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Instructor's Manual: The Economic Role of the Audit in Free and Regulated Markets

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Instructor's Manual
to Accompany

**The
Economic Role
of the Audit in
Free and Regulated
Markets**

**Suggested Responses
to Questions for Discussion**

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Table of Contents

Topic	Page
Solutions to Questions for Discussion	
II. The Market Evidence	4
III. Agency Theory: The Stewardship (Monitoring) Hypothesis	6
IV. The Information Hypothesis	10
V. The Insurance Hypothesis	12
VI. Product Attributes of the Audit	14
VII. Information Economics: The Costs and Benefits of Auditing	16
VIII. The Supply of Audits	24
IX. A Look at Regulation	27
Economic Analysis Appendix	
Analysis of Selected Questions for Discussion	
II. 1.	31
II. 2.	32
III. 1.	35
IV. 1.	37
V. 1.	38
VI. 2.	42
IX. 1.	44
Proposed Integration of Teaching Tool with Traditional Topics Covered in Auditing	46

II. The Market Evidence

1. The setting of extensive reporting requirements, as will be discussed later, has the joint effect of increasing the demand by clients for the expertise of accountants and increasing the costs of the production of audit services. Since the SEC statutes can be avoided by not "going public," and since the professional standards of auditing set to guide audits of SEC clients also apply to non-SEC clients, the net "employment" effect on auditors is ambiguous. In other words, the raising of audit costs to the point where the price is not cost-beneficial to potential voluntary auditees may offset the additional demand from SEC clients generated by the statutes. While auditing firms, including the Big Eight, have large audit staffs that service small business, in spite of the SEC influence on professional auditing standards, it is uncertain how many additional non-SEC companies would become clients if the free market was allowed to operate as the basis for prescribing auditing standards. Granted, auditing firms have incentives to standardize their product with one set of professional standards and can benefit from economies of scale in developing their expertise; however, the influence of regulators on standard-setting suggests that the degree of standardization which would result from free market trading differs from that observed in the presence of regulation.

Given the cost effect of regulation in addition to the demand effect, it is unclear whether the current "full employment" of accountants differs from the employment level which would result from free market forces.

2. There is reason to believe that the frequency of audits would not decline substantially. The prevalence of audited financial statements pre-SEC and currently in the non-SEC market provides evidence that auditing services are valued *apart* from the regulatory requirements of the SEC. The determinants of free market demand will be explored throughout this teaching instrument.
3. The claim suggests that the audit had value *at one point in time*; however, due to existent regulation, current auditing practices do not necessarily imply a *current* value to the audit. It should be noted, however, that this response reflects literature which has recently theorized a divergence in regulators' actions and the "public interest."

Since there are forces to demand deregulation if regulation is not valuable (as observed with airline deregulation), the existence of continued demand for auditors does suggest some *current* value to the audit. However, the ease of accomplishing deregulation determines to what extent the claim supports current as opposed to past valuations.

III. Agency Theory: The Stewardship (Monitoring) Hypothesis

1. a. An external auditor can test the compliance of employees with the prescribed system of internal control and general operations. An audit can increase the reliability of performance measures utilized by an employer in evaluating and promoting employees.

The use of an external auditor for management advisory services can similarly assist the employer in monitoring. By having an independent expert develop an information system, it is reasonable to expect that the information generated will be less likely to be manipulated by employees than if the system were developed internally.

- b. If the employer does not hire an external auditor, employees' salaries will reflect the expected divergence of employees' actions from employer's preferences.
- c. The choice not to be audited is presumably the result of comparing audit costs to the monitoring benefits. If the expected divergence in employees' actions is less than the cost of the audit, the decision is "correct."

At this point, it is relevant to acknowledge the existence of substitute means of monitoring available to an employer. The control system may be sufficient without an audit, an internal auditor may be more cost-beneficial than an external auditor due, in part, to his expanded attention to operational efficiency, and the simple involvement of the employer in operations may be a sufficient means of monitoring.

2. If the banker does not receive audited financial statements, he can adjust the interest rate for the expected divergence of the borrower's activities from the lender's preferences. The owner-manager understands agency theory perfectly well *provided* the market interest rate available with unaudited statements is equal to the market rate available with audited statements. If, instead, differential interest rates prevail, the owner-manager does not understand that in agency theory it is the agent who bears the cost of monitoring activities, either directly through paying for the audit or indirectly through the interest cost adjustment for the lack of audited financial statements (or for the audit fee "paid" by the banker). Unless the interest adjustment is less than the cost of the audit, the owner-manager should agree to fill the banker's information request.

(An additional benefit to the owner-manager of providing audited financial statements is the ability to shift part of the loan risk to the auditor. If the banker can

sue an auditor, he may be willing to lower the interest rate. See Section V.)

3. a. The commonality of monitoring contracts, specifically audits, suggests they are cost-beneficial means of controlling the agency problem.
 - b. Audits are frequently not observed in owner-manager operations. Not only does an owner-manager by definition have incentives similar to principals, he has the opportunity to personally monitor operations and the performance of his employees. While the owner-manager's incentives can diverge from creditors' interests, bankers are frequently able to personally monitor performance or to insure themselves against substantial loss through setting compensating balances or similar loan requirements.

It has not been uncommon for some municipalities to utilize internal auditors rather than external auditors to review their financial statements. Since municipal bonds are frequently marketed to local or regional purchasers, it may be that these purchasers are able to monitor performance in the absence of an external auditor. Consequently, the interest savings realized from contracting for an audit, for a subset of municipalities, may be inadequate to compensate the municipal managers for the cost of an audit.
4. The following debt bonding covenants are common.
 - a. The extent to which a firm can become a claimholder in another business enterprise is often tied to a minimum level of *net tangible assets* or a prespecified percentage of the firm's *capitalization*, i.e., owners' equity plus long-term debt.
 - b. Asset disposition is frequently held to a fixed *dollar amount*, or restricted to the use of proceeds for *new asset purchases* and *debt retirement*.
 - c. Secured debt restricts the disposal of pledged *assets*.
 - d. Mergers are frequently permitted only if the *net tangible assets* of the firm, calculated on a post-merger basis, meet a certain dollar minimum, or at least a certain fraction of *long-term debt*.
 - e. *Working capital (current assets minus current liabilities)* requirements are common, as are contingencies of mergers upon maintenance of working capital.
 - f. Restriction of the payment of cash dividends to shareholders is common (as are restrictions of redemptions, purchases, retirements, partial liquidations, or capital reductions in cash, in kind, or in the form of debt obligations of the company). The restriction is typically tied to an "*inventory of funds*" based on *net earnings*, *proceeds from the sale of*

common stock net of transactions costs, and the quantity of *dividends paid* since the bonds were issued.

- g. Restrictions on issuing additional debt can be in the form of an aggregate *dollar limit* or minimum prescribed *ratios* between
1. *net tangible assets* and *funded* (i.e., long-term) *debt*,
 2. *capitalization* and *funded debt*,
 3. *tangible net worth* and *funded debt*,
 4. *income* and *interest charges*, or
 5. *current assets* and *current debt*.
- h. Restriction on stockholders' use of lease or rental contracts is often specified as a fraction of *net income* or a set dollar amount.

The italicized terms refer to amounts typically reported through financial statements. Indenture agreements normally commit the company, government agency, university, or other borrower to supply financial and other information for as long as the debt is outstanding. Typically the firm agrees to supply

1. all financial statements, reports, and proxy statements which the firm already sends to its shareholders;
2. reports and statements filed with government agencies such as the SEC or Public Utility Commission;
3. quarterly financial statements certified by a financial officer of the firm; and
4. financial statements for the fiscal year *audited* by an independent public accountant.

Typically, public debt issues require the application of generally accepted accounting principles (GAAP). Presumably, one effective means of assuring GAAP compliance is the audit of financial statements.

In addition to the use of audited accounting numbers in monitoring debt contracts, it is very common to base executive compensation plans, particularly bonus payments, on audited financial statement numbers such as net income. (This response is based largely on Smith and Warner, 1979—see references for Section III.)

5. a. While the basic monitoring concepts describe the agency relationship of government to taxpayers, there are several differences in the political process and market process that can act to decrease the incentives of the agent to undergo an audit. Rather than having stock prices reflect taxpayers' valuation of government and its performance, the primary means of communicating the local government's value is through property value. The primary performance assessment is through voting. It is apparent that the thin market in

local real estate and barriers to relocating from an area with poor local government, at least in the short term, make property values a less effective means of motivating government than the market for corporate securities. The voting mechanism, by its very nature, is a much less timely monitoring device than the market. Similarly, the frequency of debt issues in the municipal sector is less than in the private sector, implying less exposure to creditors' price protection. The ability of the government to secure debt with its "full faith and credit" further differentiates government securities (although the New York City experience has blurred the meaning of "full faith and credit"). Since government has taxing authority to meet its obligations whereas businesses are unable to force consumers' "purchases," there are differences in the risk of government's divergence from creditors' preferences. The cost to government of diverging from taxpayers' interests is unlikely to be fully price-protected by taxpayers in the same manner that business agents' actions are price-protected by providers of capital due to this "involuntary" nature of capital contribution.

- b. The political process implies fewer costs imposed on government for divergence from taxpayers' preferences and therefore fewer benefits from the audit. In the private market, individuals can capture "rents" arising from the consumption of perquisites by agents (such as managers). Whereas in the political market the high costs associated with trading to capture potential rents provide less incentive to monitor political agents.
- c. There are numerous incentives for a politician to contract for an audit. The literature has suggested the politician's preferences for
1. publicity (to establish his credibility as an "honest" politician and his belief in the public's "right to know"),
 2. scandal insurance,
 3. assistance in getting acquainted with governmental operations and in training replacements,
 4. support by CPAs,
 5. compliance with revenue-sharing and grant fund information requirements, and
 6. improved efficiency of operations to increase the pool of resources under control
- as a rationale for government units voluntarily subjecting themselves to an audit. In fact, widespread voluntary audits are observed in the municipal sector. The Government Accounting Office (GAO) and numerous state auditors further attest to the demand for auditing in the governmental sector.

IV. The Information Hypothesis

1. The stewardship (monitoring) hypothesis implies greater interest in the audit as a device for providing managers with proper incentives and for measuring managers' performance and compliance with contracts. In contrast, the information hypothesis stresses the increase in the reliability of information as an input to decision making. Each of these hypotheses are likely to contribute toward the demand for an audit. There are, however, contracting difficulties after dissemination of the audit results and a relative absence of trading gains to managers due to their problems with maintaining exclusive access to information and to their concerns about the value of their human capital. The monitoring hypothesis, with its emphasis on the agent as the source of demand for audits, does not share these difficulties. There is historical evidence that audits initially centered on agency relationships, as opposed to a desire for "better information for investment decisions"; recall ancient Greece. However, changes in markets since that date may have altered the significance of the alternative (complementary) hypotheses. Examples of investors' demands resulting in additional audited data provide contrary evidence supporting the information hypothesis. Further testing of alternative hypotheses may assist in defining those settings in which each hypothesis best explains observed phenomena.
2. The public good characteristic of information probably explains the usual contracting arrangement for audits. Typically, the management (or audit committee) contracts with an auditor and then disseminates audited reports to the various principals of the entity. Since the monitoring benefit to all parties is fulfilled by a single audit, in a "public good fashion," it is sensible for the auditee to "pay" for the monitoring and to obtain compensation for the smaller risk exposure of the varied principals through higher stock and bond prices and higher salaries. The key to this "public good" attribute of monitoring is that managers are in a position to negotiate with all parties in advance, and they can identify the principals. In other words, since the agent is generating the demand for monitoring, he has no incentive to issue stocks or bonds at prices that reward principals for agency risks not incurred due to the knowledge of monitoring activities being performed on some other principal's behalf. He thereby precludes the principals' use of information without reflecting its value in monitoring the agency relationship and solves the

"public good problem." In this sense, demand for the audit is unaffected by public good characteristics.

It is usually the case that "public good problems" are claimed to be uniquely solvable by government. The justification for such intervention is typically on efficiency grounds through a claim of high transaction costs in the marketplace. It is likely that managers face lower transaction costs than the government in this situation, since there is no "middle man" (i.e., government) in agency contracting.

3.
 - a. By expending resources to generate information, the investor can accrue trading, speculative, and resale gains. These individual incentives to produce information are further explored in Section VII. (Also see the response to Question 4.)
 - b. This statement is only valid if the process generating prices follows a random walk. Otherwise, it is the process that generates prices which determines the best means of predicting future values.
4. It is possible for information to have value to individuals without affecting the expectations of the market as a whole. Since individuals update their beliefs and have some unresolved uncertainties clarified through public information releases, they can increase trading and shift to preferred portfolio investment positions. This improvement of individuals' investment decisions represents a value of information distinct from the resource allocation value of stock price adjustments.

For example, information might indicate that an asset's risk and return have increased. The market's valuation of the increased return could be just enough that the discount by the market for the increase in risk offsets that valuation. However, individual investors may value investment attributes such as risk differently from the market. Thus, an investor who is risk-averse would be willing to pay for information concerning a change in risk so that he could better his position by shifting to a preferred portfolio investment position of lower risk. Similarly, he would pay for information that indicated no change in risk since the uncertainty of the investment would thereby be reduced.

V. The Insurance Hypothesis

1. a. If the auditee is interested in protecting himself from a faulty audit, the limitation on damages from the auditor would be expected to lower the quantity of auditing demanded by trustees, underwriters, stockholders, and other third parties. In other words, the nature of the output has changed; there is a ceiling on the insurance coverage available from an auditor. However, since the audit tends to be an "all or none" choice, and some evidence of "due care" is preferred to none, it is likely the quantity of auditing demanded by these parties would not be greatly altered. In contrast, the demand for an extended audit, beyond compliance with generally accepted auditing standards (GAAS), would likely decline.

If it is reasonable to assume that some audit costs directly relate to auditors' concerns over liability exposure and defense capabilities in court—*rather than* actually increasing the reliability of audited financial statements—it can be expected that the limited legal exposure of auditors would lower the costs of production. These lower costs can be expected to lead to lower auditing fees. Lower fees would increase the market in which audits are an economically feasible means of insuring, monitoring, and acquiring information. This implies an increase in the quantity of audits, most likely to exceed the decrease in the quantity demanded by the present market.

- b. If the auditee's damages are limited, he has much less incentive to "insure" against litigation exposure through an auditor. Based on the typical "sharing of legal responsibility" by auditee and auditor, there will likely be an increase in exposure to twice the size of the liability (2 times \$1,000,000) without an auditor. Stockholders, faced with a limitation on legal recovery, will increase their demands for an audit in order to double their potential recovery by increasing the number of defendants.

The net effect of the proposed Securities Code is theoretically ambiguous, but is likely to be an increase in the total quantity of auditing demanded due to a substantial decline in the cost of production. The decrease in costs is due to the expectation that auditors will audit less if their losses are limited; this does not necessarily imply a lower standard of due care, but it does imply less emphasis in the audit process on "establishing a legal defense" for the auditor.

2. The SEC insures against blame for unpopular standard-setting by permitting the private sector to prescribe generally accepted accounting and auditing standards. Further, an opportunity is provided for the SEC to intervene when, with the benefit of hindsight, it appears a standard is "inappropriate," or if the standard is simply unpopular. Recent demonstrations of this power to "be right" in "correcting problems" and to "accept no blame" for private standard-setting were the SEC's actions on oil companies' accounting and on foreign currency translation issues. Similarly, the SEC proposal for mandatory internal control reporting, with auditors' involvement, contained numerous references to the private sector's *failure* to monitor and report adequately on controls.

VI. Product Attributes of the Audit

1. A typical benefit from the audit is the improvement of internal controls which, in turn, benefits the auditee by decreasing the number of errors and the extent to which intentional abstraction of resources is possible. Specific suggestions may include a preferred segregation of duties, time-saving techniques for establishing an audit trail without substantially detracting from productive efficiency, and the purchase of bonding insurance by employees handling substantial amounts of cash. Another specific "efficiency benefit" of the audit stems from auditors' recommendations on operations. The expertise of the auditor and his exposure to numerous auditees provide a basis for making real operating improvements. Frequently, control systems that focus on accounting information needlessly conflict with operations; the auditor is likely to be knowledgeable concerning means of improving the compatibility of information and operating controls.

Another efficiency benefit from an audit can be realized by considering the implementation of control practices which will decrease audit costs. One example is the establishment of an internal audit group.

The nature of many of these services can be represented as joint- or by-products of the audit. In the course of performing audits, potential improvements in auditees' operations and controls become apparent to the auditors. In contrast, an outside management consulting firm starts from scratch, without a similar knowledge of the firm's operations. Areas of the business reviewed with no recommendations generated are "zero return" investigations in contrast to the auditor's contribution toward an evidential base for attestation to the financial statements, regardless of whether efficiency benefits accrue to the auditee.

The direct cost nature of consulting services relative to the largely indirect costs of auditor recommendations due to the "subsidization effect" of the audit process—including familiarity with the auditee's employees, knowledge of his operations, and an overlap of auditing procedures and consulting activities—suggests that the cost of hiring an outside consulting firm for advice may very well be more expensive to an auditee. Even acknowledging the use of separate professional staff for audit and MAS services, the access by MAS staff members to the auditor and the auditor's input regarding areas where changes in operations are likely to be beneficial can be expected to yield cost savings relative to a separate engagement by a consulting firm.

2. The product attributes related to "efficiency" will diminish, and the economies of scale potentially available from the audit will be wasted. The fixed costs of getting acquainted with an auditee will have to be paid twice, implying a decrease in the total quantity of management consulting services demanded. In other words, an increase in the price of the audit would be expected, since a revenue source which formerly contributed toward joint costs of the audit and management services is no longer available, although the joint costs for the two products remain. The incentives to the auditor to generate efficiency suggestions can be expected to drop as the possibility of auditors acquiring an engagement for management advisory services is eliminated. This would represent a decrease in the operational savings possible from implementing the auditors' recommendations.

Further evidence of this cost effect is provided by the fact that managers currently use auditors' MAS services, implicitly taking into account the cost of the appearance of non-independence in their auditors' reports and deciding that the benefits of MAS still outweigh the costs.

3. The enforcement of generally accepted accounting principles (GAAP) increases the comparability through time and across firms of relevant financial statements. Presumably, the reliability of financial statements is improved through GAAP compliance. Decision making will improve through the use of these more reliable and comparable (or consistent) inputs in decision models.

Within GAAP it is also possible to evaluate management's selection of specific financial reporting policies, such as the inventory costing method or the handling of the investment tax credit for book purposes.

Finally, in contracting with creditors, owners, and managers, those agreements tied to accounting numbers require a means of monitoring how the numbers are calculated. GAAP compliance is a fairly low-cost means of contracting, relative to detailed specification of each measurement rule to apply.

VII. Information Economics: The Costs and Benefits of Auditing

1. a. The essentials of contracting require that the basis for the contract be observable quantities for both parties. In other words, both parties must be able to enforce the contract. Since managers' efforts and a company's overall performance are rarely "automatically revealed," man must produce some means of measuring these otherwise unobservable quantities. Typically, the financial statements have served as the measurement device. However, the managers have incentives to bias the financial reports and to apply coarse measurement rules. The means of motivating managers to report unbiased, finer financial figures which can be utilized for risk-sharing and incentive compensation schemes is the independent audit. Without this attestation, the total amount of contracting would decline, as would the provision of less biased, finer financial reports which would not be distinguishable from "average quality" financial statements in the absence of audits.

The *essential* "observable" nature of contract terms (i.e., the requirement that both parties can detect whether the terms of the contract have been met) increases the demand for audits. In addition, the symmetry of information required for acceptable contracting encourages "signalling" activities by managers. Presumably, managers who issue biased, coarse financial reports will not voluntarily undergo an audit. In this context the audit is a signal that can counteract the negative effects of the adverse selection phenomenon.

b. Foreknowledge is information which will in time be revealed by Nature herself. While available as a means of contracting, foreknowledge is likely to be a more expensive basis of contracting than discovery information. This is due to the opportunity cost and production losses associated with waiting and with utilizing untimely monitoring techniques. By waiting until the final output is produced, rather than monitoring operations on a monthly basis,

1. the efficiency of operations is likely to be less than achievable through the production of discovery information,
2. excessive capital is likely to be committed to a single operation resulting in less of a return than would be available from lowering one's investment base and committing the resources to the next best opportunity, and

3. depending on the nature of the contract the output may not be revealed at the investor's preferred point in time, i.e., during the term of the contract or at completion of the contractual service.

A simplistic example of differences in the two classes of information as means for contracting is provided by considering a contract between patient and surgeon. A foreknowledge basis of contracting would be to make payment of the surgeon contingent on the patient being alive one week after surgery. Obviously, Nature will reveal whether the patient is alive on that date. However, nothing precludes the patient's death two weeks after surgery, since no discovery information has been made available post-surgery to ascertain the condition of the patient. Investment in discovery information and the writing of a contract as contingent on the examination of the patient by a second physician would

1. help to assure that the condition of the patient is consistent with the spirit of the contract and
2. provide the opportunity for follow-up surgery or medication if required to avoid substantial loss of health by the patient.

The obvious implication of this example is that discovery information facilitates efficient contracting.

c. If only foreknowledge was available, the total quantity of contracting activities would decline. This is predictable because the means of detecting fulfillment of contractual terms is not always available in foreknowledge form. Further, the lower efficiency of contracting based on foreknowledge will make it less likely that the costs of engaging in a contract will be offset by the benefits.

2. Pure wage contracts do not preclude the balancing of risk-sharing and incentive effects. First, consider the managerial labor market. If the market operates in a fairly sophisticated manner, fixed wages will be adjusted through time to reflect past performance. Hence, the managers implicitly share the risk of operations and have incentives to maximize shareholders' returns. If the manager does otherwise, his future fixed wage will be adjusted downward for his past poor performance.

Second, consider the ability to provide incentives and to share risks via non-wage sources of compensation. Perquisites in varied forms can serve as excellent motivators.

Third, alternative sources of information may be available to market participants which essentially substitute for mixed wage contracts. For example, a principal may know that the utility function of an agent includes a highly valued work ethic and a moralistic

attitude which precludes divergent actions. Or, owner involvement in operations may provide a sufficient basis for motivating employees.

Fourth, the market for securities provides an incentive to managers to act in the owners' interests, by exposing the managers to the risk of takeover.

In light of these four alternatives, the observation of pure wage contracts is not inconsistent with the claim that contracting parties will attempt to balance risk-sharing and incentive effects.

3. There are two primary factors that limit the degree to which managers' actions can diverge from owners' preferences. First, the fact that some performance information will be revealed through observable attributes of a company's operations and through the dissemination of information produced by individuals implies that the market limits managers' divergent actions. Since rational expectations result in market efficiency, the security prices of a company will fall as managers decrease their efforts; eventually a takeover will occur. The mere threat of such a takeover restricts managers' divergent activities. The second factor that can serve as a limitation is the competitive nature of the labor market. Since the future salary of a manager will reflect the security price and similar performance measures of his past employer, and since other managers have incentives to report the divergent activities of fellow employees as a means to improve their salaries and insure their current positions (or their displacement of higher management), there is a limitation on the extent to which managers can shirk their duties and go undetected. The idea that an ongoing firm is always in the market for new managers suggests that competitive entering managers will provide additional incentives to present managers to control operations, since lower wages will be accepted by the entering agents who are capable of lowering waste and thereby increasing their bonus payments. However, the managerial labor market has limitations in its ability to fully reflect agents' divergent activities; for example, due to the inability to penalize managers detected for shirking when these managers are close to retirement, the labor market is not always an effective deterrent. (However, pensions are sometimes subject to adjustment.) Similarly, there may be obstacles to replacing management and significant costs to contracting with managers in a manner that is sufficient to insure their "total accountability" for divergent activities. Despite some limitations, the automatic control mechanisms provided by the securities market and the management labor market will restrict the divergence in managers'

actions and owners' preferences even in the absence of an audit.

4. The market typically cited in the literature is the used car market. By definition it is assumed that no one would sell a good car. The "drastic" price adjustment which occurs from the day a car leaves the show room to the day it is resold reflects this expected low quality of the average used car. The result is that people cannot afford to resell good cars, since they cannot obtain higher than the average price. The reason offered is that the car's quality is "unobservable." The parallel to the audit which has evolved is the practice of dealerships buying and reselling used cars and agreeing to issue a warranty as evidence that the used car is not a "lemon."
5. Auditors signal via the licensing practices which certify that CPAs have attained a recognized level of proficiency. Further, the profession's enforcement of a code of ethics and acceptance of liability exposure signal auditors' exercise of due audit care and willingness to demonstrate compliance with generally accepted auditing standards. Finally, auditors combine into firms and establish firm trademarks as additional signals of their reputations and the quality of their professional services.

Managers signal via product warranties, forecasts, and the provision of financial data. Voluntary contracting with auditors would be irrational were financial statements materially misstated; hence, audits signal high quality financial data. Since managers have liability exposure for their failure to exercise due care in their stewardship responsibilities, the mere acceptance of such responsibilities signals their intentions to be prudent managers.
6. The audit decreases noise, improves fineness, and provides reasonable assurance that material bias does not exist in the financial statements. If the auditor does not provide reasonable assurance that material noise and bias do not exist, as well as assure a minimum level of fineness (i.e., compliance with generally accepted accounting principles), the auditor has liability exposure to investors for their losses, unless he can avoid penalty by demonstrating that generally accepted auditing standards were met. The audit thereby attaches a penalty function to the auditor's performance and increases the overall reliability of the financial statements.
7. The development of financial accounting has tended to restrict accounting techniques to the generally accepted accounting principles and has tended toward greater detail in reporting.

One example of restricting the discretion of financial statement preparers is the selection of the all-inclusive method of financial reporting, rather than allowing numerous direct charges to retained earnings. More recently, the fine tuning of non-operating, extraordinary, and prior period classifications has assured finer income numbers and greater capabilities of users to formulate predictions of future cash flows for a given entity.

Another example of restrictions on preparers' selection of report form relates to the designation of appropriations of Retained Earnings. Past practice included the common designation of an Appropriation (then typically called Reserve) for Contingencies. This practice was restricted to the designation of appropriations for particular purposes, such as an Appropriation for Litigation. The added detail of the purpose of appropriations clearly improves the fineness of financial reports.

The pronouncements that restrict the application of pooling of interests, require amortization of goodwill, increase lease disclosures, and require supplementary price-level adjusted financial statements are all examples of greater detail and fineness in the development of accounting principles and financial reporting techniques through time.

8. Yes, distributive risks are relevant to both private and public information production. A private individual can transfer wealth from others by trading on information. Hence, the distributive risks of others provide substantial motivation to produce private information. However, it is the distributive risk that also leads to the more losers than winners rationale for investors demanding public information. Since investors are willing to compensate providers of public information for the reduction of their distributive risk, the quantity of public information produced increases due to this risk.

Distributive risk is also the explanation for information producers' difficulty in maintaining exclusive access to information as well as their difficulty in suppressing bad news. Distributive risks suggest such substantial gains from trade or resale that as suppression of production, distribution, or access to information is attempted, the incentives for individuals to replicate or discover the information increase.

A contributing factor to companies' production and distribution of public information in response to investors' desire to minimize distributive losses is the incentive not to participate in insider trading due to detrimental effects on the value of managers' human capital and to regulations that restrict such activities.

9. Companies' management does have definite incentives to make public bad news of the foreknowledge type at the earliest date possible. Since, by definition, foreknowledge bad news cannot be suppressed, managers will be compensated for the distribution and production losses foregone by investors due to early warnings of pending bad news.

Similar incentives exist to produce and disseminate discovery bad news because of the difficulty in suppressing information. Whenever information is suppressed, the private value of the information will increase. Therefore, suppression attempts can backfire. As individuals have increased incentives to find out the information and trade on it for large gains, the distributive risk of loss for the *majority* of individuals increases. Hence, companies will be motivated to produce and disseminate discovery bad news since they will be compensated in the form of higher stock prices for the reduced distributive risks of their investors. In addition, productive benefits from reallocating resources based on discovery bad news can also accrue to companies as compensation for their disclosure policies.

By combining the theories of signalling and rational expectations, another explanation of why companies can be expected to voluntarily disseminate bad news becomes apparent. Assume a company publicly reported earnings every time they were good news and chose not to report earnings whenever they were bad news. In this case, the absence of an earnings report would become as much of a signal as the issuance of a report. Since investors will have rational expectations, they will expect that no report constitutes bad news. Considering the theory of adverse selection, given no other information the investors will assume a sort of "worst case" when no earnings report is made available. Consequently, managers will be better off if they provide details on both the bad and the good news.

10. Efficient markets suggest that as one party trades on private information, the price will adjust to the appropriate level which reflects this information. Hence, information available to venture capitalists and private placement debt holders implicitly becomes available to the public market via price adjustments as soon as the parties trade on the information.

Information production in the private markets is a useful means of assessing the preferred types of information for monitoring and investment purposes. Since the private markets do not face the contracting difficulties or the problems claimed to arise from public good attributes of information (at least, not to the extent

of the public market), hypotheses as to desirable forms of information—particularly those proposed by regulators—can be tested by observing the production of information in private markets.

11. It is possible to overproduce public information in the sense that it can be excessive relative to its social value. Individuals *perceive* that relative gain can be obtained from taking speculative positions, even based on public information. Differences in tastes or beliefs concerning economic activities are frequently attributed to one's possession of superior information. As a result, individuals invest and then expend resources generating public information to convince others of their opinion. A similar thought process results in the production of public information by parties holding opposed opinions. A lot of the information produced can be expected to be devoid of or, at best, neutral in its information content. Such information represents a waste of resources in terms of its social value. In addition to direct costs, there are indirect costs incurred in the form of expenditures of resources required to evaluate whether public information has any substantive content.

The public good status of information does not by itself make all information useful. It merely suggests that information which is useful can be utilized by an unlimited number of individuals without detracting from others' use of that same information.

12. a. The mere absence of any report form is not evidence of a market failure or of underproduction of desired information. Since information is not free, the absence of some report form suggests that the costs of producing that information exceed the benefits derived. The claim of a market failure typically is based on some barrier to the production of desired information. However, the observed reports by two companies suggest that no effective barrier to entry exists.

Further, if one claims that contracting difficulties have led to a market failure, it should be possible to identify the information's use in private markets where the contracting costs are at a minimum. Yet, bonding covenants do not require accountants' reports on internal accounting controls, and survey results have suggested that bankers and private placement analysts rarely utilize such reports. In fact, potential users' negative reaction to the SEC proposal suggests it is unlikely that accountants' reports on internal accounting controls are even desired by investors and creditors.

- b. The SEC proposal to require internal accounting control would alter the auditing production function by
1. eliminating the now available economic choice between compliance and substantive testing,
 2. increasing compliance testing,
 3. encouraging a switch toward an efficiency and "asset waste" orientation, and
 4. possibly requiring CPAs to conduct cost-benefit analysis of controls.

In addition, a decline in the potential increased-efficiency suggestions presented to management by CPAs and an increase in the clout of CPAs in getting their suggestions implemented by clients would be expected. Further, competitive disadvantages from disclosures, loss of competent directors, and possible problems with the information content of disclosures would be probable side-effects of the proposal.

The cumulative effect of the proposal, since such disclosures were not deemed cost-beneficial by the private sector before the SEC action, would be to raise the costs of an audit, thereby lowering demand for auditing services.

The subsequent withdrawal and the waiting period will result in greater cost savings relative to those which would result from the implementation of the initial proposal, since it permits additional preparation of reporting guidelines by the profession and compliance with regulators' preferences over a more reasonable time frame. Since an increase in the rate of production always yields greater costs, the rapid implementation of new reporting practices as suggested in the original SEC proposal would result in greater expenses than implementation over three years. However, the ultimate costs of the withdrawal, given auditees' compliance with the original proposal in order to deter regulation (since the SEC has promised to reconsider the proposal in the spring of 1982), will parallel the costs outlined for the proposal.

- c. The costs of an audit would be tied more to the internal control system of auditees than in current auditing practice. This would be due to the SEC's "subsidization" of internal control evaluation as an auditing procedure and the procedure's consequent inelasticity. In addition, the changes in the audit function described in response to part b suggest greater costs for an audit and less flexibility in selecting the factor mix for an audit.

(This response is based largely on Wallace, Wanda A., "Why Mandated Internal Accounting Controls?" *The Collegiate Forum*, Dow Jones & Co., Inc., Spring 1980, p. 9.)

VIII. The Supply of Audits

1. The primary input to the audit production function is professional staff time. However, in support of this staff, capital expenditures are required to develop training materials, to continually update the auditor, to provide time-sharing capabilities for performing auditing procedures, and to develop new audit technology to facilitate more efficient review of large auditees. Further, the legal liability exposure of auditors requires substantial expenditures for insurance.

The production process reflects the prescribed set of generally accepted auditing standards. Since there is one set of requirements for all auditees, there is a fixed cost nature to the production process, and there are constraints on the extent to which the production function can be altered.

In the sense that there are economies of scale in the application of auditing techniques (e.g., through investment in tailored time-sharing systems), in the development and maintenance of an information system, and in the purchase of liability insurance (since larger auditing firms can diversify their risks to a greater extent through a diversified client portfolio), there are economic barriers to small firms entering the auditing profession. The size of professional staffing required for large auditees provides a significant cost advantage to large auditing firms, since the costs of contracting and monitoring across several small CPA firms are likely to exceed the costs of organizing offices within one firm.

However, while the economic barriers to entry cited are clearly applicable to SEC auditees, many of them are relatively unimportant for small unregulated auditees. In fact, the observation that numerous small CPA firms are successfully competing in this auditing market is empirical evidence that no legal barriers to entry exist and that large capital investments are not required in order to offer auditing services. The implication is that regulation has decreased the economic feasibility of smaller auditing firms in the regulated large-auditee market. However, if the large CPA firms attempted to extract other than a competitive return, it is possible that smaller firms could enter even the SEC market and successfully compete through contracting across firms. (The response is based, in part, on Benston, George J., "The Market for Public Accounting Services: Demand, Supply and Regulation." Working paper, University of Rochester, April 1979.)

2. While regulation has increased the quantity of auditing demanded by SEC clients, it has also increased the minimum set of generally accepted auditing standards and the total cost of production for auditing services. Since this decreased flexibility in tailoring audit services to the auditee's requirements raises the costs of production and hence the price at which production is feasible, the quantity of audits demanded in the unregulated sector can be expected to decline. The extent to which the increased demand in the regulated sector offsets the decreased demand in the unregulated sector is an empirical question.

Recently, compilation and review services have been made available as a lower-effort (lower cost) "unaudit service." The provision of such services could assist in recapturing some of the market in the unregulated sector.

3. a. The elimination of all non-common law regulations would make the demand for auditing more elastic and result in price pressures by consumers (auditees, primarily). The auditing production function would likely be tailored to auditees' and financial statement users' demands, as opposed to regulators' demands. Although auditing standards have been set by the profession, tremendous pressures by regulators have been influential, as typified by the illegal payments pronouncements, the proposed report on internal control by the SEC, and time constraints typically placed on SEC filings. The elimination of "excess auditing and related disclosures" would decrease costs, facilitate a decrease in price, and lead to a greater demand for auditing services. The inability of auditing firms to pass on the cost of regulators' preferred auditing standards would provide producers with incentives to increase the efficiency of the audit.

Since some regulations have taken the form of prohibiting services, e.g., the provision of forecasts (this practice was prohibited by the SEC until 1973), there could be a change in the historical emphasis of auditing and an expansion in services valued by consumers but not permitted by regulators.

It is theoretically ambiguous whether an elimination of all non-common law regulations would result in a greater or smaller quantity of resources being allocated for auditing services.

- b. The elimination of private standard-setting would introduce even greater flexibility into the audit production process than would the elimination of government regulations. However, the "signalling" advantages of generally accepted auditing standards and an enforced code of ethics as devices to make the

audit process more observable would be lost. It is likely that a substitute means of increasing the observability of audit services would be developed in the private market. A certification process requiring that some minimum review be performed would evolve, similar to the peer review activities that are currently conducted by the American Institute of Certified Public Accountants.

If a substitute means of monitoring auditors' activities is not identified, the basic premise of contracting would be violated, and the quantity of auditing services demanded would decline. In fact, the adverse selection phenomenon could take a severe toll on the profession. However, just as the ability of managers to shirk their duties is limited by the securities and labor markets, the auditor has incentives to establish a trademark and can be penalized through professional liability exposure and through the loss of clients if he shirks his duties and is detected. Incentives exist for individuals to collect private information as to the sufficiency of the audit process, since the professional liability claims and speculative gains from detecting inadequate audits can be substantial. Since the product of the auditor is integrity, the loss of reputation through faulty audit practices can drive the present value of future audit fees to zero; this suggests the costs of shirking are higher in the auditing market than in the total market for managerial labor.

The costs of direct control over the audit production process exemplified by private standard-setting and regulators' intervention are directly related to these parties' information on the production functions of auditors and the least cost-effective auditing technology for all firms. The losses from such control over the audit production function will equal the increase in audit costs resulting from the employment of inefficient production methods. These losses must be weighed against the "signalling" advantages of uniform audit requirements in order to predict the effect of eliminating private standard-setting on the audit market.

As will be clear in the detailed instruction of auditing, while there is a minimum set of generally accepted auditing standards, there is flexibility in the means of implementing these standards. The implication, of course, is that the current direct controls over the audit production process by private standard-setting boards are unlikely to be severe constraints to the auditors, nor are they likely to impose excessive production costs.

IX. A Look at Regulation

1. Every time an auditor's duties increase, the auditee is obliged to pay the higher price for those services due to SEC mandate. If this level of auditing exceeds the unregulated market level, the regulation is analogous to a price floor and can be expected to decrease the demand for complementary services and possibly decrease the number of companies that choose to "go public." These effects result from the inelasticity of the demand for an audit by SEC-regulated firms.

Similarly, if a new audit requirement results in a substitution for other more effective means of auditing, a "rationing" effect will be observed. Since the desired audit assurance is unavailable at the given price, due to the displacement of techniques developed in the unregulated market by a mandated production process, the consumers are consequently less well-off. [Note that specific procedure specifications in auditing standards include confirmations, the physical observation of inventories, and the review of internal accounting control (although testing is not required).]

A direct rationing effect is related to the prohibition of certain types of information and to the implicit prohibition of information through increased liability exposure. The pre-1973 SEC attitude against forecasts rationed the amount of future-oriented information available to financial statement users. Similarly, the suppression of information prior to the SEC filing delays productive resource allocations by the public. It is also likely to lead to increased duplication of information production activities.

Regulation which essentially subsidizes government operations is equivalent to a government tax. There is a transfer of wealth from consumers and producers to the government. The stockholders of a company effectively incur the costs of regulation, other than those costs which can be passed on to consumers. As the costs of production are raised, without perfect inelasticity, the producers have to be worse off. Overall, the volume of trade will decline as a result of the tax effect.

Like other regulation, accounting and auditing standards reflect regulators' self-interests *through time*. There is little tendency to "clean up the books" to reflect obsolete standards that impede the efficiency of the auditing production process. Similar to other regulation, such standards can act as a threat to non-regulated sectors by effectively "forcing" those sectors to emulate many of the regulators' guidelines. The motivation for such emulation is to avoid the total intervention by government into other sectors.

2. The free-riders of mandated audits are any users of audited financial statements who do not pay for the information. For example, financial analysts are frequently cited as free-riders. These analysts lobby extensively for increased disclosures because that information when quickly disseminated lowers the information production costs to the analyst. In effect, the disclosure is a direct subsidization to the analyst's "tools of the trade"; current stockholders or consumers pay the price of the analyst's free ride.

Regulators are also potential free-riders of mandated audits. CPAs with their professional liability responsibilities provide insurance against investors' loss, thereby reducing the blame placed upon regulators for investors' loss via a direct reduction of the loss (through the recovery of damages). Further, the regulators are frequently able to shift enforcement responsibilities to the CPAs, as demonstrated by the illegal payments issue and the review and disclosure requirements related to managers' misstatements in annual reports (see SAS No. 8). A recent attempt to shift the Foreign Corrupt Practices Act (FCPA) enforcement responsibilities to the CPAs was made in the SEC proposal that would have required accountants' reports on internal accounting controls. In other words, the mandated audit can be viewed not only as a direct subsidization of the analyst's operations but also as a subsidization of government's operations and a vehicle through which regulators can avoid blame.

3. Accounting regulation differs from auditing regulation along the specificity-generality continuum. As described in Section IX, generality refers to standards that set a reasonable criterion on which to judge relevance, while specificity refers to rules which withdraw from the decision maker's consideration one or more of the circumstances that would be relevant to the decision according to a standard. The difference between a rule and a standard is a matter of the degree of precision. While accounting guidelines tend to be specific, the auditing standards tend to be general, stressing objectives rather than the means of reaching those objectives. The nature of standards allows choice by the auditor as to the means of accomplishing compliance with generally accepted auditing standards (GAAS). Although auditors enforce generally accepted accounting principles (GAAP) by reporting noncompliance, the "one GAAP for all" issue is more of an accounting regulatory constraint than an auditing constraint.

The explanation for the differences in the regulation of accounting and auditing is presumably related to

costs. The cost of accounting regulation is greater than that of auditing regulation from the perspective of allowing less flexibility in the extent to which mutually preferred exchanges are permitted between auditor and auditee regarding reporting and accounting methods *relative to* auditing processes. The greater costs suggest greater benefits must be available from such a decrease in accounting flexibility. Since accounting statements are frequently compared for investment decisions while audit processes are typically not compared, a value to detailed uniformity in accounting would exist in the investment setting.

In addition to the difference in benefits derived from uniformity, the nature of auditing is likely to require that audits be tailored to clients' characteristics, thereby largely precluding uniform detailed audit procedures. The exceptions to *general* auditing standards can typically be traced to litigation, with subsequent establishment of GAAS to provide future legal defense of "due care."

A benefit to general standards for auditing also stems from regulators' self-interests. The generality of standards permits the government to claim the inadequacy of auditing procedures in the wake of trouble. Similarly, the standard-setting boards can avoid blame, since the litigation claim rests on the auditor's judgment *within* the prescribed standards. The insurance motivation for ambiguity in regulations is evidenced by such actions as the SEC's reluctance to provide direction as to the means of complying with the FCPA or to provide opinions as to companies' compliance with the FCPA. While specificity in accounting regulations is useful to both investors and regulators in comparing companies' operations, a means of "escaping from blame" is provided by giving auditors the responsibility to check GAAP compliance and to ascertain the overall fairness of financial statements based on general GAAS, with primary emphasis on professional judgment.

4. Managers' monopoly over information appears to have few negative effects, as discussed in Section VII, since
- a. signalling incentives exist to disseminate both good and bad discovery information,
 - b. concerns for human capital value (as well as the existence of insider trading regulations) preclude the realization of trading gains by managers,
 - c. the difficulty of restricting access to information makes successful suppression of information, including bad news, highly unlikely,
 - d. managers have incentives to provide information for principals' monitoring activities to maximize their wages, and

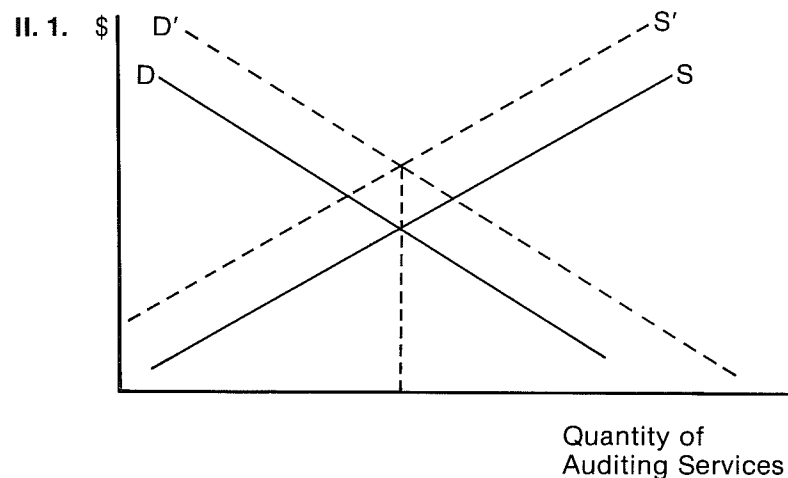
e. alternative sources of information typically exist.

Further, the public good attributes of information do not preclude contracting activities as a means of assuring the production and dissemination of information. In fact, contracting activities prior to information production between managers and creditors (note bonding covenants) and between managers and investors (note charter requirements) that in essence provide prepayment for future information production suggest some avoidance of non-purchaser problems. The typical arrangement, where managers prepare the financial statements and contract with independent auditors and then provide the information to third parties, efficiently reduces the redundancy of information production. However, the timeliness value to information guaranties some redundancy in the production of information similar to that available through management's dissemination of financial statements. While earnings announcements have information content, most of the information in the announcements seems to have been anticipated, based on numerous empirical studies. In other words, substitute information sources exist, and some duplication of information production is likely to be observed.

The signalling advantages and information production incentives that exist for managers suggest a "market failure" is not a theoretical necessity that stems from the fact that information has public good attributes; whether "market failures" occur is an empirical question. Even if some shortcomings exist, there are various remedies other than government intervention which could improve the production process. Institutional arrangements of guarantees, warranties, and other forms of insurance that protect, for a fee, a capital market agent against losses from distorted information can substitute for disclosure laws or similar regulation. Although a *requirement* of government regulation based on *claimed* "market failures" appears implausible, empirical evidence is required for resolution.

ECONOMIC ANALYSIS APPENDIX TO INSTRUCTOR'S MANUAL

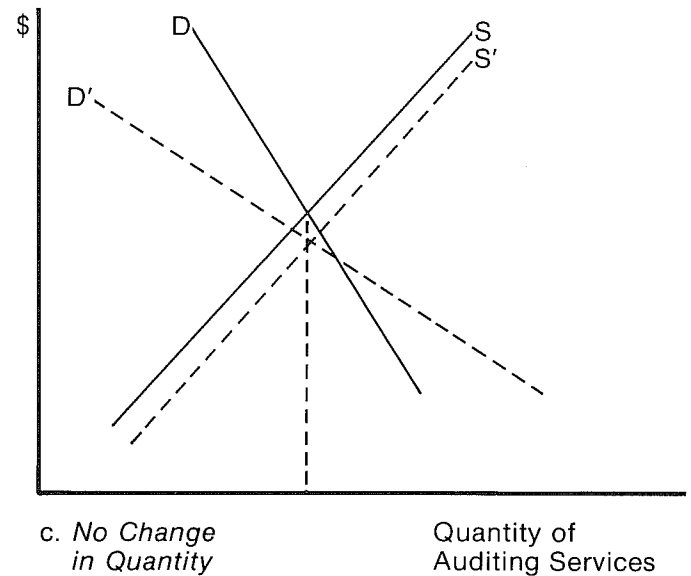
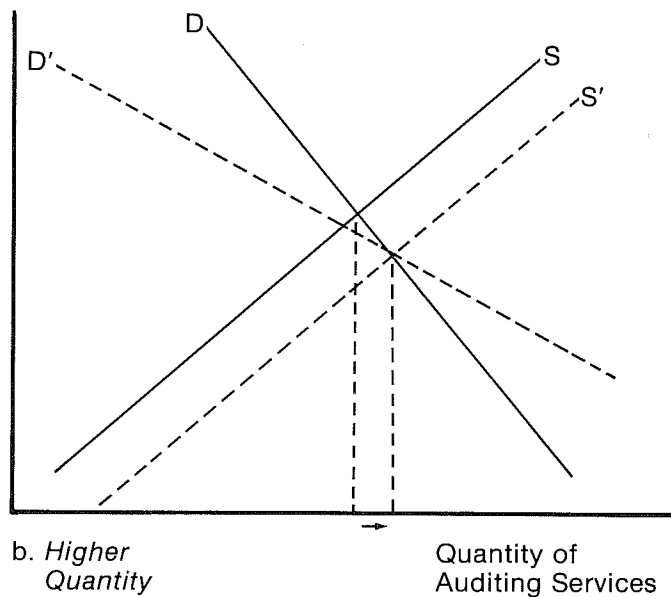
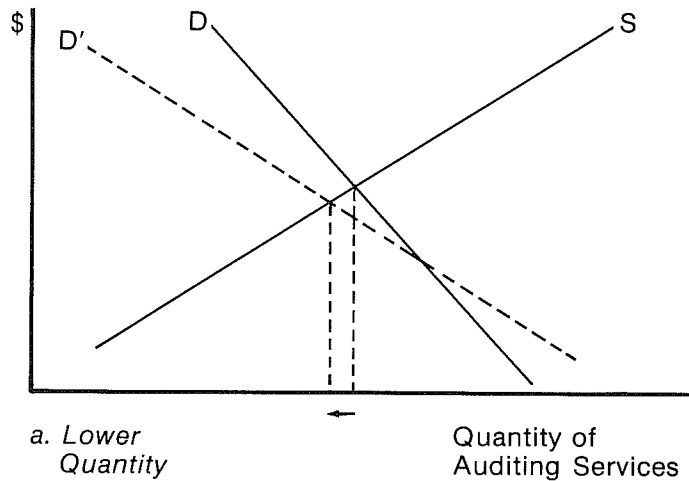
Diagrammatic Demonstration of
Key Issues for Optional Classroom Use



This graph demonstrates that while regulation can shift the Demand Curve (D) to D', it may simultaneously shift Supply (S) to S' without affecting the equilibrium quantity of auditing services. Obviously, alternative possibilities exist such that quantity can increase or decrease as a result of regulation, depending on the differential effects on Demand and Supply.

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

II. 2. COMPETING ALTERNATIVES:

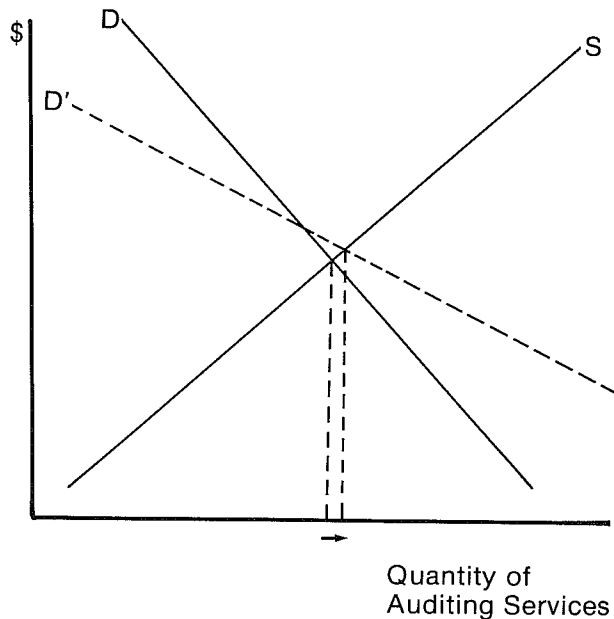


The elimination of the SEC requirement could be expected to make Demand more elastic, which by itself would lower the equilibrium quantity of auditing services (a). However, the lifting of the SEC requirement could be accompanied by a decline in other regulation which might shift the supply curve and result in an increased quantity of auditing services (b), or an equal quantity (c) at equilibrium.

NOTE: These graphs are illustrative of how the various factors interrelate, and not actual graphs based on empirical research.

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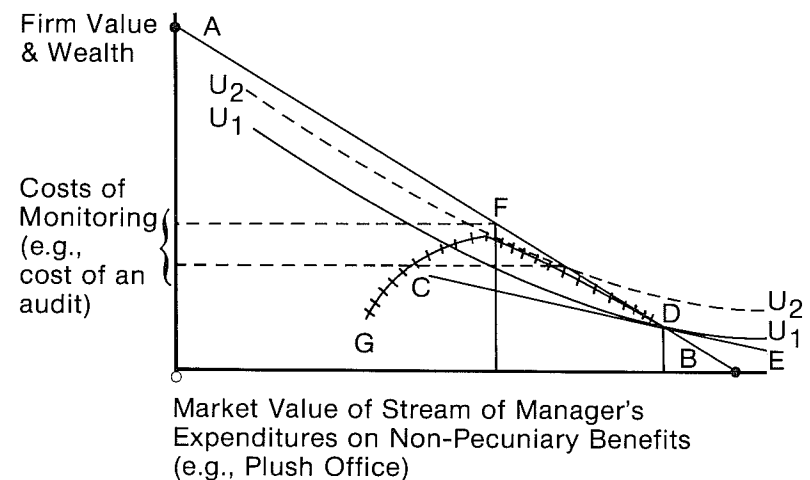
Once the cost savings from the elimination of the regulation are realized, the Demand curve could shift toward a more elastic position and result in a total increase of audits due to the availability of relatively low-cost audits. Adapting graph (a):



NOTE: This analysis is also applicable to VIII. 2. and 3.

III. 1. The diagram portrays the classic agent's decision to be monitored, utilizing an owner-manager as an agent. The essential point to the diagram is that the monitoring costs expended depend strictly on the shape of the monitoring production function. Hence, if the diagram was adapted to the employer-employee relation and no monitoring was observed, it would be assumed that GD was negatively sloped everywhere to the left of D. In this case, the correct decision would be to not incur monitoring costs, since the benefits would not exceed the related costs.

MONITORING PERMITS THE AGENT TO MOVE TO A HIGHER INDIFFERENCE CURVE



- AB = Best Attainable Combinations of Perks & Wealth
- A = Point where no perks are extracted
- B = Zero value of firm with perks costing "B"
- U_1U_1 = Utility or indifference curve of the agent: its convex shape implies that the marginal rate of substitution between non-pecuniary and pecuniary wealth *diminishes* with an increasing level of benefits. (This might be expected due to the job-specific nature of perks; otherwise, a \$1 perk could be sold on the market for \$1, and a straight-lined indifference curve would be appropriate.)
- U_2U_2 curves

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

CE

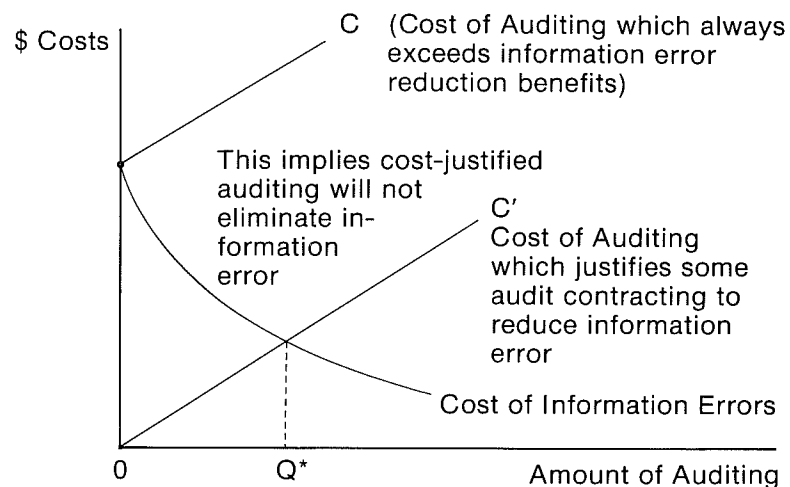
= Portrayal of the effect on the agent's wealth of moving away from D, the point where the utility curve is tangent and necessarily lies on \overline{AB} . The slope of this line is [- (fraction of firm owned by the agent)]. This slope relates to the underlying assumption of an owner-manager who pays for a greater percentage of the perquisites he withdraws since he owns a greater percentage of the firm. Rational expectations, with price protection available, preclude movement from D to E. Similarly, the "more is preferred to less" motivation of the agent deters movement from D to C. Note that C to D and D to E are below U_1 , reinforcing the claim that the agent will stay at D. Rational expectations also explain why D lies along \overline{AB} : it reflects the market's expectation that the agent will equate the marginal rate of substitution between wealth and non-pecuniary benefits to yield the slope [- (fraction of firm owned by the agent)], and based on this expectation will price-protect appropriately. Clearly, to the right of \overline{AB} the market would yield an overpriced share, and to the left of \overline{AB} an underpriced share.

GD curve = Monitoring Production Function, e.g., the Auditing Production Function, which determines whether monitoring occurs. If D were on the negative side of the production curve, the costs of monitoring would exceed the benefits of fewer perks and no monitoring resources would be expended. An eventual negative slope is expected due to decreasing returns from monitoring. It is known that some part of the curve is positive, as diagrammed, due to the observed expenditures on monitoring in the unregulated market.

F = Point preferred to D by agent since the savings in perks exceed monitoring expenditures.

(This analysis is based on Jensen and Meckling, 1976—see references for Section III.)

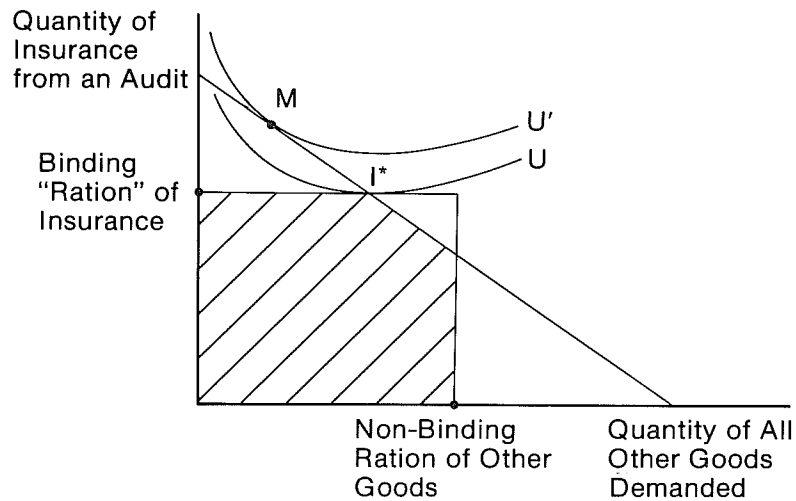
IV. 1. The "information error reduction value" of auditing depends on its relation to auditing costs. This motivation will exist if the benefits of the audit in reducing error exceed the costs. In the diagram if C' is the cost of auditing, the information error reduction contributes to determining the equilibrium level of auditing (Q^*). If C is the appropriate cost curve, the error reduction is not sufficiently valued to justify an audit. This illustration assumes that the cost of auditing reflects the contracting costs required to circumvent possible problems that stem from the "public good" attributes of an audit.




(This analysis is based on Shakun, 1978—see references for Section IV.)

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

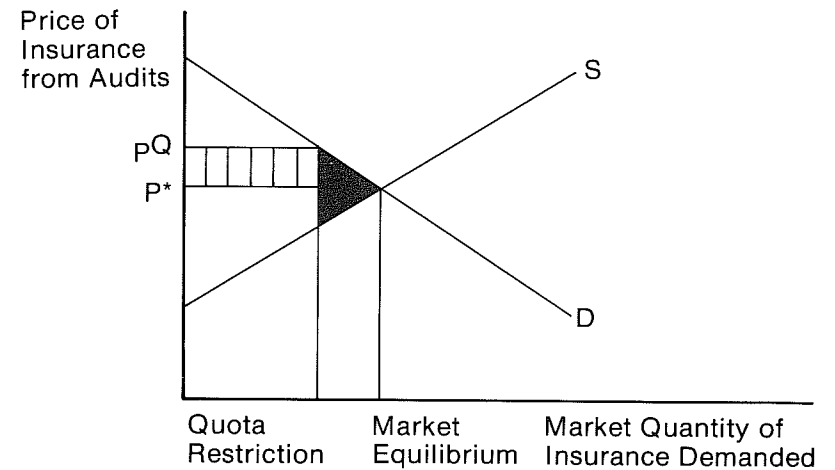
- V. 1. A ceiling on the available insurance coverage provided by an audit is analogous to a physical rationing of the amount of insurance available. The cost of this rationing to consumers is depicted as the difference between utility at the tangency optimum M that consumers would choose in the absence of a ration and the utility at position I*, inferior to M. It is assumed that this would be a binding ration in the sense that no perfect substitute would be available and that the insurance quantity demanded would be in excess of the American Law Institute's ceiling.




 = Market Opportunity Set
 U, U' = Utility or Indifference Curves


NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

- Instead of focusing on the consumers' rationing effect, this problem could be viewed as a quota on the supply of insurance by auditors (essentially the same idea).



Where P^* is the unregulated market price and P^Q is the price resulting from the quota

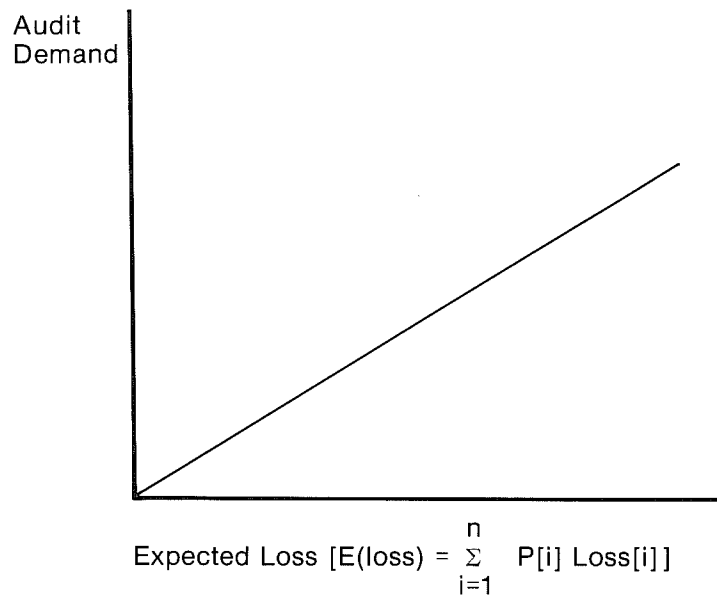
 = Deadweight Efficiency Loss Area from "Quota" Restriction on Insurance Supplied by Auditors

 = Transfer from Consumer Surplus to Suppliers (i.e., Auditors)

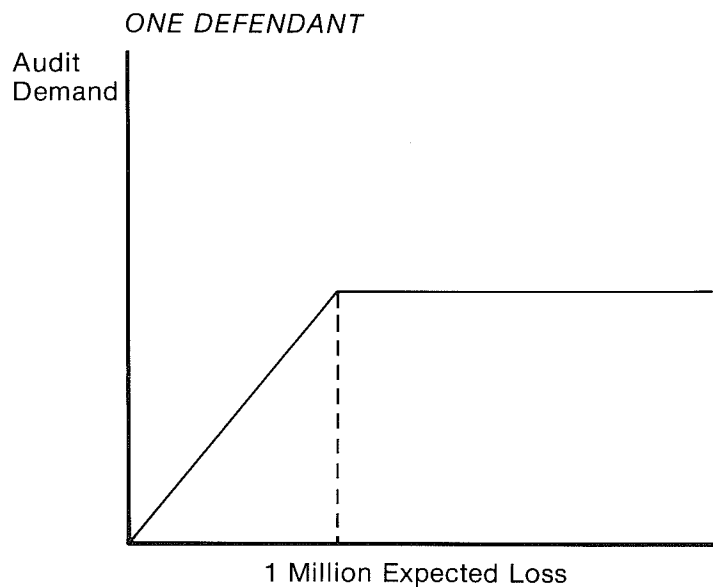
NOTE: This analysis is also applicable to IX. 1.

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

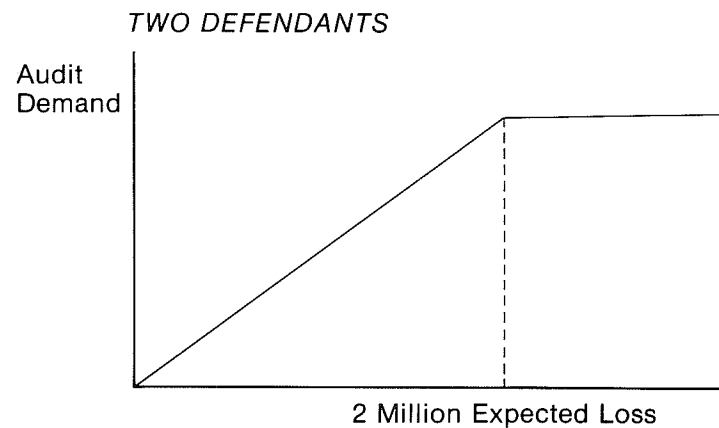
- *Alternative Analysis:* One can focus solely on the demand for insurance. Assume there is typically a linear relationship, as diagrammed.



In that case, demand based on the possible liability exposure would level off.

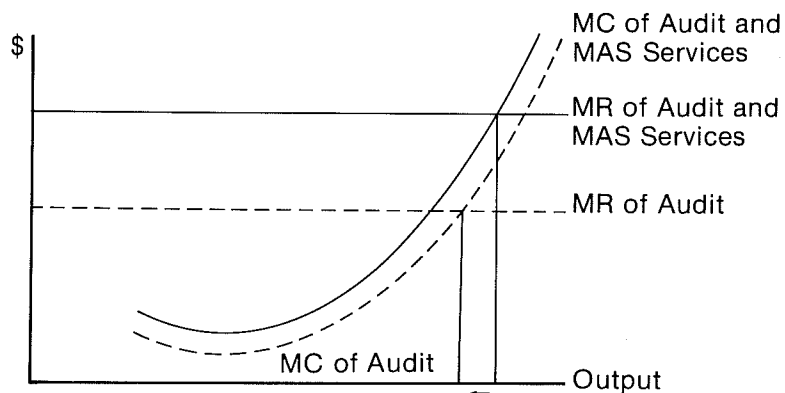


NOTE: These graphs are illustrative of how the various factors interrelate, and not actual graphs based on empirical research.



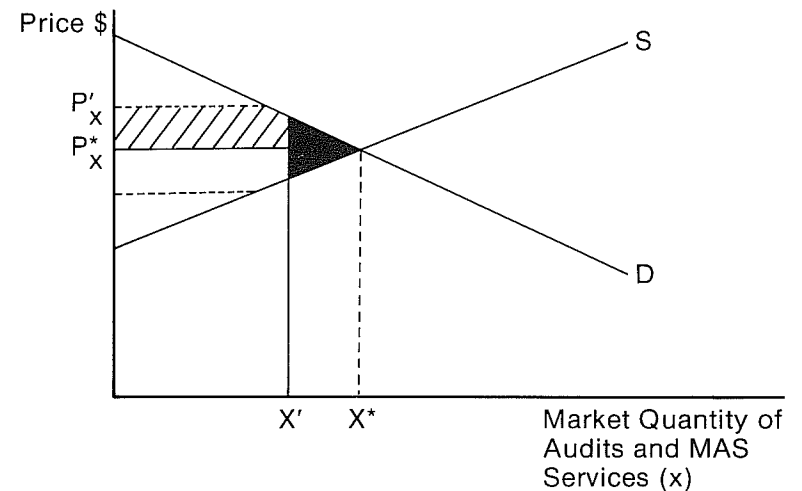
NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

VI. 2. The decision of a supplier to produce products with common costs rests on a comparison of the total costs of the whole set of joint products with the total revenue from their sale. If the loss of revenue from management advisory services (MAS) exceeds the decline in marginal costs (MC), total output which suppliers are willing to produce at a given price will drop. Only by increasing the price will the unaltered demand for audits be met (i.e., some inelasticity in audit demand is assumed). It is assumed that the decrease in marginal revenue (MR) from MAS services is not offset by some favorable effect of such a SEC requirement on perceptions of auditors' independence.



NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.


- A slightly different way of viewing this type of ruling is as a quota limit on supply. This approach basically ignores the availability of substitutes and focuses on the total demand for both the audit and MAS services. (This analysis is basically identical to V. 1.)




Where P^*_x and X^* represent equilibrium price and quantity in the unregulated market

X' is the quota or quantitative restriction on the provision of MAS Services

P'_x is the price at which goods will be sold with the quota

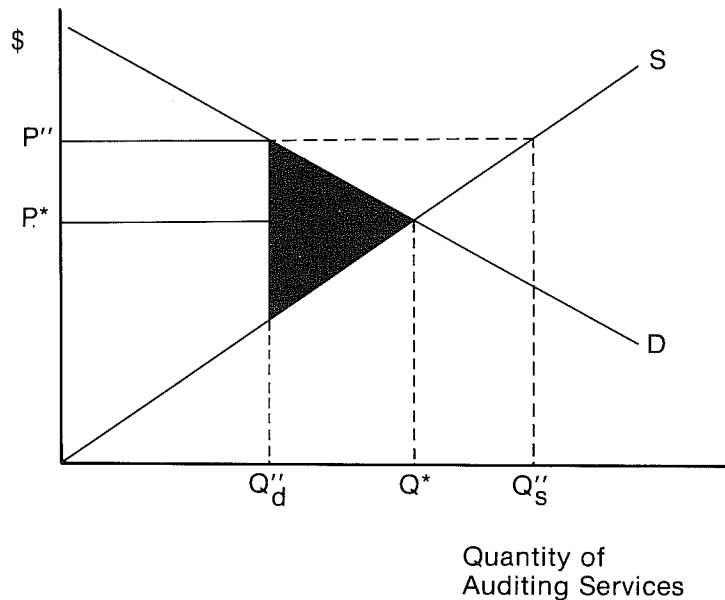
 = Loss of Consumer Surplus that now goes to the suppliers

 = Deadweight Loss from the reduced volume that results from any quota restriction

NOTE: This analysis is also applicable to IX. 1.

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

IX. 1. The effects of a binding ration, as well as a quota, were illustrated in this appendix in response to questions V. 1. and VI. 2.; both analyses are applicable to this question. A price floor on auditors' services will result in an efficiency loss, as diagrammed:



Where P^* , Q^* are equilibrium price and quantity

P'' is the price floor

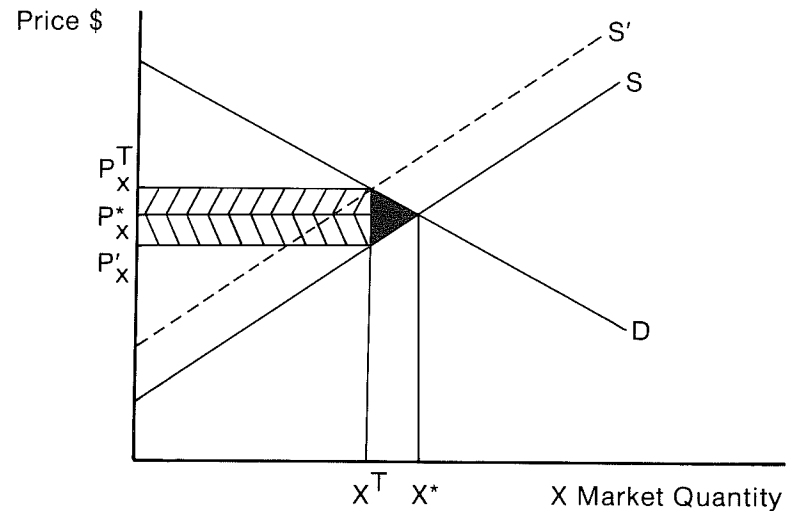
Q''_s is the quantity suppliers are willing to provide at P''

Q''_d is the quantity consumers are willing to demand at P''

■ is the efficiency loss

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

Obviously, this effect depends on the inelasticity of demand due to regulation. The effect of a tax is to hinder trade.



Where X^* is quantity traded pre-tax at price P^*_x

X^T is quantity traded post-tax at price P^T_x gross and P'_x net

▨ is the aggregate tax collection

▨ is the loss in Consumer Surplus

▨ is the loss in Producer Surplus

■ Total deadweight or efficiency loss due to the tax

} Presumably offset by government benefits

NOTE: This graph is illustrative of how the various factors interrelate, and not an actual graph based on empirical research.

Traditional Topics Covered in Auditing	Proposed Chapter Integration from Teaching Tool
Overview of Auditing <i>-A Statement of Basic Auditing Concepts</i> <i>-The Philosophy of Auditing</i>	I, II, III, IV
Legal Responsibilities	V
Internal Control -Management Letters -Reports on Internal Control	VI
Operational Audits	
Understanding the Client	VII
Code of Ethics	
Generally Accepted Auditing Standards	
The Interface of Auditing and Generally Accepted Accounting Principles	
The Nature of Audit Tests	VIII
Working Papers	
The Auditing Standards Board	IX
Securities & Exchange Commission	
Current Regulatory Activities— Metcalf, Moss, Foreign Corrupt Practices Act, Public Oversight Board, . . .	