers have obvious incentives to assess properly the factors that are associated with audit failures. They have incentives to find the most diagnostic predictors possible of future losses in litigation. They have the ability to write insurance contracts which restrict the amount of loss reimbursement whenever specified types of non-audit services are provided. At the least, this is evidence that existing safeguards of auditor independence operate to ensure that accounting firms protect their independence when providing non-audit services. It is also consistent with the view that the firms themselves have taken adequate steps to protect their independence, insofar as the insurers are concerned. Because the insurers have such an obvious and direct monetary interest in such matters, this is evidence that the supply of non-audit services has not damaged auditor independence.

5.3.3. Reaction to Accounting Series Release 250

Accounting Series Release (ASR) 250 required firms to disclose the percentage of fees for auditor-supplied, non-audit services to audit fees in proxy statements. It also required separate disclosure of the percentage of fees for each auditor-supplied, non-audit service to audit fees whenever it exceeded 3%, and whether the board of directors or the audit committee had to approve auditor-supplied, non-audit services. To underscore the dangers to independence that it perceived, the SEC stated in ASR 264, which proposed guidance for auditors and boards of directors in assessing whether auditors should supply non-audit services:[49]

> The Commission believes that public confidence is significantly lessened if auditors engage in activities and services that the public perceives as foreign to the expected role of the auditor.

With the disclosures required by ASR 250 and the official concern about non-audit services expressed in ASR 264, one might expect that firms would alter their purchases of non-audit services from their auditors. Yet in his study of firms' purchases of non-audit services from auditors after ASR 250, James Scheiner found "no significant changes in the quantity of specific nonaudit services among CPA firms or categories of clients occurred subsequent to *ASR No. 250*."[50]

It is conceivable that managers and auditors were disregarding adverse effects on shareholders in continuing the non-audit services. If that were true, one would expect that shareholders would be more likely to vote against retention of the auditor. Yet William Glezen and James Millar, in their study of shareholder votes to select an independent auditor, found no significant difference in auditor approval ratios before and after the disclosures required by ASR

[49] As quoted in Scheiner, J., "An Empirical Assessment of the Impact of SEC Nonaudit Service Disclosure Requirements on Independent Auditors and Their Clients," *Journal of Accounting Research*, Autumn 1984, p. 790.

[50] Ibid., p. 790.

250.[51] If the shareholders' interests were being compromised, they did not employ an obvious and inexpensive way to express their displeasure.

As a final gauge of reactions to the ASR 250 disclosures, we read the letters sent to the SEC by interested parties when the SEC was considering withdrawal of ASR 250 and ASR 264. Without going into undue detail, it was clear to us that the letters fell neatly into two categories: competing suppliers of consulting services, and everyone else, including accounting firms and their clients. The accounting firms and clients argued that the disclosures were not providing useful information to the investing public. Firms that were competing suppliers of consulting services argued that auditor provision of such services constituted a serious threat to auditor independence. With no evidence of such a threat, ASR 250 and ASR 264 were rescinded.

5.4. Concluding Remarks about Non-audit Services

Auditors' supply of non-audit services to audit clients has been the most consistent, troublesome target for those critical of the independence of auditors. The fees from non-audit services are significant, both as a percentage of the total fees of the accounting firms and in an absolute sense. The delivery of non-audit services often requires a close relationship with management, and with taxation advice, may place the firm in the position of articulating clients' positions before regulators.[52] Viewed in isolation, it is easy to understand how critics can perceive that the supply of non-audit services to audit clients impairs independence.

A much different picture emerges when we consider the totality of auditors' incentives. Legal liability and the value of reputations provide incentives for accounting firms to maintain their independence. Auditors are seen, at both the firm and the professional level, to regulate, monitor and protect their independence. Still, we might question whether the incentives and safeguards that exist are enough. To settle this, we must look at the evidence.

The evidence provides no support for the position that the supply of non-audit services has impaired independence to the point that costs have been imposed on any constituency. There are very few instances in which the supply of non-audit services is even alleged to have damaged independence. Insurers do not constrain the supply of non-audit services in their liability contracts with auditors, and insurers do not use the supply of non-audit services either as a risk factor or in estimating losses. The number of claims and/or suits against the Big Six is unrelated to fees from non-audit services. Managers and auditors did not alter their behavior when the SEC required disclosure of information about non-audit fees, even though this information was supplied directly to shareholders in proxy statements. Shareholders did not change their voting

[51]Glezen, G. William, and James A. Millar, "An Empirical Investigation of Stockholder Reaction to Disclosures Required by ASR No. 250," *Journal of Accounting Research,* Autumn 1985, pp. 859-870.

[52]Of course, accounting firms perform similar functions in their capacities as auditors. See Section 921.12 of the AICPA Bylaws.

behavior in auditor selection as a function of disclosures about non-audit fees. When the SEC withdrew ASR 250 and ASR 264, the only audible protest came from the auditors' competitors in the market for non-audit services.

While we find no evidence that the supply of non-audit services damages independence, we find a lot of evidence that the supply of non-audit services adds value. Accounting firms have been very successful in supplying non-audit services, as measured by the fees they generate. In assessing value created, it is important to consider more than just the fees received for non-audit services. The buyers of these services are also getting value from them. In classical economic terms, we must consider consumer, as well as producer, surplus in assessing the social value of non-audit services.

The extreme step of prohibiting auditors from supplying non-audit services to audit clients would not destroy the entire social value of the non-audit services. It would open a profit opportunity for other suppliers of these services. However, because these suppliers cannot currently wrest the market away from accounting firms, they must be less efficient than the accounting firms, perhaps due to economies of scope with audits. The difference in efficiencies and the accompanying change in the amount of services purchased would represent a social cost of banning auditors from non-audit activities with their clients. In view of our economic analysis and the evidence, we believe this social cost outweighs any realistic view of the possible benefits.

These remarks pertain primarily to the past. The evidence can only reflect actual experience, and there are environmental changes and developing trends that could effect auditor independence. We make a few brief comments on these trends in the next section.

6. Trends Affecting the Auditing Industry

We confine our remarks to two major trends, which we view as related: the increasing scale of some economic organizations associated with globalization, and the impact of rapid changes in information technology.

6.1. Globalization and Scale

Major economic organizations today operate on a global scale. In the absence of serious, widespread political conflict, they are likely to continue to do so. Clearly, organizations with a global reach require auditors with a global reach. Audit clients have been operating internationally for some time now, and all of the Big Six and many other accounting firms operate worldwide. However, improvements in information technology and low transportation costs make possible levels of consistency, communication and operational harmony in clients' international operations never before possible. Organizations are crafting structures that allow them to reap the benefits of economies of scale on a new plane. The most efficient and effective ways to audit them will very likely be through accounting firms that take advantage of the same economies of scale.

Just as our major stock exchanges have felt the presence of international competition, so too are efforts increasing to harmonize, or at least coordinate, accounting standards at an international level. Extrapolating this trend, we can expect some pressures on accounting firms to harmonize their international practices. The increasingly global nature of reputations will reinforce these pressures, because a major audit failure in one country could impact an accounting firm's worldwide reputation.

Increasing globalization and scale have implications for auditor independence. They expand the scope of understanding necessary to assess the totality of the incentives faced by a global accounting firm. The environment that provides institutional incentives through client relationships, competition, and governmental regulations is increasingly a global environment. There are likely to be differences across jurisdictions that must be identified and weighed. The institutional incentives provided by the accounting firm's governance structure also operate on a global scale. This complicates the task of understanding the economic organization of accounting firms by encompassing issues such as how revenues are shared internationally, how much standardization is applied in the approach to audits, and how a worldwide audit staff is selected and trained. The individual factors in auditors' incentives, such as personal relationships, economic situation, and family situation are also likely to be more varied in accounting firms comprised of personnel that are truly drawn internationally.

Increasing globalization creates pressure to view auditor independence on a worldwide scale. For example, developing economies often lack the institutional infra-structure (government oversight, legal systems, organized financial markets, an active and forceful auditing function, etc.) that is necessary for modern economic activity.[53] The development of a clear, concepts-based approach to auditor independence that is founded on a solid understanding of the demands of the economic environment, economies of scope and scale, and the expectations of society about the auditors' functions would facilitate the application of independence rules to such jurisdictions.

6.2. **Information Technology**

Clients' rapidly increasing use of sophisticated information technology continues to place great demands on auditors. Recent announcements of two breakthroughs in microprocessors that portend acceleration of the historical pace of a doubling of computing power every eighteen

[53]See Khanna, Tarun and Krishna Palepu, "Why Focused Strategies May Be Wrong for Emerging Markets," , *Harvard Business Review,* July-August 1997, pp. 41-51.

months (Moore's Law) imply even faster rates of change in information technology.[54] There are many ways in which changes in information technology affect auditing.

Changes in information technology change the ways an organization captures, processes and communicates the data that underlie the financial statements subject to audit. In turn, these changes place new demands on the audit process. For example, as clients' information processing becomes more automated, integrated, and distributed in a client-server environment, auditing becomes more a process of monitoring and relying on controls within the information processing system, rather than on controls of users of the system. Many accounting firms now pride themselves in their proprietary software, which makes auditing of client controls much more efficient than earlier approaches which sampled transactions. Proper application of this audit technique, however, is dependent on a deep understanding of the audit client's organization and business processes. The demands on auditors to keep up with increasingly sophisticated client software are likely to be high.

Changes in information technology have impacted and likely will continue to impact the way organizations are crafted. For example, relationships between customers and suppliers are being radically altered by integration of their information systems. Customers now place orders directly through suppliers' information systems, blurring our traditional concepts of organizational boundaries. This has extended to the physical location of suppliers in manufacturers' facilities. These changes may require that audit effort be integrated across supplier-manufacturer clients. They are likely to place new demands on our thinking about auditor independence.

Dramatic improvements in information technology may also cause fundamental changes in the approach to accounting. For example, there would seem a real possibility that some form of continual access to information will at least partially replace periodic reporting. Given access to instant information on the World Wide Web, it will likely not be long before investors are demanding to look at a constantly updated picture of financial performance over the last twelve months, rather than rely on an even mildly dated annual or quarterly report. Providing requisite assurance services on such systems will likely necessitate further continual involvement of auditors with their clients, and raise a host of unforeseen issues about auditor independence.

6.3. **Concluding Remarks about Trends**

Just as the trends toward globalization and the use of increasingly sophisticated information technology are changing the business practices of audit clients, we also expect them to change the business practices of accounting firms. Already we see accounting firms wishing to

[54]See Markoff, John, "Innovation to Double Chip Power May Cut Life Span of Computers," *The New York Times, Section A: Business/Financial Desk*, Sept. 17, 1997, p. 1, and Zuckerman, L., "I.B.M. to Make Smaller and Faster Chips," *The New York Times, Section D: Business/Financial Desk*, Sept. 22, 1997.

engage a variety of innovative business relationships, including joint ventures and strategic alliances. It is in accounting firms' interests to engage in these opportunities to create value. It is also in their interest to structure their relationships in ways that protect their independence. We believe that whatever independence rules are ultimately adopted, they should be open to the efforts of accounting firms and their clients to design innovative relationships that create value and assure audit independence.

7. CONCLUSION

Taking a holistic view, we have found that auditors have many incentives to protect their independence. Legal liability is significant, and any firm that would damage its independence risks an avalanche of litigation. Auditors' have substantial investments in reputations, audit technology and methodology, and directly in their financial stakes in accounting firms. We have found no evidence that the supply of non-audit services threatens auditor independence, and there is a strong intuitive case that accounting firms create value by capturing economies of scope between audit and non-audit services.

We have approached our analysis of auditor independence with the view that accounting firms and their clients have every incentive to devise organizational structures that take advantage of economies and create economic value. This contrasts with the skepticism we perceive is embodied in many critical views of auditor independence. This skepticism is reminiscent of the inhospitality tradition in antitrust regulation, which presumed that nonstandard modes of contracting were anticompetitive.[55] Further, we believe that the emphasis that has often been placed on perceptions invites adoption of a piecemeal view that does not give full recognition to all of auditors' incentives. Effective auditor independence rules should give auditors and their clients the opportunity and incentive to be innovative in structuring relationships that protect the independence of auditors, yet take advantage of economies to deliver value.

[55]See Williamson, Oliver, *The Economic Institutions of Capitalism*, The Free Press: New York, 1985.