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摘 要

組織可視為一群追求自身目標之人們間的契約的集合，而會計為執行這些契約的工具之一。這個觀點係以宏觀的角度來探討會計及其在組織內所扮演之功能。企業自許多市場（包括資本市場）中取得資源。在過去二十年裡，研究結論指出：(1)個人之行為如何影響或不影響市場，(2)資訊如何在交易過程中從一交易者傳遞至另一交易者手中，(3)資訊產生所需之成本負擔，及(4)市場中存在著內部人對企業之整體效率及分配效率之後果。

透過這些結果，我們對於會計管制有更進一步之認識。當吾人對於會計準則內線交易之管制寄以厚望時，必須注意及過去十年來世界各地證券交易所所困擾的問題實具有其經濟意義，且應由長期之結構性改革加以探討。除非管制與組織內人們之自利行為相一致，否則此方面之努力不可能收效。

關鍵字：會計契約理論、會計準則、證券市場、內線交易。

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INVITED EDITORIAL

Security Markets and Accounting Standards: Lessons from Research

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Abstract

We can think about organization as a set of contracts among people seeking their own goals, and accounting as a means of implementing these contracts. This perspective takes "a crude look at the whole" of accounting and its function in organizations. Business firms draw their resources from many markets including the capital market. During the last two decades we have discovered how individual behavior does and does not affect markets, how information is disseminated in a market from one trader to another in the process of trading, how information production must be paid for, and the consequences of the existence of insiders in a market for aggregate efficiency as well as distributive efficiency of the firm.

From these findings we can draw many lessons about regulation of accounting. We should be cautious about overestimating what can be achieved through mandatory or legal approach to accounting standards and insider trading. Problems that have afflicted many of the stock exchanges of the world during the past decade have deep economic roots that can be addressed through long term structural changes. Legal or mandatory efforts in this direction are unlikely to be effective unless they are consistent with the self-interest of the people who participate in the firm.

Keywords: contract theory of accounting, accounting standards, stock markets, insider trading.

1. Introduction

Of all the management disciplines accounting is, perhaps, the most universal. Some basic features of accounting have been in common practice across many commercial civilizations and over thousands of years. This universality may make the task of analyzing the role of accounting in security markets easier than it might have been. Still, there is so much that we do not understand about the alternative ways of organizing economic activity of societies. Because of my lack of knowledge and understanding of the alternatives, I shall rely a great deal on what I know of the American system.

The paper is organized in three parts. First, I outline a view of accounting called the contract theory of accounting which is developed in more detail in Sunder (1997). This is an integrated way of looking at accounting that allows us to relate all parts of accounting to each other, and to functions of the firm.

Second, I outline some of the important features of how markets--security markets in particular--function. During the last two decades we have discovered how individual behavior does and does not affect markets, how information is disseminated in a market from one trader to another in the process of trading, how information production must be paid for, and the consequences of the existence of insiders in a market for aggregate efficiency as well as distributive efficiency of the firm.

In the third part I discuss ten lessons about regulation of accounting we can draw from the first two parts. Briefly, these lessons caution us about overestimating what might be achievable through mandatory or legal approach to matters of accounting standards and insider trading. Problems that have afflicted many of the stock exchanges of the world

during the past five years have deep economic roots that can be addressed through long term structural changes. Legal or mandatory efforts in this direction are likely to prove mere band aids, and they are unlikely to be effective, even if they allow the opportunity for the decision-makers to appear decisive.

2. Features of Accounting

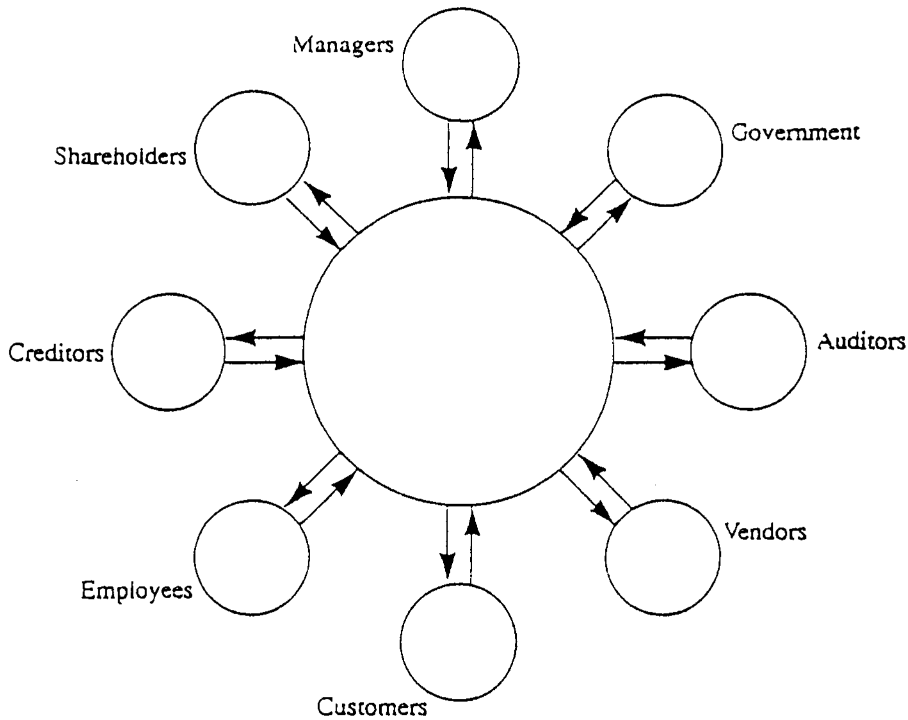
Let us consider five important features of accounting: (1) firm as a set of contracts; (2) functions of accounting; (3) relationship between firm and its shareholders; (4) problems facing the shareholders and managers of a public firm; and (5) accounting as a solution to the corporate control problem.

2.1 Firm as a Set of Contracts

Consider a model of organizations which is useful for understanding the role of accounting. It is often convenient to think of a firm or an organization as a set of contracts among people. I use the word contract loosely; instead of being a written or legally binding arrangement, a contract being only a mutual understanding or expectation among the participants about the behavior of one another. Depending on the size of the organization, the number of people involved in these contracts could be small or large. What is common to all these contracts is that each person has an obligation to contribute resources to the organization, and has the right to receive resources in exchange.

For example, we can think of a typical business firm as a contract among its shareholders, managers, labor, suppliers, customers, creditors, and government.

Figure 1
The Firm as a Set of Contracts Among Agents



While each contract is different in its details, there is a fundamental symmetry shared by all of them. Shareholders and creditors contribute capital in expectation of return on their investment; managers and labor contribute their skills and talents in expectation of compensation; suppliers contribute materials or equipment in exchange for cash; customers pay or promise to pay cash in exchange for goods or services provided to them by the organization. Similarly, government contributes public services and claims taxes from the firm.

Other types of organizations such as business partnerships and proprietorships, charitable or social organizations, and governmental

organizations can also be modelled as sets of contracts among various parties. The names of the parties may change, but the general pattern of association remains the same.

In contract model of organizations, we assume that the participating individuals pursue their respective self-interest. They cooperate in functioning of the organization only to the extent that they find such cooperation to be in their interest. Organization itself does not need to have an objective, only the participating individuals do. In a toy company, making toys is not an objective in itself; it is only a feasible means to fulfill the contractual expectations of its participants.

A well-designed organization is successful because it consists of a set of contracts that is advantageous to every one of its participants. If an employee receives a wage which is as high or higher than what he could expect to make elsewhere, his employment contract is advantageous. The same is true of supply of capital, managerial skills and other resources the firm needs. This result can be obtained only if the firm finds and implements a production function that generates resources whose value exceeds the value of the inputs. A successful organization design balances the self-interest of the participants in such a way that it is better for every individual to fulfil his contract than to default on it.

2.2 Functions of Accounting

What does it take to implement and enforce such a contract set? In a world where individuals are driven by pursuit of their self-interest, there is ever-present danger that some participants may not fulfil their contract, either due to error or shortsightedness or due to unanticipated events. Failure to fulfil their contracts by some can induce others to follow suit. Firms fail and organizations disintegrate when some participants fail to fulfil their contractual obligations, either by taking more resources than

they deserve or by contributing less than they are obligated to. Accounting is the mechanism organizations use to preserve their integrity against these forces.

How does accounting implement contracts and hold organizations together? It serves five major functions. First, accounting measures and records the resource contributions of the participants. Second, accounting monitors and records disbursements of resources to the participants. Third, the control system determines the degree to which each participant has met the conditions of his contract, and distributes this information to selected people in the organization. Fourth, accounting serves the advertising function of informing and attracting the potential participants in the organization about the benefits of participation in the organization in various capacities (e.g., shareholder, employee, customer, etc.). Finally, accounting undertakes to openly distribute some minimal level of knowledge about the firm to all interested parties in the form of public information. Deadlocks often arise because people think that they have private information even though the information is, in fact, in possession of others also. Dissemination of public information, by informing everyone that everybody is informed, reduces the chances of such deadlocks, and the inefficiencies that arise from such deadlocks.

Consider a few examples of these functions shown in Table 1. Resource contributions to the organization are monitored and measured by several parts of the accounting system such as punch clock and quality control for factory workers, receiving dock counting and testing for vendors, and cashier's desk for contributions of customers. Similarly, accounts payables control disbursement of resources to vendors, shipping department for customers, payroll accounts for workers, and dividends accounts for resources going out to the shareholders.

Table 1
How Accounting Measures Contributions and Disbursements

	Contributions	**Disbursements**
LABORS	Clock, Quality Control	Payroll Accounts
CUSTOMERS	Accounts Receivable	Shipping Accounts
VENDORS	Receiving Inspection	Accounts Payable

In order to fulfill its third function, the accounting system generates reports and documents that permit the relevant participants to know whether, and to what extent, their contract has been fulfilled. For example, each worker receives a payroll slip, and his supervisor receives a performance summary to enable both to verify the fulfillment of the worker's contract. Similarly each customer receives the shipping documents and invoice and the sales manager receives the account history so both can verify the fulfillment of the customer's contract. Various budgets and performance reports at various levels of managerial hierarchy serve a similar function with respect to the contract of each manager in the organization.

Organizations produce accounting and other reports with an advertising motive to attract new individuals to join by providing them information about the cost-benefit attractiveness of various contractual slots. This function is served not only by the normal advertising to attract customers, but also through institutional and factual advertising to attract new employees, managers, shareholders, etc. In the United States, the average number of copies of annual reports printed and distributed is about three times the number of shareholders of the firm. These reports are used to attract many other people to do business with the firm.

Finally, all contractual arrangements in the firm, with the exception of shareholders, are finite term contracts. When they come up for renewal or renegotiation, participants are tempted to negotiate a better deal for themselves by threatening to quit. If one participant in the firm thinks that he has some information that others do not have, he may try to bluff the others. Such situations lead to strikes, lockouts, and other forms of deadlocks in firms. In order to minimize the losses created by such deadlocks, larger corporations publish their reports to the public. Open publication of information not only makes sure that all the participants in the firm learn this information, it also ensures that each participant knows that others also have that information. This public information, or common knowledge, reduces the chances of deadlocks.

2.3 Shareholders and the Firm

Owners of a firm, whether they are proprietors, partners, or shareholders, stand in a special relationship to the firm. Owners contribute their capital and other resources to the firm without a guarantee of any return. They have a claim to the residual resources of the firm after other participants' contracts have been fulfilled. The necessity for this residual arrangement arises from uncertainty and arithmetic. Uncertainty about the future means that the amount of resources that become available for distribution among participants in the firm cannot be known at the time the contracts are negotiated. One or more of the participants must agree to receive state-contingent shares in the wealth of the firm. Owners are such participants, and their aggregate share of the firm's wealth depends not on their contribution but on whatever remains after everyone else has been paid off.

Owners' relationship to the organization depends on its size and structure. In a simple proprietorship organization operated and supervised

directly by the owner, a simple form of accounting called bookkeeping is sufficient. This simple form of accounting serves the firm by supplementing the memory of the proprietor in keeping track of the firm's resource rights and obligations. When an organization is larger, the owner needs help in supervising and managing various aspects of business, accounting must not only serve the memorandum function for all the managers, it must also enable each manager at each level of the organization to motivate, evaluate and control the performance of other managers who report to him. Elements of this more complex form of accounting (e.g., budgeting, cost analysis, planning and control) are taught in our managerial or cost accounting courses.

When the firm grows sufficiently large that its needs for equity capital cannot be met by a compact group of acquaintances, a publicly-held firm arises in which the management function is divorced from ownership. This separation gives rise to difficult problems of control because shareholders (being the residual claimants in the firm) are vulnerable to misappropriation of the firm's resources, and the hired managers cannot be relied upon to always have the best interests of shareholders in their heart. Financial accounting, the most complex form of accounting, is an attempt to solve this difficult problem. Let us focus our attention on how accounting struggles with the problem of devising a way of holding a large publicly-held, managerially-run firm together under the pressures of diverse interests.

2.4 Problems Facing the Shareholders and Managers of a Public Firm

The shareholder in a publicly-held firm finds himself in a difficult situation. Having invested his savings in a publicly-held firm, the shareholder faces an uncertain return. Operation of the firm, and their

return on investment depends on actions of people they hardly know, people whose short-run interests may be in conflict with their own. This return also depends on events beyond their control. Besides, as one of the thousands of small shareholders, he has little knowledge of these people, events, or the day-to-day affairs of the firm. Managers, employees, even customers have more immediate knowledge than the shareholders do. They cannot act quickly to protect their interest against adverse developments.

The shareholders require the managers hired to run the firm to submit periodic reports. But these reports cannot place the shareholder in the same informed condition as if he were running the firm. Giving information to shareholders of a publicly-held firm amounts to giving information to everybody, including the firm's own competitors and other parties it bargains with. No firm in a competitive environment can survive by conducting all its business in the open. Second, the amount of detail in such information would not only be incomprehensible to the shareholder, it would place such high demands of time and skills on the shareholder that the return on investment may be insufficient compensation. Finally, greater the detail in the reports received from the management, more costly it is for the shareholder to discern which information is in error, and what it means about the state of his investment. On the other hand, more aggregated information is more susceptible to self-serving manipulation of reports by the managers. The shareholder needs a system that will help him protect his interests in the firm without imposing costs that are so high as to render public ownership of firms an infeasible proposition.

The manager faces the opposite problem. Stewardship of resources are entrusted to him by the shareholders with the expectation that he will use these resources to negotiate and implement a feasible set of contracts

that will produce a reasonable return for the shareholders after satisfying all other contracting parties. While the manager sits at the procedural hub of the firm, as an individual he, too, is a contracting party in the firm with his own personal interest in compensation, promotion, and reputation that derive from his performance in the position he occupies. His self-interest induces temptation to opportunistically take advantage of the shareholders. Unable to publicly distribute all information, the managers face the task of credibly communicating summary information about the status and operations of the firm to its skeptical shareholders.

2.5 Accounting as a Solution to the Corporate Control Problem

The past two centuries have seen a gradual evolution of publicly-held corporation as a viable substitute for the more traditional form of business run by its owners. The initial demand for publicly-held corporations arose because individuals could not supply the large amounts of capital needed to finance the fixed assets of firms after the industrial revolution, especially for railroads. Unless a solution was found to safeguard the interest of the remote shareholders, they would have been unwilling to part with their hard-earned savings. Thus development of an attractive investment climate through stock markets depends on our ability to find solutions to the shareholders' and the managers' problems we have already discussed.

Accounting is a way of addressing this difficult problem. It makes it possible for all participants in the firm to execute their mutual responsibilities and rights. In particular, accounting makes it possible for the shareholders and managers to implement their accountability relationship with each other. The manager is able to give an account of the resources entrusted to him, and the shareholders can take account from

the managers or stewards of the firm (see Ijiri 1975). No accounting solution to this problem can be perfect; all solutions are based on compromises made by the participants among desirable traits of the solution.

3. Features of Security Markets

3.1 Individual Behavior versus Market Forces

Accountants compile, classify, aggregate, and summarize information so it can be made more useful to people. It has long been known that human ability to process information is limited by memory and cognitive abilities. If we did not have such limitations, a great deal of accounting would be unnecessary.

Markets affect processing of information in two ways. First, they affect the individuals' information processing behavior by providing them feedback and rewards. Second, markets as a whole can accomplish information processing that individuals, left to themselves, cannot do. In other words, certain information processing capabilities are properties of markets themselves, and do not depend on the abilities or limitations of the individuals who trade in them. As I shall argue later, both the individual limitations, as well as market properties have implications for what accounting regulation should and should not try to do.

3.2 Economics of Information Production

If market prices adjust instantaneously to publicly-available information, allowing no opportunity to recover the costs of those who spend effort and time gathering and processing it, such efforts would not persist. The hypotheses of instantaneous adjustment of price to new

information lead paradoxically to the conclusion that such adjustment cannot occur due to the absence of private incentives to gather information. This conclusion, in turn, provides private incentives for search.

There can be no economic equilibrium in the market for information if prices adjust instantaneously to information.[1] Relatively small but finite adjustment periods are all that is needed to eliminate the apparent paradox that arose out of the early empirical studies of the stock market, which failed to detect price reactions to various types of publicly-available information at the time of announcement. These findings led to some overzealous conclusions about the market reflecting all available information at all times and about financial analysis being a waste of effort. As it turned out, early empirical studies were conducted using monthly return data, and the price adjustments that took mere hours or days to complete were drowned out in the noise of monthly returns. More recent studies, using daily and hourly data, show consistent price reaction to various types of information at the time they first become available. Volume studies support the hypothesis of small but finite adjustment periods.

Characteristics of market response to information follow from its competitive nature and apply to accounting as well as to other forms of information. It is difficult to find information that is publicly available and whose profit potential has escaped the attention of other investors and analysts. However, it is not impossible because someone has to be the first to make each discovery, and all there is to know about the relationship between the stock market and economic data and events has not yet been discovered. Looking for publicly-available accounting data

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[1] See Grossman and Stiglitz (1980) and Sunder (1992a).

that will help make money in the market is like prospecting for gold: easily accessible stream beds have already been searched; going further up into the hills requires commitment and effort with no assurance of success. There is enough gold hidden in that corporate balance sheet to support a few hardy prospectors; a large nugget may occasionally be found, but there isn't enough to sustain a gold rush.

3.3 Insider Information and Disclosure

In United States, the term insider trading has not been given a formal legal definition. However, on the basis of enforcement actions brought by the Securities and Exchange Commission, three meanings of the term are apparent.

Managers and directors of a firm possess confidential information about the firm's operations and plans. Since such people would not have learnt of the information except through their privileged position in the firm, this is insider information. Second, the term is applied to information about affairs of the firm that the outside parties such as analysts and investors may learn, discover, or produce through their own private efforts, if this information is not publicly available, and if it is important enough to have the potential to move the market. Finally, the term insider trading has also been applied to information one trader may have about the intentions of another trader if such intentions include major trading activities such as takeover attempts.

Empirical studies reveal that all these types of information are valuable for the purpose of trading, and are used by their holders to earn profits. There are strong theoretical arguments for prohibition of insider trading based on the first type of information by managers and directors of the firm. This information comes to their possession in their fiduciary role, and its misuse for personal profit involves unauthorized transfer of

wealth from the other shareholders. Prohibition of such insider trading helps increase the confidence of small shareholders. Though Henry Manne (1966) and some others have argued that profiting for private gain from such information should be regarded as a part of the compensation of the managers and directors, others do not accept that argument. It would be better to fix their compensation as an explicit function of their contribution to the firm or profits of the firm, instead of leaving the individual insiders free to feed themselves from the corporate trough at their own will.

Including second and third types of information listed above among the insider trading prohibitions presents some serious problems. Outside parties do not have fiduciary responsibility to the shareholders of the firm. It is true that such investors seek private gain through investment in information discovery and production. It is also true that such private gain comes at the expense of other investors. However, such investment is no different than investment in research and development by firms that compete to produce a better product. While development of a better product may hurt the competition, ultimately the entire industry and economy benefits from such investment. Private information also gets broadly disseminated as its owners seek to exploit it for private gain. Investment in production of information provides incentives to investors to discover good buys in the stock market, and therefore makes the market more efficient. Prohibition of such insider trading makes the market less informed, and therefore less efficient and volatile. See Sunder (1992b).

4. Lessons for Accounting Regulation

What do these features of accounting and security markets mean for regulation of accounting? I shall try to address this question in ten steps.

1. **Accounting is an important source of information for the stock market, but it is not the only source of information.**

   Direct observation of investors and financial analysts provides ample evidence that financial statements and disclosures are an important source, perhaps the single most important source, of information for them. Twenty five years of empirical research also supports this observation because release of financial information increases trading volume and price volatility. Moreover, stock price changes are correlated with unexpected changes in financial performance, especially changes in net income of firms.

   On the other hand, both direct observation of investor and analyst behavior, as well as empirical research on security market behavior, reveal that financial reports and disclosures are not the only source of information for them. A great deal of information that is pertinent to valuation of securities comes from other sources. Changes in macro-economic conditions and policy, weather, taxes and tariff, technology, and competition, for example, do not lend themselves to timely reporting through financial reports. Information about such variables is crucial to valuation of securities; financial statements cannot be relied upon to keep the market informed on such matters.

   Inability of financial statements to provide all information the investors might need is not an indictment of the existing accounting

system. While it may be possible to improve the current accounting practices on the margin, we cannot ever expect to produce accounting statements that will tell investors everything they may want to know.

2. Stock market is an important client of the accounting system, but it is not the only reason for existence of accounting system.

We have discussed above that the accounting system of the firm has to be designed to implement all contracts that bind the participants in the firm. Shareholders are only one such group of participants. Just as stock market relies on other sources of information beyond financial statements, accounting system also has other clients; this system cannot be tailored to suit the needs of the investors alone, sacrificing the needs of others. Such a one-sided system would fail because it would reduce the incentives of the disadvantaged party to participate in the firm.

For example, suppose financial accounting rules required managers to report net income based on highly subjective estimates about the future values that the investors could not verify and the managers could not substantiate. No matter how important such estimates are for the investors, reporting such numbers places managers in a situation in which they cannot defend themselves against charges of malfeasance when subsequent events prove their earlier estimates to be incorrect. Nor do they protect the shareholders from deliberate but unprovable misrepresentations by managers.

A second example of this problem comes from the controversy about market valuation of assets of firms, especially in the banking industry, advocated by the Securities and Exchange Commission in United States. Shareholders have a contractual right to real assets of

a firm after all its other obligations have been met. Information about real assets is not very convenient because different types of assets cannot be added together. Investors, especially those who are remote from the operations of the firm, prefer to know the market valuation of these real assets. However, with only a few exceptions of readily marketable securities, market valuation of assets is highly subjective. Use of such market values exposes both the managers as well the shareholders to mutual distrust as well as moral hazard. Traditionally, accountants have used the technique of historical valuation instead of market valuation. The historical valuation has the advantage of making it possible to establish an effective accountability relationship between the managers and the shareholders, without subjecting them to mutual suspicion and recriminations. Thus the accounting system trades off the potential relevance of market valuation for feasibility of implementing a stable contract among the participants of the firm.

3. **In a world in which processing or production of information is costly, only a part of all information in possession of individuals can be reflected in stock prices. Thus security markets cannot incorporate all information into prices.**

Trading to profit from information tends to eliminate the opportunities for making such profit. The amount of time, or the number of transactions, that it takes to eliminate opportunities for making a profit depends on the liquidity of the market. When the expected profit is greater than the cost of trading, opportunities persist only as long as the price moves sufficiently to make the gross profit equal to, or less than, the transaction cost. In a market with large transaction volume, it would take a larger trading volume, but only a short period of time, to dissipate such opportunities. In shallow

markets, dissipation can occur with only a small volume, but over a longer interval of time.

4. Effective prohibition of insider trading by legislative and enforcement process alone is difficult, perhaps impossible, in absence of social sanctions against such behavior.

Effective control of insider trading requires us to confront two major problems: one about the range of information that needs to be covered by the statutory definition of insider information, and second about the means of enforcing the prohibition against the use of such definition. Let us suppose, for the purpose of our present discussion, that the first problem is somehow resolved, and that we decide to include only the first type of information (i.e., information that managers and directors hold in their fiduciary role) in the scope of insider information. Even with respect to such information, legally enforceable evidence about its use in trading is difficult to obtain.

Flow of information, unlike the movement of physical goods and services is difficult to trace. Movement of information does not leave an audit trail. Virtually all evidence on insider trading is either circumstantial, or involves direct testimony of those directly involved in transfer of information. People who exchange insider information tend to be tied by personal, family or business connections, and these ties make it difficult for them to provide evidence to the authorities about insider trading. Their willingness to testify against their business associates or members of their families depends on the norms of society in which they live and work. If insider trading is widely believed to violate a social norm, prosecutors may succeed in obtaining such testimony. In absence of such norms, the task of

stopping insider trading is difficult, even impossible. Development of social norms against insider trading might be attainable through a long term program of public education.

5. **Effective prohibition of insider trading (if it were possible) carries with it the disadvantage of reduced private production of information, and therefore reduction in efficiency of the capital allocation process.**

Even as various countries move in the direction of legislating and enforcing laws against insider trading, we have to keep in mind that private incentives to produce information must exist for a great deal of information to be produced. If the definition of insider trading includes the information in the hands of those who do not stand in a fiduciary relationship with respect to shareholders, such incentives may weaken, or disappear. Without private incentives to produce information, the security markets will become less informationally efficient, and therefore will not be able to serve well their function of allocating capital in society.

6. **No matter how efficient a security market is, security prices cannot guide us in selection of standards for financial reports and disclosure.**

Accounting records past events to tell us what happened; stock market prices are based on anticipation of the future. Past events surely are an important basis of formation of future expectations, but they are not the only basis. Accounting has tried, in many instances, to record future anticipations, but not very successfully. Tentative nature of the future expectations, and the definitive nature of the accounting record do not fit well together. But accountants continue

to try to find ways of incorporating future expectations into their records.

With the development of efficient markets literature in finance, accountants have been tempted to used the anticipatory powers of security markets to help solve their own problem of anticipating the effect of future events into financial reports in a reliable fashion. Furthermore, it has been argued that stock price reactions to accounting events and data can be used to choose among accounting alternatives.

Unfortunately, the anticipatory nature of the stcck market makes it quite unsuitable to guide the choice of financial reporting methods. To illustrate, suppose a standard setting agency made the following announcement:

> We propose that effective next January 1, all firms should use accounting method A and method B should no longer be used. We think such a change will increase the market value of the equity of firms. But just to be sure, we have commissioned a research study to assess the effect of the proposed change in market value. If this effect is found to be negative, we shall withdraw this proposal.

Suppose the effect of such an accounting change on a firm's cash flow is a negative ten dollars. Consider what will happen in a rational market. Prices will decline by x; the market will conclude that the rule maker will withdraw the proposal. The decline in price does not occur, which in turn implies that the rule maker will not withdraw the proposal. This implies that the market price will go down by x, and so on. In a noiseless market, which acts rationally to anticipate the

future, it is not clear what the equilibrium point of this process is. A careful consideration of the rational expectations in security markets renders the interpretation of empirical results, and especially their use for making policy, far more complicated than is generally recognized.[2]

In other words, no matter how efficient the stock market is in anticipating the events of the future, it does not solve the accountants' problem of reporting information on which the market participants can form their expectations about the future.

7. **In writing accounting regulations, we must balance relevance against reliability and verifiability. Pushing toward either extreme is counterproductive.**

Accounting has long been criticized by some economists, and by many others for not producing the numbers managers and investors can use in making their decisions. Information that people need for making decisions pertains mostly to the future. Uncertainty about the future means that information for decision-making consists mostly of somebody's subjective estimates, and cannot be verified. To the extent accountants abandon the verifiability criterion, the ability of their system to perform its primary role of implementing the contracts of the firm is weakened.

In the U.S. alone, there are several examples of how attempts to move accounting to an extreme position in favor of relevance at expense of verifiability have proved to be counter-productive. The Securities and Exchange Commission (SEC) pressurized the oil and

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[2] See Sunder (1989) for more detailed analysis.

gas exploration industry to recognize the estimated value of firms' underground reserve. Ultimately, however, even the SEC found that the dysfunctional consequences for the implementation of firms' contractual system far outweigh the advantages of revealing the underground reserves of oil and gas through the financial statements. Any push towards general market valuation of assets and liabilities will also prove to be equally misguided. Accountants can only try to reveal the market-relevant information subject to the constraints imposed on them by their primary role in implementing the contract among participants of a firm. They cannot and should not report information that jeopardizes this role, just because investors ask for more relevant information. Accounting is an important but not the only source of information for investors.

8. Uniformity or comparability, by itself, is not a useful criterion for selection of accounting rules.

The principle of uniformity or comparability has a great appeal in accounting: transactions that are similar should be treated in a similar fashion, and transactions that are different should be treated differently. The principle appears to be simple, but is not, and its popular appeal as a practical guide to doing accounting or setting accounting rules is misplaced. Why would any one want to attack something as sacred as the principle of uniformly in accounting?

The problem is that the application of two apparently compatible parts of this principle--treat similar transactions alike, and different transactions different--results in contradictory results. These two parts of the uniformity principle are mutually consistent only as long as we confine ourselves to consideration of only one attribute or

dimension of transactions. Whenever more than a single attribute of transactions is important to their classification, as is almost always true, application of the two parts yields contradictory results.

If the population of transactions to be classified includes all possible combinations of two or more attributes, application of the first part of the uniformity principle means that every transaction will have some similarity with some other transaction in the set. Therefore, the accounting classification scheme will consist of only a single class--which is no classification at all. On the other hand, because every transaction will be different from every other in at least some respect, application of the second part of the same principle means that every transaction must be given a unique accounting treatment. Again, this can hardly be called an acceptable scheme of accounting classification.

The ephemeral nature of uniformity is easily seen in the example of the Statement of Financial Accounting Standards No. 2 (FAS 2) in the U.S. This Standard was an attempt to increase the uniformity of accounting for research and development costs by taking away the discretion of managers; it required all firms to expense such costs in the period they are incurred. The result is that the costs of successful as well as unsuccessful research projects now show up as expenses, and the corresponding assets are missing from the balance sheets of the firms whose research projects are successful. Some have claimed that FAS 2 achieved dominance of form over the substance of accounting. If that is true, it was only because it sought to implement uniformity principle without recognizing its internal contradiction. See Sunder (1983) for details.

9. Accounting regulations can be used to nudge the accounting practice, but wholesale change in accounting practice through mandated regulation is unlikely to succeed.

It is difficult, often undesirable, to implement revolutionary change in accounting. Accounting implements and enforces the complex set of contracts that constitute a firm. Participants in a firm take into account the existing system of accounting in negotiating these contractual arrangements. Radical change in accounting methods creates chaos in this finely tuned system. Many participants suddenly find that the delicately balanced contractual arrangements they had negotiated in good faith are no longer valid or they cannot be implemented under the new accounting system. Instead of being helpful to them, radical change in accounting system can become a hindrance in running in the firm. It is hardly surprising then that people develop informal accounting systems and try to circumvent such accounting mandates. When this happens, the accounting mandate fails to achieve its intended effect.

10. Change in accounting practice can be brought about through education and active consensus building among the industry, accounting profession, and the government.

I do not wish to argue that accounting systems should not be changed. Instead I am arguing in favor of evolutionary change in accounting with the consensus of those who do the accounting, and those who are affected by it.

The United States has experimented with various models of setting accounting standards. From 1959 to 1973, a committee of the American Institute of CPAs, called Accounting Principles Board,

consisting of some 21 part-time people met periodically to write its opinions on accounting matters. In 1973, the Accounting Principles Board was replaced by a more formal arrangement. The Financial Accounting Standards Board consists of seven full time members supported by a large staff, whose only responsibility is to set accounting standards. These seven members are drawn from diverse backgrounds in accounting, and have no other affiliations with firms or industry.

Perhaps the most important difference between the Accounting Principles Board and the Financial Accounting Standards Board is that the former body issued opinions while the latter issues standards that must be followed by the members of the American Institute. While the FASB makes very significant efforts to reach consensus and compromise among various points of view, their pronouncements have a mandatory nature when they are issued. Sometimes, they feel compelled to issue a standard even when a broad consensus cannot be achieved. From its early years, FASB seems to have felt that, if in spite of its best efforts, consensus cannot be reached, it should go ahead and issue new standards by majority of approval of its members. This procedure has undermined its credibility because serious objections have been raised to many of its standards, and these standards had to be modified or withdrawn.

This problem arose in the U.S. because of certain overconfidence in our ability to define improved standards of financial reporting. The problem of setting accounting standards can be addressed effectively by keeping four criteria in mind:

1. An incentive compatible structure for setting standards that does not encourage making of new rules for the sake of rules. Creation of a permanent bureaucracy tends to produce rules when they may not be necessary or effective.

2. Use of a quasi-legislative rather than quasi-judicial arrangement in which the participants can openly argue for their own interest and debate the pros and cons of various courses of action.

3. Use of a representative body in which all affected parties have a reasonable representation. Making of accounting rules cannot be left to the professional accountants or auditors alone.

4. Issuance of rules must be supported by a broad consensus; simple majority rule is not enough. If a broad consensus cannot be achieved, perhaps it is better to engage in an educational program until it can be, instead of railroading the reforms. Such reforms are likely to be ineffective.

Setting accounting standards is not a mere technical task. As with other social decisions, setting accounting standards requires identification of socially superior solutions. It is difficult because nobody can know the preferences of others, let alone so many others. Standardization imposes different costs on different members of the community, and the interests of those who do not actively participate in the process of setting accounting standards cannot be ignored. No accounting standard is a must; people can and do live without them. No standard can be better than its community support. Progress in improvement of accounting practice requires broad cooperation of the business community and other interested parties.

5. Concluding Remarks

In its most elemental form, accounting is an integral part of society because all interaction among individuals is accounted for in some manner or other. More complex the form of economic exchanges and organizations, more complex is the form of accounting needed to make them possible. Thus accounting is the skeleton that holds organizations together against the centrifugal forces that act upon it. Accounting methods have been developed over the millennia to perform this crucial function in variety of organizations in a variety of economic and social environments.

Introduction of stock markets, with the attendant separation of residual ownership from operational control, and anonymity of individual owners, is a recent and important innovation. Organizing economic activity in the form of publicly-held corporation requires that the accounting system of such corporations have some new features that are unnecessary in other organizations. Unfortunately, some of the features of accounting needed for stock markets clash with some features necessary for other aspects of corporate operations.

Therefore the difficult problem in designing the accounting and control systems for organizations in modern economies is how to reconcile these conflicting requirements of various types of organizations, and of various functions within the organization. As we progress in the direction of resolving these conflicts, it is well to remember that dealing with the needs of the stock markets is one, and only one of the many needs of organizations that accounting. Needs of stock markets can be met only to the extent that the changes do not cause unacceptable level of harm to other organizational functions.

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