

RESEARCH ON ACCOUNTING AND REPORTING POLICY

by

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I have been asked to review research in the area of financial accounting and reporting policy and to discuss prospects for related dissertation work. Since the time available is only about 40 minutes, I shall concentrate my remarks on the major research problems in this area instead of an item-by-item review of specific research studies.

The literature on accounting policy can be divided into three categories. Because these three categories are roughly separated in time, we could also see them as three stages in the evolution of policy research. For ease of reference, I shall assign a label to each stage: external criterion research to the first, efficient market research to the second, and welfare economics research to the third. Let us start with the external criterion research.

Until approximately the late sixties, externally defined criteria such as verifiability, relevance, and timeliness, etc., formed the basis on which accounting and reporting policy was seen to be chosen. Accounting Principles Board's Statement No. 4 was, in a sense, the culmination and the best example of this way of looking at accounting policy. The Statement listed and defined 13 basic features, six basic elements, and fourteen important characteristics of financial accounting. It listed nine qualitative objectives of financial statements (e.g., relevance, verifiability, reliability, etc.) which were to form the basis of choice among accounting alternatives. Though the Statement mentioned the various parties who are interested in the financial reports, the link between these interests and accounting policy was not forged. Usefulness of financial information in making economic decisions was merely mentioned in the Statement without an explication of how accounting policy to fulfill this goal could be identified. The Statement used the language of economics in parts without applying the concepts of economics to accounting policy formulation. It is for this reason that this external criterion approach to accounting policy should be regarded as a pre-economic method.

In the external criterion literature, truth and fairness of representation in financial statements played a major role. If the balance sheet and income statement could not be relied upon to be truthful, they would cease to serve their function. The shareholders will no longer feel assured by financial statements about the current status of the capital they entrusted to the management; the creditors will be uncertain of the collateral on their loans and the audited statements will provide little assurance to the government that the taxes due have been paid. Thus the truthfulness of financial statements was seen to provide the very basis of their perceived value. Truthfulness of financial statements, it was argued, should be a key criterion for accounting policy.

However, application of such external criteria failed to help resolve the increasingly contentious policy issues on financial reporting placed before the Accounting Principles Board during the sixties. While the lists of external criteria were not controversial in and of themselves, little consensus could be found on the relative importance of various criteria. Even worse, accounting methods that were regarded as most relevant by some experts were seen to be the least relevant by others. This problem was common to other external criteria as well, to varying degrees. Dissatisfaction with the use of external criteria led researchers to look elsewhere for a new paradigm of policy research in accounting. Increasing emphasis on teaching of economics and statistics in the U.S. business schools and new research in finance in the sixties provided the basis of what became known as efficient market research in accounting.

EFFICIENT MARKET RESEARCH

The classical firm of microeconomic textbooks is run by an owner-manager with the objective of maximizing profit in a single-period framework and maximizing value of the firm in a multiperiod model. With this monolithic model of the firm with a clear-cut and unambiguous objective of value maximization in mind, accounting researchers sought to simplify the problem of choosing accounting policy. Why not choose accounting policy that maximizes value of the firm? The accounting methods could be seen as a part of the production technology of the firm; and financial statements and other disclosures could be seen as a part of the output of the firm.

The value maximization criterion provided by the classical firm still left open the question of how value is to be measured. If the practical problem of measuring values were resolved by falling back on accounting numbers, the value criterion would imply selection of accounting methods that maximize owners' equity, which is not of much help. The help for resolving the value measurement problem came from the security price research in finance. As evidence accumulated to suggest that in heavily traded securities such as those listed on the New York Stock Exchange, adjustment of prices to new information occurs quickly, the market price of securities, which was long seen to be dominated by unpredictable speculative bubbles, suddenly became an alternative means of measuring value of the firm. This alternative measure of value, the market price, was determined by a mechanism independent of the accounting methods, even though the accounting information played a role in the functioning of stock markets. Thus the classical model of the firm, the value maximization criterion, and an independent and reliable practical means of measuring value were combined by the accounting researchers to present a new criterion for choosing accounting and reporting policy: the market value.

The market value criterion was to be applied to both the social choice of setting accounting standards and disclosure rules as well as to the choices made by individual firms among acceptable accounting alternatives.

At the social level, the market value criterion was clearly normative in the sense that it was presented to the rule-making bodies with a recommendation that they should use it instead of whatever other criteria they employed in selecting rules and standards. The use of this market value criterion at the social level was not presented as descriptive theory because such an argument would require evidence that, in general, new rules and standards increase the market value of affected firms. Such evidence, necessary as it was to present the market value criterion as descriptive theory, could not be found.

At the individual firm level, however, the market value criterion was presented in both descriptive as well as prescriptive forms. Since empirical evidence to support the descriptive hypothesis that firms choose accounting policy to maximize value has been weak, at best, the prescriptive form has dominated the literature at the individual firm level also.

The market value criterion for choosing accounting policy also presents several problems. I shall discuss three of these problems and call them the "needle in the haystack" problem, the "expectations" problem, and finally the "wrong model" problem.

When the size of the effect of accounting choice, or of any other event for that matter, on the market value is relatively small, the noisiness of market value which is influenced by a myriad of different events makes it difficult to identify such effects. Our knowledge of market parameters allows us to conduct an advance estimation of the chances of discovering the effects of a specified size. The market model residuals for individual stocks from monthly data have a variance in the neighborhood of 0.007. If we use a portfolio of N firms and cumulate residuals over T periods, under the independence assumption variance of CAR is $.007 \frac{T}{N}$. For $N = 100$ and $T = 12$, CAR has a standard deviation of about .03. Assuming a normal distribution and two-tailed test, there is only 50 percent chance that an effect as large as 6% over 12 months will be successfully detected at 5% level of significance as shown in Figure 1. Chances of detecting smaller effects of accounting choices on the market value are even more remote. Smaller portfolio sizes reduce the probability of successful detection of the market value effects even more.

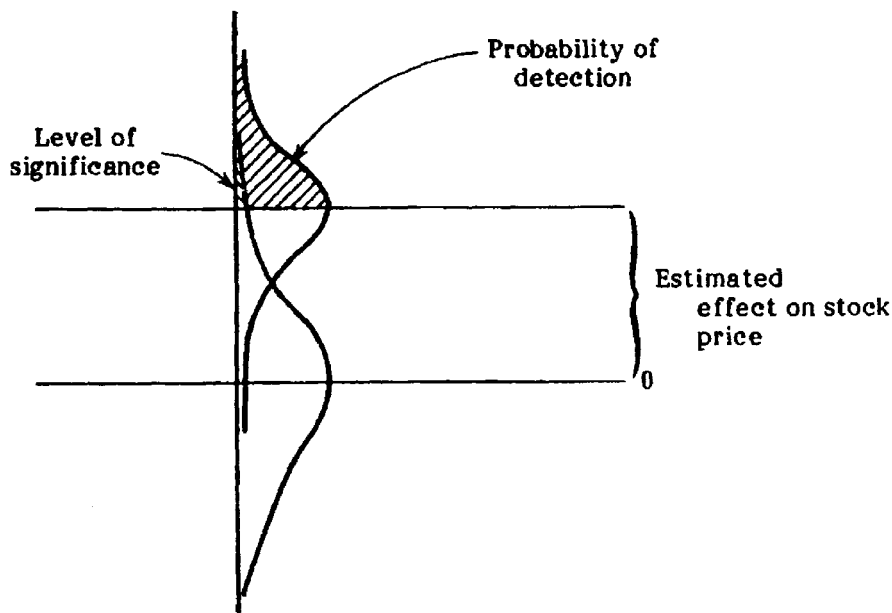


FIGURE 1

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change the full effect of accounting change on market value, x , will be effected. However, the price change observed at this time of announcement will be only $x(1 - \pi)$ because $\pi \cdot x$ has already been incorporated into the price earlier. Note that the higher the probability of change, π , the smaller the observed fraction of the total market effect. However, there is a consolation prize. High value of π also means that from a given universe of, say, N firms, a large expected sample size $\pi \cdot N$ will be available. Conversely, small sample sizes are associated with larger fractions of the total market value effect being observable at the time of announcement. The t-statistic of the observed effect is therefore proportional to $x(1 - \pi) / \sqrt{\pi n}$. The larger the collectible sample size, the smaller is the fraction of total market value effect that can be observed at the time of announcement. The ability of a competitive market to anticipate the future thus makes the task of measuring market value effects more difficult.

At the social level of standard setting and rule making, the ability of the market to anticipate the future creates an even more serious problem. Suppose the FASB makes 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 firms. But just to be sure we have commissioned a research study to assess the effect of the proposed change on the market value. If this effect is found to be negative, we shall withdraw this proposal.

Suppose the effect of such an accounting change on cash flows of the firm is negative. Consider what will happen in a rational market. Price will decline by, say, x ; the market will conclude that the FASB will withdraw the proposal; therefore the decline in price will not occur; which in turn implies that the FASB will not withdraw the proposal; which 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.

The two problems of the market value criterion I have mentioned so far, the "needle in the haystack" problem and the "expectations" problem, are merely measurement and identification problems and are minor in comparison with the

third and more fundamental problem that this criterion is based on the wrong model of the firm. A discussion of this problem will lead us to consider the third criterion for choice of accounting and reporting policy--the welfare economic criterion.

Recall that the market value criterion is firmly rooted in the monolithic classical model of the firm which is run by its owner-manager with the objective of maximizing its value. The problems of financial accounting and reporting policy that have attracted so much attention in the recent years hardly exist for a firm run by owner-managers. Publicly held, and professionally managed corporations for which financial accounting and reporting policy is an important issue hardly resemble the owner-managed firm of the classical model. Predictions of the value maximization rule about the choice of accounting policy by individual firms have not been supported by the data. Failure of a large number of firms to adopt LIFO is a glaring example which suggests that value-maximization is the wrong criterion for accounting policy and the classical model of the firm is the wrong model to seek an understanding of accounting problems. Indeed, in the perfect information environment of the classical firm, accounting system, or any other information system for that matter, has no role to play. Analysis of accounting issues requires a model of the firm with uncertainty and less than perfect information so accounting can play a nontrivial role in the firm.

This brings us to the welfare economic criterion, but before I talk about it, permit me to say a word about a second model of the firm, the contract theoretical model of the firm.

CONTRACT THEORETIC MODEL OF THE FIRM

Contract theoretic model views the firm as a set of contracts among numerous independent agents or homogenous groups of agents, each of whom seeks to maximize his or her own welfare. The firm is merely an arrangement arrived at among these agents through negotiations and bargaining; it is not a maximizing entity in itself. Only the agents maximize and take action to seek this goal. The agents involved, for the purpose of analyzing accounting issues, include the shareholders, managers, creditors, auditors, and government, etc. As

with all models, which agents are included in analysis depends on the purpose of analysis.

The contracts obligate each agent to contribute certain factors of production to the firm and give rights to obtain a share of the gross revenues of the firm. The managers provide their skills in exchange for salary and compensation, shareholders provide capital in exchange for dividends, and auditors provide their services in exchange for their fees. The obligations and rights of each party are negotiable and are regulated in part by the markets for the respective factors of production. If a manager does not think he gets a good deal from the firm, he can leave and sell his services elsewhere. The same is true of all other parties to the contract.

In this model of the firm, the accounting system itself forms a part of the contracts that bind various agents together and it is a part of the mechanism for enforcement of these contracts. At the time a shareholder buys stock of the firm, he is buying a package of rights and obligations of which the measurement and enforcement mechanism of accounting is an integral part.

If we move from the owner-manager oriented classical model of the firm to this multi-party contract theoretic model in which the shareholders' position is considered no more special than the position of other parties involved, the role of financial accounting in the firm is more easily recognized. Such firms need an accounting system to measure inputs of various agents in order to determine if each agent has met his obligation; they also need the accounting system to apportion the wealth of the firm to various agents in accordance with the contract.

Under this model of the firm, an accounting change will affect all parties involved, including shareholders, managers, and auditors. Moreover, it will trigger a sequence of readjustments on the part of various agents; and these readjustments will continue until a new equilibrium is reached.

However, changes in the market value measure only the effect of a change in accounting method on the holders of equity shares of the firm. A change in the market value tells us very little, if anything, about the effect of such a change on other parties; it doesn't tell us what happens to the manager's interests; it doesn't tell us what happens to auditors' interests.

For example, a change that increases the market value may actually hurt the manager and cause a change in the manager's behavior. If a change in accounting method hurts the managers badly enough, they will resign and go elsewhere, and that may hurt other people in the firm as well.

Therefore, the contract theoretic model forces us to view the accounting problem in welfare-economic terms; that is, to examine it in terms of the multiple interests of a multi-party environment. In such an environment you can't say whether a given accounting method is good or bad on the basis of market value. Let us look at the effect of an accounting change on the various parties involved. Some people might benefit, others might be hurt. In order to evaluate these effects, one must choose a welfare criterion, which might take the form of a Pareto criterion or a compensation principle, to name just two possibilities.

The major implication of using a welfare-economic criterion, such as a Pareto criterion or a compensation principle, for future research in accounting is that it will have to measure the impact of accounting changes on all parties involved, or at least all the major parties involved, and not just on shareholders.

The ready availability of stock market makes the job of measuring the effect on equity holders fairly easy, but an increase in stock price does not mean that the change is good from the society's point of view. A decrease in stock price does not mean that the change is bad for the social order. We need to measure the effects of accounting changes on the interests of auditors, creditors, and managers, as well as stockholders. This will be a very difficult task.

The difficulty of the task is evident from some recent efforts in this direction. It is very costly in both time and money to dig into the managerial compensation contracts, debt covenants, and other contracts to determine the effect of an accounting change on parties other than shareholders. Since the interest of managers and auditors in the firm cannot be capitalized and they cannot be sold directly in a market, the economic effect of accounting change on these parties is very difficult to measure.

One may be tempted to use the stock price data to measure these effects, but the gross cash flows of most large firms are several orders of magnitude larger than the compensation paid to the auditors or managers. A one-billion-

dollar firm may pay its managers no more than a few million dollars and may pay its auditors no more than a few hundred thousand dollars. Such differences imply that market methodology is not apt to yield a suitable measure of the effect of accounting change on their compensation paid to managers or auditors.

In recent years, I have done some work on trying to address the question of what happens to equilibrium price in a competitive market when the information system changes. Now, that question is very difficult to answer by using data from the stock market, because we lack experimental control over the entire information system associated with the market in the real world. However, experimental methods enable the researcher to exercise such controls. Let us consider several examples of such experimental work.

Theory leads us to expect that a change in information system means a change in price, but we haven't had empirical data to support that answer until recently. From the experimental data we have, the answer so far is yes; in general, you would expect different information systems will result in different equilibrium prices in the marketplace.

We have also been trying to identify the key features of the market structure that result in full digestion of information from the marketplace. Full digestion of information could mean that the market is efficient, although efficiency has been, to a large degree, a qualitative criterion. Either the market is efficient or it is not efficient. There has been no satisfactory matrix for measuring the degree of efficiency or how efficient one market is in comparison to another. Experimental work allows us to compare the economic efficiency of different market structures and different information structures. It allows us to quantify the efficiency measure of various market structures, and it tells us under what kind of market structures we may or may not be able to digest various kinds of information.

DISSERTATION ABSTRACTS

**ON THE ASSOCIATION BETWEEN ELASTICITY OF DEMAND
AND SYSTEMATIC RISK**

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The determinants of security risk have been frequently studied analytically and empirically in the accounting and finance literatures in recent years. While the risk-determination literature is both varied and extensive, it is somewhat unsatisfying. On one hand, a number of studies have empirically linked security risk to a wide variety of financial variables and accounting numbers (see, for example, Ball and Brown [1969]; Beaver, Kettler, and Scholes [1970]; Bildersee [1975]; Thompson [1976]). But, for the most part, there is no rigorous theoretical model linking the firm's production and investment decisions to the variables these studies have examined. On the other hand, where theoretical relationships between security risk and firm decisions have been developed, the relationships are sometimes difficult to verify empirically because they require data not normally publicly available (Rubinstein [1973]; Lev [1974]).

This dissertation directly addresses these two deficiencies in the risk-determination literature. First, it extends a recent paper by Subrahmanyam and Thomadakis [1980], which demonstrates a theoretical relationship between security risk and firm decisions, to demonstrate a simple test of the model which uses only published financial accounting data. In so doing, it provides a theoretical justification for some relationships previously observed but not explained within the context of the model of the firm.

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**A THEORETICAL AND EMPIRICAL INVESTIGATION INVOLVING
THE INTEGRATIVE MODELING, ANALYSES, AND PREDICTION
OF SELECTED FINANCIAL OPERATIONS**

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The importance of identifying and understanding key relationships and interrelationships within the financial operations of a firm, and the prediction of future operations are a necessary and integral aspect of present-day decision-making in a number of areas including managerial accounting, financial accounting, and auditing. The need for analyses and prediction of financial operations transcends the accounting, economic, and finance disciplines. Some of the more readily apparent applications include sensitivity or "what if" type analyses, financial planning and budgeting, public disclosure of forecasts, and the auditors' analytical review.

Unfortunately, the need for information involving key aspects of financial operations has not been adequately met by present research. Investigation of financial operations and the reliance thereon continue to proceed on often unwarranted assumptions and limitations. For instance, a single equation econometric approach to the modeling of financial operations is relatively common even though it is readily apparent that the endogenous variables are often jointly determined through the interactive operations of the firm. Furthermore, the high expectations and later proliferation of various time series models for use in prediction, particularly the autoregressive integrated moving

average (ARIMA) model, has recently experienced a growing number of dissenters. A leading cause of this disenchantment with the use of these statistically sophisticated but economically naive models appears to be the inability of such models to capitalize and react on recently available exogenous information. In addition, substantive research involving the use of models which are both statistically and economically sophisticated is seriously deficient.

The purpose of this dissertation research is to address these concerns among others. The main objectives of the dissertation include: (1) The modeling of a firm's financial operations within a simultaneous equation system, (2) The modeling of the firm's financial operations in relation to the macroeconomic environment, (3) Analyses and evaluation of empirically obtained measures of the a priori theoretical model (e.g., theoretical consistency, significance, etc.), (4) The prediction of selected financial operations from the empirically derived model, and (5) The evaluation of the obtained predictions over various forecast horizons against leading alternatives including the ARIMA model. A secondary objective of this dissertation is to investigate the potential of combining forecasts from alternative models for purposes of obtaining more accurate composite forecasts. The current state of research in this area is at an early stage of development; however, results which have been obtained suggest the presence of significant improvements in forecast accuracy from its use (see, for example, Bates and Granger [1969]; Reid [1969]).

The basic modeling approach chosen to fulfill the main objectives of the dissertation may be referred to as a simultaneous equation econometric model. The strengths involved with this modeling approach include its ability to account for the simultaneous nature of many financial operations, its ability to incorporate recent changes in microeconomic or macroeconomic conditions, and its apparent flexibility to adapt to differing firm and industry structures. In this regard, this modeling approach can be looked upon as refining, integrating, and extending prior research which has dealt with the modeling of financial operations (see, for example, Warren and Shelton [1971]; Pindyck and Rubinfeld [1976]; Kaplan [1978]; Francis and Rowell [1978]), and in addition, those which have attempted to model the financial operations within the larger macroeconomic environment (see, for example, Mueller [1967]; Saltzman [1967]; Elliott [1972]; Elliott and Uphoff [1972]).

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**MODELING THE UTILIZATION OF ACCOUNTING DATA:
AN EMPIRICAL STUDY**

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Evidence indicates the market reacts to corporate financial information. However, little evidence of the information usage process, underlying this market reaction, is available; this dissertation will investigate that process.

Patell [1979] demonstrated that research on the association between accounting information and market reactions can take two forms. In the first,

one assumes the expectation models employed represent investor expectations and then tests for information content. The alternative assumes information content and evaluates the model used to generate expectations. Assuming information content and expectation models which are valid, this study will investigate causal links between expectation errors regarding the four economic dimensions of a firm's operations (profitability, liquidity, leverage, and activity), and the market's volume and price reactions. Previous research has concentrated only on expectation errors related to the profitability dimension.

The relationships between expectation errors and the resulting price and volume reactions will be simultaneously modeled. Verrecchia [1981, p. 183] denotes the importance of this type of research when he states, "[There are] several issues that still need to be pursued. One in particular is whether the degree of volume reaction, looked at in conjunction with the degree of price change, implies anything about the extent to which investors revise their expectations, given new information."

In order to operationalize this study, three major components are needed. They are the cues, the market reactions, and the framework of hypothesized relationships between the cues and reactions. A cue is the change in expectations, due to revision or realization, which results from the announcement of earnings accounting data. Reactions of the market to the earnings announcement are displayed by abnormal volume and price changes.

A specification of the process by which capital markets use financial data is a necessary prerequisite for understanding the interaction of accounting as an information system and the capital market as a user of the information. Since the role of information in an efficient market is two-fold, this study provides evidence pertinent to understanding these roles. Modeling the relationships between the financial dimensions and the security market reactions allows assessment of the importance each of these dimensions plays in setting relative prices. Since both price and volume reactions are studied by this dissertation, the relationships between the financial dimensions and the effects on the market from both individuals and a total market point of view are analyzed. This is very important to the understanding of the use of information by individuals and by the total market. The second role of information is assistance in selecting the best portfolio given an individual's needs and preferences. Dissection of the

relations between firm dimensions and the market volume reactions provides evidence of the dimensions individuals use in their investment decisions.

This research project also contributes through the methodology employed. Judge, Griffiths, Hill, and Lee [1980, p. 785] note that many economic models are based on unobservable variables or constructs. The use of observable proxies often introduces stochastic elements in the explanatory variables which if one uses ordinary least squares method causes biased and inconsistent estimates of the parameters. "Therefore, future research in this area should consider the simultaneous nature of the unobservable abstract variables and their relationship with those that are observable." This research project fulfills this prescription in an accounting context.

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DISCUSSION AND COMMENTS

Accounting Changes and Adjustment of the Price Equilibrium

MR. YOUNG (The Ohio State University): Is it true that in an efficient market the price change resulting from a change in accounting method reflects the shareholder's expectations about managers' and creditors' responses to the accounting change?

PROFESSOR SUNDER (University of Chicago): Yes. After the accounting change, everyone will adjust his/her behavior to that accounting change and ultimately the price will reflect the net effect of that change on every party involved. Consider a change in accounting methods that makes the task of auditors riskier. Suppose, for example, that the SEC were to require the auditors to render an opinion on disclosures about the impact of changing prices on financial statements. Also suppose that the elasticity of the market for auditors does not permit them to raise their fees immediately. In the short run, shareholders might benefit from the accounting change because now they receive more detailed information along with auditors' opinion. Auditors now bear the risk that was earlier borne by the shareholders. Over time, the auditors may raise the fees and shareholders will pay more. Alternatively, if fees are not raised, auditors may begin to leave the profession of auditing because it is not sufficiently remunerative compared to other opportunities available to them. Consequently, there will be fewer people left to do the work of auditors until the price of auditing services rises. By the time the equilibrium is re-established, the effect of adjustments by all other parties will be reflected in the investors' net payoffs. So net payoff of everybody, in general, will change.

However, the form of the change cannot be argued from a priori examples. You need a formal model for the new situation, and such models are difficult to construct. This is a problem in welfare economics that stems from the work of R. H. Coase (see "Nature of the Firm," Economica, 1937) and, more recently, from the work of Armen Alchain and Harold Demsetz (see "Production, Information Cost, and Economic Organization," American Economic Review, December 1972) and Michael Jensen and William Meckling (see "Theory of the Firm: Managerial Behavior, Agency Cost, and Ownership Structure," Journal of Financial Economics, October 1976). Unfortunately, we don't have formal mathemati-

cal models of more than two parties. The mathematics is simply too complicated. Most work is being done on two-party contracts. A little bit of work is done on three-party contracts, but it is difficult to work out the new equilibrium, especially in the presence of institutional details.

In short, the answer to your question is yes. The stock price will reflect all adjustments made by other people but who ultimately benefits and loses cannot be determined from stock prices.

Economic Consequences and Accounting Policy

PROFESSOR WILLIAMS (University of Wisconsin): Let us assume that we can solve the modeling problem. It would be interesting to researchers to know how the process works and to understand the effects on the various parties. Would it also be useful to accounting policymakers to be able to characterize the effect of accounting policy changes on different groups?

PROFESSOR SUNDER: I can answer your question only on the basis of my opinion rather than on the basis of research findings. I think it is very difficult to anticipate the effect of changes in accounting standards on the welfare of various groups in the society. The difficulty is easily seen by what has been happening with lease accounting. I believe we have already seen seven interpretations and six modifications of SFAS 13 and more are on the way. Foreign currency translation offers another example. Our ability to anticipate the effect of changes in accounting standards on various parties is poor. I believe that it is unrealistic to hope that we can improve on that ability no matter how much we study the economic consequences of various policies. We just don't have the methodology to measure those economic consequences.

If we cannot assess the consequences of changes in policy, an alternative would be to be more cautious about changes in policy. Whatever the current method is, whatever the status quo is, at least everybody has adjusted to this accounting method. Every time you change the accounting method, you throw another pebble into the pond that sends a lot of new ripples through the system and forces people to make adjustments to the new policy. If we were reasonably sure that the new policy is good policy, then the change is fine. But if you can't be sure, then it makes sense to slow down our standard-making activity.

MR. NAGARAJAN (Northwestern University): Isn't it possible to observe the effect of accounting changes on variables other than stock prices? For example, we might adopt a contract theory and assume an initial equilibrium; then a change in compensation might signal such an effect. Such signals might not be proportionally related to the change, but they would give an indication of the effect.

PROFESSOR SUNDER: I would agree. If you can infer changes in the payoff to managers from direct observations of their compensation, then that is an appropriate way to proceed. But these direct observations of change in compensation are frequently not available or are difficult to make. Moreover, as I suggested earlier, it is very difficult to infer changes in payoffs to managers from stock price data.

Research and the Development of Theory

PROFESSOR HAYES (Michigan State University): Although it is desirable to conduct research within the confines of a well-developed theory, the stage of development of research in some areas does not permit this to be done. In such cases, research may be necessary to resolve fundamental structural questions before a theory can be completed. A well-developed theory may emerge as a result of such work, but the work is not really motivated by an existing theory. Such work is frequently motivated by a desire to describe certain institutional or behavioral structures that appear to play important roles in phenomena of interest.

David Ziebart's dissertation is a case in point. Dave is investigating the relationship between (1) errors in expectations concerning the profitability, liquidity, leverage and activity of a firm and (2) the volume a price reaction in the market for the firm's stock. This investigation must rely on a partial equilibrium model that is not very well-developed for this purpose. Yet Dave's dissertation is a perfectly reasonable extension of earlier studies despite the fact that the extension strains the related equilibrium theory.

MR. WILD (University of Wisconsin): Economists have an enviable theoretical literature, whatever its shortcomings may be for particular purposes. Unfortunately, the literature of accounting is lacking in this regard. We lack well-developed theories to explain or predict even the most fundamental

accounting variables. At least I found this to be true of the variables I seek to model in my dissertation. For example, I found but one article in the accounting literature giving systematic consideration to the lagged relationship between sales and advertising expenditures. I found some additional guidance in the marketing literature but, on the whole, the theory I needed was not well-developed.

MS. KIPHEN (The Ohio State University): I am concerned that there may be too much emphasis on having a well-developed theory. Considering the relatively short period of time in which accounting research has been going on, we should not expect to have theory comparable to that developed in fields like economics or physics where research has been going on for hundreds of years. In many areas of accounting, we still don't have enough evidence about what is really going on in the real world to permit us to develop theories. It is very difficult to do a creditable job of testing theories about phenomena about which so little is known.

If we should place so much emphasis on testing weak theories, shouldn't we first develop stronger theories? It's as if we are trying to jump in the middle of the process instead of starting in the beginning.

PROFESSOR HAYES: I think it is important to notice that there are two ways to develop theory. A theory can be developed by deductive methods or a theory can be developed by inductive methods. I don't think that either procedure is necessarily wrong, but empirically oriented people are apt to prefer inductive methods. Moreover, deductive theorists will always fault the empiricist for not working with a fully-developed theory. That is a standard criticism, but it does not defeat the purpose of doing empirical research. Scientists in most fields can cite important findings arising from studies that could not be completely justified by existing theory at the time they were conducted.

Neutrality of Accounting Policies

PROFESSOR SHANK (The Ohio State University): As you know, the FASB is extremely reluctant to acknowledge a role for economic consequences in the establishment of accounting policy. The FASB would like to ignore the economic consequences of accounting policy and to establish neutral accounting policies.

Are neutral accounting policies really a possibility? And, if they are, do such policies reduce the role for research in the formulation of accounting policy?

PROFESSOR SUNDER: Let's consider the different meanings one could place on the word neutral in economic terms. Neutral accounting changes could be accounting changes that make everyone better off to the same extent or that make everyone worse off to the same extent. That is one interpretation of neutral. Another interpretation of neutral accounting changes could be accounting changes that have no economic consequences whatsoever for anybody. If the FASB accepts the latter interpretation, then what purpose does the FASB serve? Why are we spending seven million dollars each year on this establishment? Moreover, when I see various groups fighting tooth and nail over a proposed policy change, I have difficulty concluding that the proposed change is neutral in this latter sense.

PROFESSOR WILLIAMS: It seems to me that the Board doesn't have any practical option, other than to proclaim their neutrality. If they admit that they are evaluating the economic consequences of their policies, whoever is hurt might well seek to recover damages in the amount revealed by the research that pertains to the policy change. Who gave the FASB the power to transfer resources from one group to another? This is not to say that accounting policy does not have such effects, just that the FASB makes (or probably must assert that they make) the policy decision on other grounds.

Data Collection

PROFESSOR MURDOCK (The Ohio State University): Clearly the theoretical aspects of accounting policy research present challenging problems. But these are not the only problems associated with this research. Much of this work raises difficult data collection problems as well. Would any of our student panelists be willing to recount their data collection experiences for their dissertation?

MR. ZIEBART (Michigan State University): My dissertation requires monthly stock price and monthly transaction volume data. I first began to think about sources of data during the course of my literature review. I noted that earlier research made reference to the I.S.L. Daily Stock Records. I determined that our library had the I.S.L. Daily Stock Records on its shelves and concluded

that all the required data were at hand. Accordingly, I made reference to that conclusion in my dissertation proposal.

When the time came to collect the data, I went back to the I.S.L. Daily Stock Records. I was surprised to find that the volume information was not aggregated by month. To perform this seemingly trivial step would have required that I calculate about 60 monthly sums for each of 275 firms. To perform this task with the aid of a calculator would have required about one and one-half hours for each firm. And that was just the volume data. Eventually, I was able to locate a computer-accessible data base that was much easier to work with.

I encountered another problem in gathering firm-specific information concerning liquidity, leverage, profitability, and activity. To develop the required expectation models, I needed quarterly data. I was very disappointed to discover that the quarterly Compustat tapes include only very limited information. It appears that I must go directly to the SEC and examine the Form 10-Q filings to secure the required quarterly information. This will involve a lot more work than I had initially expected. My point is that it is very easy to underestimate the time required to collect the data for empirical work.

BEHAVIORAL RESEARCH IN ACCOUNTING