RESEARCH IN
ACCOUNTING REGULATION

Editor: GARY JOHN PREVITS

Associate Editors: LARRY M. PARKER
ORACE JOHNSON
SHYAM SUNDER

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GARY J. PREVITS

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A Research Annual

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Editors Note:

Errata in Volume 2 (1988)

"The Regulatory Philosophy of Carman Blough: A Legacy"

The editor has received a letter from Professor S. A. Zeff of Rice University dated February 9, 1989, which calls to our attention typographical and factual errors which appear in the paper, "The Regulatory Philosophy of Carman Blough: A Legacy." We share his concern that these errors might create "mischief." While scholars would detect typing errors, some errors are in need of factual correction or explanation. Individuals interested in the subjects addressed in this paper are invited to write the Editor for details of the errata provided by Professor Zeff.

Gary John Previts
Series Editor

EDITOR'S PREFACE

At the 16th Annual AICPA SEC Developments conference in Washington earlier this year as I chatted over dinner with Andy Barr and Professor Ray Stephens, who was serving as an Academic Fellow in the SEC Chief Accountants Office, we mused about the sameness of the issues which the Commission addresses over time. The topics—revenue recognition, inventory costs, deferral of costs, independence—were much the same. Much as in the basics of a sport or a "game," the players change and the technology has transformed the market into one that is transnational and instantaneous in response to capital issues. Technological aids such as EDGAR [Electronic Data Gathering Analysis and Retrieval], and innovations in the development of financial instruments have increased the speed and complexity with which information is needed and developed.

Ed Coulson, whose essay is included in this volume, commented at the conference about his concern regarding the two "I"s, internationalism and Independence. International issues are being addressed both at the Commission level, as at the recent [October 1988] global conference of government securities agencies in Melbourne, and at the staff level with studies being directed by Linda Quinn. These initiatives are expected to have far reaching implications as to the basic securities statutes, the ability of foreign registrants to access U.S. capital markets, and the ability of the U.S. capital markets to retain a prominent role as a source of net new capital.

Independence questions affecting both domestic accountants and accountants for foreign issuers are also currently at issue.

Also, the March 30, 1988 petition of Andersen, Peat Marwick Main, and Price Waterhouse to clarify independence rules dealing with prime and subcontractor arrangements suggests the need for re-examination of the rules of independence. The issue in the petition relates to whether a firm retains its independence if its audit client also happens to be engaged by the firm as a speciality subcontractor on another attest engagement. From the firm's position, there is a concern that the SEC and the Department of Energy requirements place accountants in a position where they must choose between retaining the client or retaining the subcontractor. The issue is that a firm's client who is capable of doing the subcontracting work would not be eligible to be a subcontractor, if the firm wishes to retain an independent relationship. Yet, under DOE procurement policies it is prudent, if not necessary, to engage speciality subcontractors for audits of certain energy companies.

The conference also reviewed some of the matters being proposed by the Commission regarding its own governance. One of Chairman Ruder's proposals, for a "self funded" SEC suggests that the Commission's annual budget [approximately $135 million] could be better funded and supplemented from its fee revenue of about $250 million. The Commission argues that it is necessary to increase budget expenditures if only to remain competitive for the level of talent necessary to assure that the Commission's presence is maintained in the growing activity of the capital market.

Gary John Previts
Series Editor

MAIN ARTICLES

ACCOUNTING REGULATION AND RESEARCH AND DEVELOPMENT EXPENDITURES:

AN EQUILIBRIUM EFFECT

Mohammad S. Bazaz, Frances L. Ayres, and Phillip D. Harsha

ABSTRACT

This study examines the impact of Statement of Financial Accounting Standard No. 2 on firms' expenditures on research and development. The percentage change in R & D from the pre- to post-SFAS 2 period is modeled to be a function of the pre-SFAS 2 accounting method, whether the firm is controlled by owners or managers, the level of pre-SFAS 2 leverage and the level of pre-SFAS 2 spending on R & D. The overall model was significant ($\alpha < .0001$), explaining about thirty percent of the percentage change in R & D.

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The results indicate that manager-controlled firms who were expensing R & D costs prior to SFAS 2 increased R & D by about twenty-two percent, while other firms showed a significant decrease in R & D from the pre- to post-SFAS 2 period. The results also indicate that firms who were capitalizing R & D in the pre-SFAS 2 period showed a negative relation between the change in R & D and the degree of pre-SFAS 2 leverage. Using a broader view of the economic impact of accounting regulation than was employed in prior studies of the impact of SFAS 2, we argue that SFAS 2 had a more general equilibrium effect than was previously believed. In general, SFAS 2 appeared to lead to a more uniform level of R & D spending among classes of firms.

In 1974 the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standard No. 2: Accounting for Research and Development Costs (SFAS 2) which required that all firms expense research and development (R & D) cost in the year incurred. SFAS 2 was issued with relatively little opposition because fewer than twenty percent of publicly owned firms deferred R & D costs and most of these were small high technology firms (Barrons [1974]). However, the management of many of the firms which were capitalizing R & D costs asserted that the change would lead to reduced spending on R & D and ultimately diminish technological innovation in the future.

This study examines the relation of the change in R & D expenditures from the pre- to post-SFAS 2 period to (1) the method of accounting for R & D expenditures in the pre-SFAS 2 period, (2) the ownership structure of the firm, and (3) the level of firms' debt. The results are consistent with the hypothesis that expenditures on R & D decreased from the pre- to post-SFAS 2 period for capitalizing firms both absolutely and relative to expensing firms. Ownership structure was also a significant explanatory variable. Manager-controlled firms decreased R & D expenditures more than owner-controlled firms. A marginally significant interaction between the degree of pre-SFAS 2 leverage and whether the firm capitalized or expensed R & D costs was also found.

The remainder of this paper is divided as follows. In the following section prior research in this area is discussed and the motivation for this study developed. Next, the research hypotheses are presented. The following section describes the sample, design and methodology. Then the results are presented and discussed. The final section represents the conclusions.

I. PREVIOUS RESEARCH FINDINGS

Several studies have examined the relation between the method of accounting for R & D costs and changes in R & D expenditures from the pre- to post-SFAS 2 period. The results have been mixed. Using a sample of over-the-counter (OTC) firms, Horwitz and Kolodny [1980] (hereafter HK) found evidence that capitalizing firms (firms which capitalized R & D expenditures prior to SFAS 2) reduced R & D expenditures following the passage of SFAS 2. Dukes, Dyckman and Elliott [1980] (hereafter DDE) using a sample of larger firms listed on the American and New York Stock Exchanges, were unable to find a relation between R & D expenditures and the passage of SFAS 2. Elliott et al. [1984] attempted to resolve the differences between the two studies using an augmented sample. They concluded that differences between the two studies were due in part to differences in the size of firms comprising the two samples and in part to differences in the pre- and post-SFAS 2 measures used in the two studies. They conclude that the data are consistent with the argument that capitalizing firms showed a drop in R & D expenditures from the pre- to post-SFAS 2 period. However, they assert that attributing causality is difficult because the drop in spending on R & D occurred prior to the issuance of SFAS 2.

The current study extends this line of research to a different sample consisting of smaller firms than those used in DDE and Elliot et al. In addition, the impact of leverage and firm ownership on R & D expenditures is examined. This research is needed because it is precisely the small firms which are alleged to be most impacted by SFAS 2.

The firm ownership variable is important because numerous studies have found that firms which are controlled by managers are more sensitive to the income effects of accounting policy than are owner-managed firms. Conversely, when managers also own a high proportion of the firm, they are more concerned with the long term share price effect of their actions (see Hunt [1986] for a review of this literature). DDE examined changes in R & D as a function of firm control and found no significant effect. However as Elliott et al. noted, DDE also found no overall significant change in R & D for capitalizing firms, primarily due to the fact that their sample consisted of large firms, Elliott et al. did not examine the ownership variable. Hunt [1986] noted that further research was needed to resolve the issue of whether firm control had an impact on R & D expenditures.

Daley and Vigeland [1983] examined the differences between characteristics of firms which expensed versus those that capitalized R & D costs in 1972 (prior to the mandatory accounting change to expensing). They found that the capitalizers were smaller, were more highly levered, had a lower interest coverage, and had a higher dividend payout ratio than expensers. This suggests that managers of capitalizing firms were more concerned than were managers of expensing firms with the financial statement impact of the accounting method used, and therefore would be more likely to reduce R & D expenditures if the mandatory change to expensing caused the firm to violate or come near violation of debt covenants. Even if explicit covenants are not violated, firms run the risk of bond rating changes or a higher cost of new financing if the leverage ratio is too high.

II. HYPOTHESES

The following specific hypotheses about R & D expenditures of small firms were tested (expressed in their alternative forms):

H1: *The R & D expenditures of capitalizing firms declined relative to expensing firms from the pre- to post-SFAS 2 period.*

H2: *The R & D expenditures of manager-controlled firms declined relative to owner-controlled firms from the pre- to post-SFAS 2 period.*

H3: *The change in R & D expenditures from the pre- to post-SFAS 2 period was negatively related to the degree of leverage for capitalizing firms.*

Hypothesis 1 is essentially a replication of the prior studies using a sample of smaller firms. The second and third hypotheses relate the positive theory of accounting choice to management's action subsequent to a regulated accounting change. If managers choose accounting policies to increase their own welfare, then we would expect that a mandatory accounting policy change would force managers to change their production/investment decisions (e.g., reduce R & D expenditures). Hypothesis 2 was previously tested by DDE and found not significant for large firms. In the Elliott et al. study designed to reconcile the inconsistent findings between HK and DDE, managerial control was not examined. The theory

of management choice suggests that this variable should be a factor in explaining changes in R & D expenditures. The lack of significance of this variable in DDE could be due to the sample they selected. For firms in the current study the mean level of R&D/Sales (prior to SFAS 2) was approximately 10 percent compared to 3 percent for the DDE firms.

The model used in this study is also somewhat broader than that employed in prior research in that we do not restrict the expected impact of SFAS 2 to be confined to capitalizing firms. Rather, we argue that manager-controlled expensing firms are likely to reduce R & D expenditure in the post-SFAS 2 period in order to maintain their competitive equilibrium with manager-controlled capitalizing firms. Empirical evidence from the theory of finance provides strong evidence that economic factors have an impact that extends beyond the primary target. For example, Foster [1981] found that when firms released earnings numbers, the prices of other firms in the industry were affected. Similarly, if capitalizing firms reduce R & D expenditures to avoid the adverse financial statement impact of the mandatory accounting change, we expect that other firms with R & D will change their spending as well. The extent and direction of the change depends on the firm's comparison group and the relative importance of maintaining a certain position in the industry. Thus, we expect that manager-controlled firms will reduce R & D expenditures in the post-SFAS 2 period regardless of the method of accounting used in the pre-SFAS 2 period.

H3 relates the firm's leverage to subsequent levels of R & D expenditures. Level of long-term debt was used as a surrogate for sample firms' closeness to debt constraints and overall financial risk. The impact of the change in R & D accounting would be to lower total assets and owners' equity leading to an increase in leverage. In order to avoid violation of debt covenants or risk changes in bond ratings, firms which are highly leveraged are expected to reduce R & D expenditures more than firms with a lower degree of leverage.

III. SAMPLE, DESIGN AND METHODOLOGY

The sample consisted of four groups of firms. These firms were (1) capitalizing manager-controlled (CM), (2) capitalizing owner-controlled (CO), (3) expensing manager-controlled (EM) and (4) expensing owner-controlled (EO).[1] The sample selection procedure was as follows. Firms which reported a switch from capitalizing to expensing were obtained

from the *Disclosure Journal* (Corporate Events and Companies Information) for the years 1973–1976. The initial list obtained consisted of 700 firms. The sample was then further restricted on the basis of size and data availability. Because the focus of the study was on small firms, companies with over 1,500 employees were eliminated.[2] An owner-controlled firm was defined as one in which the directors and officers as a group controlled 20% or more of the firm's voting securities.[3] Otherwise a firm was classified as manager-controlled. Expensing firms were selected from the Compustat Over-the-Counter and Industrial files. The expensing firms were matched as closely as possible to the capitalizing firms on the basis of SIC codes and pre-SFAS 2 R & D expenditures. The final sample consisted of 145 firms.

Table 1 reports descriptive characteristics of the sample firms. As can be seen from Table 1 the capitalizing firms are smaller and have a higher level of leverage than the expensing firms. This is consistent with the Daley and Vigeland [1983] results. A key difference however, is that the firms in this study are much smaller than those used in either Daley and Vigeland or Elliott et al. [1984]. The mean sales of the capitalizing and expensing firms for this study were $9.2 and $13.8 million respectively. These figures compare with $371 and $307 million for the Elliott et al. sample, and $250 and $487 million for those studied by Daley and Vigeland.

The following variables were computed for each firm in the sample and were used to test the three research hypotheses:

LEV = debt to total assets for 197X, the year prior to adopting SFAS 2

PCHG = percentage change in R & D intensity from the pre- to post-SFAS 2 period calculated as

$$\frac{\text{avg}(\text{R\&D/Sales})_a - \text{avg}\ (\text{R\&D/Sales})_b}{\text{avg}(\text{R\&D/Sales})_b}$$

where 'avg' denotes the mean,
'a' refers to the period after a firm adopted SFAS 2 (197Y–1980)
'b' refers to the period before a firm adopted SFAS 2 (1970–197X),
197X = 1973 if the firm adopted SFAS 2 in 1974, or 1974 if the firm adopted SFAS 2 in 1975, and
197Y = 197X + 1

RDB = average $(\text{R\&D/Sales})_b$

Table 1. Means of Sample Firms by Group
(Standard Deviations in Parentheses)

	R & D Capitalizing		*R & D Expensing*	
	Manager-Controlled $n = 37$	*Owner-Controlled* $n = 41$	*Manager-Controlled* $n = 31$	*Owner-Controlled* $n = 36$
Sales[1] (Millions)	11.553	7.086	13.554	14.020
	(13.450)	(8.607)	(11.401)	(12.553)
Total[1]	11.295	5.670	12.070	12.536
Assets (Millions)	(11.538)	(5.561)	(10.034)	(13.305)
Debt/Total[1]	.198	.158	.173	.114
Assets	(.181)	(.218)	(.206)	(.117)
R&D/Sales$_b$	.104	.091	.094	.058
	(.176)	(.114)	(.152)	(.080)

[1]Average pre-SFAS 2 level

The hypotheses were tested using linear regression. The variable RDB was included in the model as a covariate to control for the level of R & D expenditures prior to SFAS 2 period. This controls for a possible "growth" effect. That is, in general, firms are expected to have a higher level of R & D/Sales early in their life cycle. Then as the firm grows and the R & D generates sales, the percentage of R & D to sales would be expected to decline. This factor was not controlled for in prior studies. However, Elliott et al. noted a general declining trend in R & D/Sales for all the firms in their sample. By including this variable as an explicit factor, the incremental effect of the variables of primary interest to the study can be tested. In order to test our research hypotheses the following regression model was run:

$$\begin{aligned} PCHG = {} & b_0 + b_1{*}CE + b_2{*}MO + b_3{*}LEV + b_4{*}RDB + \\ & b_5{*}CE \times MO + b_6{*}CE \times LEV + b_7{*} MO \times LEV, \end{aligned} \qquad (1)$$

where LEV, PCHG and RDB are as previously defined and CE = 1 if the firm was a capitalizer prior to SFAS 2 and 0 otherwise, and MO = 1 if the firm was manager-controlled and 0 otherwise.[4]

IV. RESULTS AND DISCUSSION

Table 2 presents the results of the regression from Eq. (1). As can be seen from Table 2 both CE and MO are significant in the predicted direction. The results indicate that capitalizing firms reduced R & D expenditures

Table 2. Regression Analysis

$$PCHG = b_0 + b_1{*}CE + b_2{*}MO + b_3{*}LEV + b_4{*}RDB + b_5{*}CE \times MO + b_6{*}CE \times LEV + b_7{*}MO \times LEV$$

Coefficient	b_0	b_1	b_2	b_3	b_4	b_5	b_6	b_7
Expected sign	?	—	—	?	—	?	—	—
Parameter estimate	0.25	−.36	−.35	.49	−1.53	.33	−.70	−.01
t statistic	2.67	−3.03	−2.68	1.03	−5.28	2.09	−1.52	−.02
p > t	0.009	0.003	0.008	0.306	0.000	0.038	0.131	0.98

Adjusted $R^2 = .28$

LEV = debt to total assets for 197X, the year prior to adopting SFAS 2

$$PCHG = \frac{avg(R\&D/Sales)_a - avg\ (R\&D/Sales)_b}{avg(R\&D/Sales)_b}$$

'a' refers to the period after a firm adopted SFAS (197Y–1980)

'b' refers to the period before a firm adopted SFAS 2 (1970–197X),

197X = 1973 if the firm adopted SFAS 2 in 1974, or 1974 of the firm adopted SFAS 2 in 1975

197Y = 197X + 1

RDB = average $(R\&D/Sales)_b$

CE = 1 if capitalizing and 0 if expensing prior to SFAS 2

MO = 1 if the firm is management controlled and 0 otherwise

from the pre- to post-SFAS 2 period relative to expensing firms. In addition manager-controlled firms reduced R & D expenditures from the pre- to post-SFAS 2 period relative to owner-controlled firms. A significant positive interaction between the CE and MO variables was found.

Cell means are presented in Table 3 for all four categories of firms included in the sample. As can be seen from Table 3, all groups except the EO group showed a decline in R & D expenditures. The average decline in both capitalizing groups was about the same (−33% and −28%) for CM and CO firms respectively. Although there was a small difference between manager-controlled and owner-controlled firms within the capitalizing category, the difference was not significant. This is consistent with the hypothesis that capitalizing firms, both manger- and owner-controlled, were impacted by the mandatory expensing required by SFAS 2. In contrast, for expensing firms the EO group showed a 22 percent rise in R & D expenditures from the pre- to post-SFAS 2 period, while the EM group declined 14 percent. This suggests that the manager-controlled subset of expensing firms may have been affected by SFAS 2

Table 3. Cell Means by Groups of the Percentage Change in R & D (Standard Deviations in Parentheses)

	Capitalizing Firms		*Expensing Firms*	
	Manager-Controlled (CM)	*Owner-Controlled (CO)*	*Manager-Controlled (EM)*	*Owner-Controlled (EO)*
PCHG	−.3329 (.3955)	−.2847 (.4844)	−.1437 (.4538)	.2209 (.6362)

Cell Comparisons

	Mean Difference
CM–CO	.0482
EM–EO	−.3646 **
CM–EM	−.1892 **
CO–EO	−.5056 **

**Mean difference is significantly different from 0 at α = .01 or less
**Difference between means is significant at α = .01 or better

although to a lessor extent than the capitalizing firms. One possible reason for this is the desire to remain competitive with capitalizing manager-controlled firms. If capitalizing firms reduce R & D expenditures to improve their financial position, then expensing firms may do so as well in order to avoid appearing financially weak relative to the capitalizing firms. Owner-controlled firms are likely to be under less pressure in this regard. In addition, the managers of the owner-controlled firms are not as dependent as the manager-controlled firms on earnings performance for their compensation. Thus, it is not surprising to find that the EO group was the only group of firms to raise the level of R & D expenditures from the pre- to post-SFAS 2 period.[5]

Figure 1 shows the trend in R & D intensity for all four groups. What is apparent is that the divergence in R & D intensity which occurred in the pre-SFAS 2 period virtually disappeared in the post-SFAS 2 period. This suggests that the mandatory accounting change which imposed consistency in reporting among firms may have also led to a more consistent level of R & D spending among firms. This is a somewhat broader view of the impact of SFAS 2 than has been taken in previous studies. However, it is consistent with the theory that the regulatory impact of mandatory accounting changes is not confined to a single set of "affected" (e.g., capitalizing) firms, but that it can impact the overall equilibrium balance among a larger group (all firms with R & D expenditures).

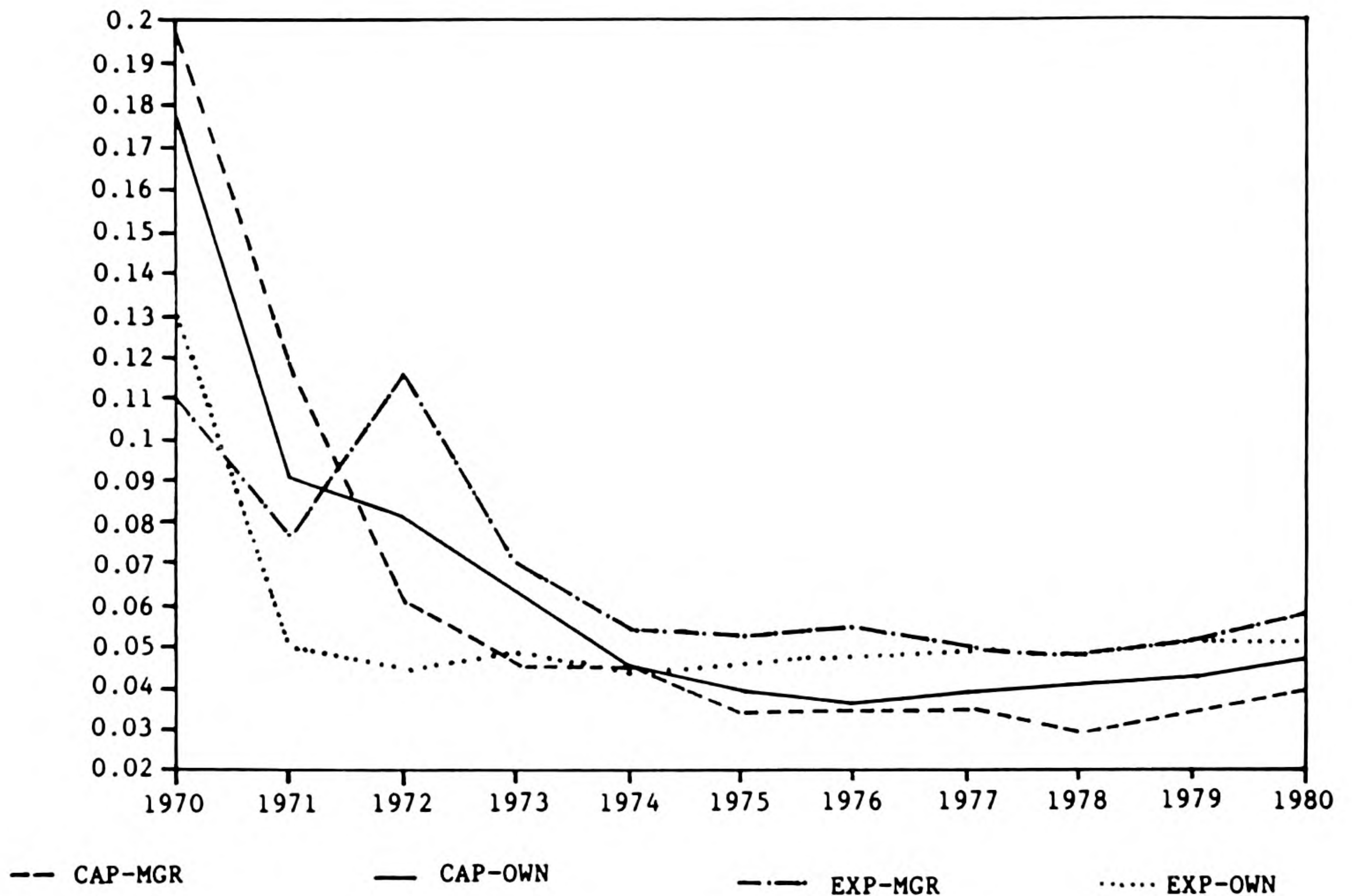

Figure 1. Average R & D Intensity

The leverage variable was not significant as a main effect. However, a significant interaction between variables CE and LEV was found. The negative sign supports H3 indicating that capitalizing firms with a higher degree of leverage reduced R & D expenditures more than less highly levered firms ($\alpha < .07$ one-tailed test). This result is consistent with the results of a large body of positive theory research which has found that highly levered firms seek income increasing accounting methods (see Watts and Zimmerman, pp. 244–260 for a review of this literature). The results further suggest that when the income increasing method is no longer available due to a regulatory change, managers take action in the form of changes in production/investment decisions to avoid the adverse financial statement impact of the change.

RDB was a significant covariate ($\alpha < .0001$) and negative in sign. This is consistent with expectations and suggests that as sales grow, R & D intensity will decline. The importance of this variable to the model indicates the relative importance of small firms to the innovation process. That is, as firms grow, their investment base broadens and the relative proportion of sales spent on R & D falls. To the extent that R & D expenditures lead to new product development, it appears that small firms are a necessary component of economic growth.

CONCLUSIONS

This study is an extension of previous research investigating the impact of SFAS 2 on R & D expenditures of affected firms. Our results indicate that (1) R & D expenditures of capitalizing firms declined relative to expensing firms from the pre- to post-SFAS 2 period, (2) R & D expenditures of manager-controlled firms declined relative to owner-controlled firms from the pre- to post-SFAS 2 period, and (3) the change in R & D expenditures from the pre- to post-SFAS 2 period was negatively related to the degree of leverage for capitalizing firms.

Using a more general equilibrium perspective than has previously been employed, we argue that the mandatory accounting change affected to some extent all firms that engage in R & D activity. The apparent impact of the mandatory change was to eliminate differences in the level of reported R & D expenditures among firms using different accounting methods in the pre-SFAS 2 period, and among firms with different ownership structures. Hence, the regulation-induced similarity in accounting methods appears to have resulted in a similar level of spending behavior on R & D among different classes of firms. The results are consistent with the positive theory of accounting choice. They also suggest that the economic implications of accounting policy decisions may be broader than most prior research has suggested. Accounting regulations may affect not only firms that are directly affected by the mandatory change in accounting policy, but other firms whose competitives position are altered by the actions of the change firms.

ACKNOWLEDGMENTS

Professor Ayres would like to acknowledge the financial support of the Peat Marwick Foundation.

NOTES

1. This sample consisted of some of the same firms as in Elliott et al. [1984]. Twenty-four of the capitalizing firms and eleven of the expensing firms in this study were in their sample.
2. This criterion is based on that adopted by the Senate Special Reports on Small Business (1978, p. 42).

3. This parallels the definition of significant influence used in APB Opinion No. 18, "The Equity Method of Accounting for Investments in Common Stock" [FASB, 1983].

4. Various forms of the model were tested. There we no other significant interactions. The model presented here represents our exante model of the most likely main effects and interactions.

5. The methodology employed in this study evaluates only changes in reported levels of R & D. However, it is possible that the reported and actual levels of R & D may be different. For example, some firms may have responded to the mandatory change to expensing required by SFAS 2 by maintaining spending levels on R & D and finding ways to reclassify expenditures. Conversely, as noted by an anonymous reviewer, because SFAS 2 required disclosure of R & D expenditures, some firms may have reclassified non-R & D expenditures as R & D in order to appear competitive. Selto and Clouse [1985] provide evidence that some firms adapted to SFAS 2 by decentralizing or moving R & D expenditures to other categories.

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MANAGEMENT EXPECTATIONS, FIRM CHARACTERISTICS AND THE ECONOMIC CONSEQUENCES OF STATEMENT 87:

IMPLICATIONS FOR TRANSITIONS PERIOD POLICY

Heibatollah Sami and Roland Lipka

ABSTRACT

In December 1985, after 11 years of deliberation, the Financial Accounting Standards Board approved, by a 4-3 vote, SFAS 87 on accounting for pensions. This paper studies the effect of the new regulation's lengthy transition period on certain managerial expectations and decisions. In addition, the study is designed to provide evidence on the positive theory of

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accounting choice and the theory of costly contracting since the regulators expressed concern with company reactions to the rule changes. Survey data was collected from CFOs and corporate controllers.

The results of the study indicate that management estimates of the effects on earnings, liabilities, and cash flow are related to whether the company: is overfunded or underfunded; has a GAAP based executive compensation plan; and whether the company chooses to voluntarily adopt the provisions early. Furthermore, the evidence supports the positive theory of accounting choice's prediction that voluntary choice for firms with GAAP based bonus plans will be income increasing. Counterfactual to the regulators' concerns, the evidence does not support the assertion that contract renegotiation costs would be significant (as suggested by costly contracting theory).

The Financial Accounting Standards Board (Board) responded to the passage of ERISA[1] and the continued criticism of its regulation of pension accounting by placing the topic on its agenda in 1974. The fact that it took the Board eleven years to study and approve (by a 4-3 vote) Statement of Financial Accounting Standards No. 87 (SFAS 87, 1985) demonstrates the complexity of measuring and reporting pension costs and obligations. The need to estimate future compensation levels, employee turnover rates and their life expectancies, projected plan earnings and changes in plan promises is a monumental task. Compounding these estimation problems is the fact that the Board's members were not able to agree on the more fundamental issue of what is the appropriate unit to be accounted for: the individual presently employed or the aggregate employee group.[2]

Furthermore, the Board faced the practical but difficult task of determining the length of the transition period for the voluntary adoption of the new rules. The length of the transition period is an important regulatory issue since: (1) it presents managers with the opportunity for self-aggrandizement through executive incentive plans; and (2) it creates a period of cross-company inconsistencies. However, the Board had to balance the costs associated with these issues against the cost of implementing the new regulations, including debt renegotiation costs.

I. A BRIEF HISTORY OF PENSION ACCOUNTING REGULATION

The accounting profession's attempt to reach a consensus on these (perhaps unsolvable) problems began in the late 1940s with Accounting Re-

search Bulletin No. 36 which concluded that prior service costs should be recognized prospectively. In 1956, the Committee on Accounting Procedure found it necessary to reaffirm this conclusion (Accounting Research Bulletin No. 47). Interestingly, the Committee expressed, somewhat obliquely, a preference for measurement using future salary levels: an issue which divided the regulators in their 1985 deliberations [FASB, 1985].

In 1966, the Accounting Principles Board issued Opinion No. 8 in response to what it considered to be unreasonable diversity of measurement techniques and the substantial fluctuations in pension expense recognition by many firms. The underlying perspective of the opinion (from which SFAS 87 drew heavily) is that pension commitments are long-run, and therefore, the costs of the pension plan should be measured using long-run concepts. Thus, smoothing techniques to eliminate possible gyrations in pension costs (e.g., actuarial gains and losses) were required. But Opinion No. 8 was acknowledged as transitional as the profession continued to struggle with the issues.

One of the more intractable problems was the perceived inadequacy of liability recognition. (Bulletin No. 47 had anticipated the problem by suggesting that the excess of the vested benefits over the accumulated trustee funds be recognized in the accounts.) SFAS 36 (1980) improved reporting by requiring that firms disclose the accumulated benefit obligation, which is the actuarially determined present value of vested and nonvested pension benefits (including past and prior service costs).

Opinion No. 8 failed to eliminate the substantial range of possible outcomes in pension costs, and SFAS 36 did not provide sufficient relevant information. Further, it failed to integrate, in the view of the accounting profession, the pension liability into the accounting statements. Whether the Board has successfully produced, in SFAS 87, a standard that is reliable and relevant awaits empirical evaluation.

What is clear is that the new regulations have dramatically changed the pension accounting requirements for single-employer defined benefit plans. The rules require: (1) the use of a standardized measure of pension cost; (2) the recognition of the minimum liability[3] when accumulated benefit obligations exceed the fair market value of plan assets; and (3) the disclosure of additional information in the footnotes.

Mandatory adoption of the expense and disclosure regulations is required for fiscal years ending after December 15, 1987. In addition, mandatory adoption of the minimum liability regulation is required for statements issues after December 15, 1989. This unusually long transition period (from the end of 1985 through December 15, 1989), in which

voluntary compliance is encouraged, reflects the Board's fear that implementation costs might be substantial. For example, a number of respondents expressed concern that the new liability recognition regulation would burden their companies with the additional costs of renegotiating existing contracts.[4] Thus, the regulators were caught in the web of wishing to restrict future reporting alternatives while at the same time creating greater disparities in reporting during the transition period. In addition, the regulators (through their early adoption transition rules) may have created an excessive interval of time during which managers were presented with the opportunity to manipulate accounting earnings for their own benefit.

II. PURPOSE OF STUDY

Since the extended transition period may adversely affect intercompany comparability of financial statements between voluntary and mandatory adopters,[5] one of the principal objectives of this study is to investigate whether management estimates of the effects of the new pension regulations on earnings, liabilities and cash flows are related to the voluntary choice to adopt the provisions during the transition period. If the research indicates that systematic differences exist between voluntary and mandatory adopters, the Board may need to study the costs and benefits of its policy on the length of transition periods of future standards. Therefore, this study seeks to determine:

1. If corporate managers perceive that the new pension accounting regulations reflect the economic substance of the labor contracts (See Question 4 of the Questionnaire in Appendix A);
2. If managers expect the regulations to impact accounting earnings, liabilities and cash flow (Questions 5–7);
3. If managers expect their firms to alter their pension contracts (Questions 8 and 9);
4. If managers expect their firms to incur renegotiation costs as a result of the regulations (Question 10); and, as explained above,
5. If the voluntary decision to voluntarily adopt the regulations can be explained by positive accounting theory (Question 3).

There already exists a substantial body of research on costly contracting theory and accounting choice theory. Although the explanatory vari-

ables (discussed in the following section) are significant, the overall coefficients of determination are frequently below 30 percent, and consequently, evidence from an alternative source is useful in the confirmation or rejection of these theories. The outline for the remainder of this paper is: in the next section, a brief review of the related theoretical and empirical research appears; Section IV describes the research design; the results are presented in Section V; and the last section concludes the paper.

III. PRIOR RESEARCH

A. The Theory of Pension Contracts

1. *The Economics of the Bargaining Process*

The theory of pension contracting and accounting has four branches of inquiry:

1. The contracts represent deferred compensation whose present value is competitively determined by labor market factors (deferred wage theory);
2. The contracts are long-term incentive plans that are used to motivate employees and monitor the actions of managers for the owners (agency theory);
3. The contracts are a cost minimizing source of funding for the firm (option pricing theory); and
4. The choice of methods and the decision to voluntarily adopt is associated with the existence of incentive contracts (positive accounting theory).

Deferred wage theory claims that the pension contract simply defers a portion of the market determined compensation package. Essentially, current wages and deferred wages are substitutes (Pesando and Rea [1977]). But they are imperfect since the deferral is illiquid and risky. Consequently, the value of the deferral contract must exceed the value of the foregone wage in the absence of any other factors, such as taxation. The institutional arrangement whereby taxes are deferred is a driving force to postpone income when normally such action is suboptimal. The wedge of taxation tends to make such contracts viable.

In the current U.S. system, there is a four-fold advantage to deferral: (1) postponement of income taxes; (2) the likelihood that ultimate taxation will be at a lower bracket; (3) the savings is with pretax dollars; and (4) the savings buildup is tax deferred. The principal disadvantages are: the illiquidity of retirement savings under the Federal system, and possibility that social security benefits are taxed if there is too much private savings [Lipka, 1987].

But suppose there are no tax inducements, should firms be willing to offer such contracts when an illiquidity and risk premium has to be paid? The answer is obviously yes, if the contract is nothing more than an unregulated gamble between the house (firm) and the gambler (employee), since the house possesses far superior information and control over the outcome. Because such gambles are extremely risky, one would expect very few private pension plans of this type in an unregulated world. Of course, some employees may ignore the inherent riskiness in spite of their general behavior towards risk.[6]

But what about the case of a regulated market, where the gambler's toss for the pension fund is guaranteed fair? Are there any economic incentives for the firm? Mielke [1986] provides an agency theory type analysis which builds upon Harris and Raviv's [1978] postulate that a necessary and sufficient condition for an efforts based incentive plan (i.e., pension plan) to be optimal when agents' actions are not easily observed is that the agents be risk averse.[7]

Mielke's key insight is that pension plans are incentive type plans based on a relatively long vesting period in which the firm is able to use salary level and years of service as a proxy for effort.[8] The employer's cost savings (assuming the plans are effective and efficient motivators) are: (1) reduced turnover costs of hiring and firing [Salop and Salop, 1976]; (2) increased employee productivity through reduced risk of investment in their training [Becker, 1964]; and (3) decreased monitoring costs as workers have a stake in the well-being of the firm. To the extent that there are cost savings, the profit maximizing firm will find it advantageous to offer a compensation contract whose expected value exceeds a "wages only plan." In other words the employer is willing to share the savings. Hence, the existence of tax-favored treatment, the opportunity to reduce costs, or some combination of both factors explains the widespread use of pension contracts. (As evidence of the widespread use, consider that twenty percent of the value of the stock listed on the New York Stock Exchange was owned by pension funds in 1985 (Radcliff [1987, p. 698])).

2. *Theory of Funding Pension Obligations*

There is little disagreement among theorists that unfunded vested benefits represent a net liability to the firm (for example, Oldfield [1977], and Feldstein and Seligman [1981]).

What is unusual is that the accounting profession has concurred with the disclosure of the net amount of the difference between accumulated benefits and the value of the plan's assets. But Landsman [1986] and Miller [1987] argue that the legalistic reporting of the net amount does not faithfully represent the economic property rights and obligations inherent in the contract. Although the pension trust is a separate legal entity, the company stands to enjoy the excess funding, if any, and must make up shortfalls. Hence, the assets and the liabilities should not be netted since the information contained in the gross amounts is directly used for the evaluation of the systematic risk of the firm (Beaver, Kettler and Scholes [1970], Hamada [1972], and Dhaliwal [1986]).

The Black and Scholes [1973] option pricing model offers insights about what the pension contract is and how the firm should optimally finance the pension obligation. The pension plan is a contingent claim contract. The workers provide present labor effort for future benefits which are contingent upon attainment of vesting and upon the ability of the firm to accumulate sufficient resources. The contract, consequently, provides the firm with a put (sell) option. If, when the plan is terminated, the value of the firm and the plan's assets are insufficient to cover the claims of the pensioners, the company is able to exercise the put option by delivering (selling) the property in satisfaction of their claims. On the other hand, the firm will allow the put to lapse if the value of the plan's assets exceed their claims [Stone, 1982]. Puts permit the firm to leverage and hedge its investments [Radcliff, 1987].

The issue of optimal funding is unresolved. The potential to enjoy tax arbitrage (since the earnings of qualified plans are tax deferred; whereas, borrowing to fund the plan is tax deductible) dictates full funding (Tepper and Affleck [1974]). Feldstein and Seligman [1981] reach the same conclusion for a different reason. Their analytics suggest that fully funded plans have a lower present value cost than pay-as-you-go plans.

With an untaxed, perfect capital market, Sharpe [1976] shows that funding of uninsured plans is irrelevant: it neither increases nor decreases firm value. But his conclusion changes when plan insurance is introduced. Now the firm will find that underfunding is optimal.

Ippolito [1986], dissatisfied with prior explanations and the funding

implications, developed an alternative explanation derived from agency theory. His theory is based on the notion that underfunding is a form of bonding/monitoring, which is borne by the agents/labor union. As such, Pension Benefit Guaranty Corporation insurance reduces the value of underfunding. The theory posits that;

funding ratio = f(firm size, plan size, age, union status, industry, industry growth, pension plan type).

He found that union status was the most important variable. Union plans experienced a 24.1 percent funding ratio lower than for nonunion plans. Industry growth, type and age of the plan were also significant.

3. *The Voluntary Choice to Adopt Early and Postitive Acounting Theory*

The theory of why firms choose one accounting method over another (especially when there are no apparent cash flow gains) cannot be directly answered by the capital asset pricing theory. Yet the financial community spends a great deal of resources over what that theory concludes is irrelevant for the efficient pricing of securities. The market is able to assess the time series of cash flows and their likely variations.

Watts and Zimmerman [1978, 1986] reacted to the impotency of the market theory by developing an alternative paradigm. The basic postulates of their theory of accounting choices are: managers maximize their self-interests; and their behavior can be made congruent with self-interests of the owners through appropriately designed incentive contracts (e.g., stock options or cash bonuses). A parallel theory of choice, costly contracting theory, developed concurrently (and with substantial overlap) and positive theory. It postulates that accounting choice is wealth-maximizing through its indirect effect on share-prices. Investment, financing and choice of accounting methods are intertwined so that economic decisions include the choice of method (Collins, Rozeff and Dhaliwal [1981]). Therefore, seemingly innocuous (in terms of their direct impact on cash flows), mandated accounting changes may lower share prices because the new methods force recontracting adjustments, as managers seek new equilibria of investments and financial contracts given the new methods.

B. Empirical Studies

This review of the empirical studies is limited to research which is relevant to the objectives of that research as stated above. Since we are not aware of any works that evaluate management's perceptions on the economic substance or their estimates of the economic effects of SFAS 87 (the first two objectives), we proceed to empirical studies on the last three.

A common formulation of the positive theory of accounting choice is:

Choice = f{firm size, financial leverage, bonus plan, firm type, earnings variability}.

Firm size, a proxy for political cost (Watts and Zimmerman [1978]), has been used in a number of studies with mixed success. For example, in Hagerman and Zmijewski [1979] and Ayres [1986], size is significant at the five percent level. But Bowen, Noreen and Lacey [1981] and Dhaliwal, Salamon and Smith [1982] do not observe significance. Financial leverage is consistently significant (Bowen, Noreen and Lacey [1981], Zmijewski and Hagerman [1981], Dhaliwal, Salamon and Smith [1982] and Daley and Vigeland [1983]). The results of the empirical studies on whether unfunded vested benefits are equivalent to liabilities is almost irrefutably positive. (See Oldfield [1977], Feldstein and Seligman [1981], Daley [1984], and Dhaliwal [1986].)

Bowen, Noreen and Lacey [1981] did not find a significant effect for bonus plans, but Zmijewski and Hagerman [1981] did. This inconsistency justifies additional evidence. Firm type (manager controlled or owner controlled) was found to be significant by Dhaliwal, Salamon and Smith [1982] and Ayres [1986]. Earnings variability was significant in Hagerman and Zmijewski [1979] and Lilien and Pastena [1982].

This study extends the studies previously cited by using an alternative research strategy to study: (1) whether the positive theory of accounting choice explains the decision to voluntarily adopt SFAS 87's provisions; and (2) whether the estimates of increased renegotiation costs are consistent with the theory of costly contracting. The strategy used in this study is based on a survey instrument, which is discussed in the next section. The results are consistent with the positive theory of accounting choice advanced by Watts and Zimmerman [1986], which implies that the Board should reconsider its policy on transition periods for future projects. But the evidence on the effect of the pension regulations on renegotiation costs is inconclusive.

IV. RESEARCH DESIGN

The research design of this study is to obtain survey information about the perceived and expected effects of the Statement's new regulations.[9] The subjects are either chief financial officers or corporate controllers who are employed by firms, which disclosed pension information on the SFAS 36 tape.[10]

There were 363 companies that disclosed information about pension plans for 1984. Of these firms, 244 were overfunded and 119 were underfunded. A questionnaire and a cover letter were mailed to all 363 firms.[11] A follow-up package, containing the same questionnaire and a new cover letter, was mailed to nonrespondents eight weeks later. Approximately 31 percent (111) responded to the first mailing and 11 percent (41) to the second for a total of 42 percent (152).[12,13]

Companies are classified by the following characteristics: (1) the plan's funding status (underfunded–liability versus overfunded–asset); (2) whether they had executive compensation plans based upon reported earnings (yes versus no); and (3) whether they adopted SFAS 87 earlier than required (yes or no). Obviously, this classification is a $2 \times 2 \times 2$ (or eight groups) design. Panel A of Table 1 assigns eight group numbers to the firms. These group numbers will be used in the following section. The number of respondents by group are also indicated. For example, the companies in group 1 had pension liabilities in excess of pension assets, utilized executive compensation plans, and voluntarily adopted the regulations during the transition period. Panel B of Table 1 correlates the eight hypotheses of this study with the instrument's questions.

A. Statistical Analyses

Analyses of the data include descriptive statistics for Questions 1–3 (categorical) and descriptive statistics and nonparametric tests of significance of sample means and medians for Questions 4–10 (ordinal).[14]

Due to the exploratory nature of this study, levels of significance up to 20 percent are reported. Judgmentally, we classify: alpha levels of five percent or less as highly significant; five to ten percent significant; and ten to twenty percent as significant enough to warrant additional investigation. (See McCloskey [1983] for a discussion of the subjective aspects of significance testing in the context of the quest for knowledge.)

Table 1.

Panel A:

		Firm Characteristics		
Group Number	*Balance Sheet Position*	*Executive Compensation*	*Early Adoption*	*Sample Size*
1	Liability	Yes	Yes	21
2	Liability	Yes	No	24
3	Liability	No	Yes	2
4	Liability	No	No	5
5	Asset	Yes	Yes	44
6	Asset	Yes	No	30
7	Asset	No	Yes	15
8	Asset	No	No	11
Total Number of Firms Classified				152

Panel B:

Correspondence Between Questions and Hypotheses

Question	*Hypothesis*
3	1
4	2
5	3
6	4
7	5
8	6
9	8
10	7

Group membership for each company was determined by the responses to Questions 2 and 3 (Table 1) and the financial information on the SFAS 36 tape (liability or asset position).

B. Hypotheses

1. We suspect that the early adopters (the set{1357}: read as the set of groups 1, 3, 5 and 7) will be motivated to report different reasons for their decision depending upon their profiles (see Table 1; however, group 3 is eliminated from the statistical testing of these group means and medians due to its limited sample size). For example, {1} has liabilities, and {57} do not. Also, {15} have GAAP based bonus plans, and {7} does not. Therefore, we posit the following three null hypotheses:

H1: *There are no differences among the set {157} with respect to the decision to adopt early due to:*

H1.1	*Conceptual Soundness*	*Question 3.1*
1.2	*Expected Effect on the Financial Statements*	*3.2*
1.3	*Expected Cost of Implementation*	*3.3*

2. We expect that the managers' report perception of the ability of the Statement to measure the true cost of the pension contract will be affected by their environment. The hypothesis is stated as:

H2: *Differences in corporate profiles (for the set {12345678}) have no effect on the perception of the ability of SFAS 87 to measure pension costs (Question 4).*

We are also interested in whether differences between composite groups exist. (By composite, we mean some combining of the basic groups along a common profile characteristic. For example, the composite {1357} is also described as the early adopters, which is their common characteristic.) Consequently, the above hypothesis is reformed into the following ancillary hypotheses for the three characteristics:

H2.1	*Liability vs. Asset Position*	*{1234} vs. {5678}*
2.2	*Bonus Plan: Yes vs. No*	*{1256} vs. {3478}*
2.3	*Early Adopters vs. Later Adopters*	*{1357} vs. {2468}*

(Each of the following principal hypotheses has three ancillary hypotheses corresponding to H2.1, 2, and 3. For brevity these are not formally presented.)

3. Positive accounting theory suggests that differences in reactions to changes in accounting rules will be affected by GAAP based bonus plans. Hence, we expect that early adoption is more likely for companies which claimed estimated increases in accounting income. However, for companies with liabilities, there may be an offsetting effect through its possible increase.

Our hypothesis for all groups is:

H3: *Differences in corporate profiles (for the set {12345678}) are not associated with the expected effect of SFAS 87 on corporate earnings (Question 5).*

4. Positive theory predicts that firms will prefer accounting methods and strategies which reduce financial leverage. Relatedly, risk assessment theory predicts that changes in liabilities impact share prices through the effect on systematic risk. Expected effects of changes in liabilities may, therefore, be related to the decision to adopt early. Our hypothesis for all groups is:

H4: *Differences in corporate profiles (for the set {12345678}) are not associated with the expected effect of SFAS 87 on pension obligations (Question 6).*

5. Security returns depend upon both the level of cash flows and the variability of the cash flows according to capital asset pricing theory. Thus, the responses to Question 7, if significant, should provide insight into how market studies should be conducted for accounting changes and may help explain why market studies frequently have low R^2s. In other words, the security returns data may be systematically affected by firm profiles which are not properly controlled. Our hypothesis for all groups is:

H5: *Differences in corporate profiles (for the set {12345678})are not associated with the expected effect of SFAS 87 on cash flow (Question 7).*

6. Costly contracting theory claims that accounting methods are part of the optimizing set for investment decisions. If the new regulations restrict the alternatives, it is possible that a systematic pattern, according to some profile such as ours, may exist. If so, then market studies need to control for such factors. We have three hypotheses which are related to costly contracting theory:

a. First, our hypothesis for all groups is:

H6: *Differences in corporate profiles (for the set {12345678}) are not associated with the expected effect of SFAS 87 on measurement alternatives (Question 8).*

b. Second, our hypothesis for all groups is:

H7: *Differences in corporate profiles (for the set {12345678}) are not associated with the expected effect of SFAS 87 on renegotiation costs (Question 10).*

c. Our third hypothesis is based upon the possibility that, perhaps the theorized adjustment occurs in the provision of future pension benefits also. Essentially, we ask, "does SFAS 87 alter the expected provision of pension benefits?" Therefore, the hypothesis for all groups is:

H8: *Differences in corporate profiles (for the set {12345678}) are not associated with the expected effect of SFAS 87 on future pension benefits (Question 9).*

V. RESULTS

A profile analysis of the three characteristics (under/over funded, GAAP based executive compensation, and early adopters) is summarized in Table 2. The data reports the distribution of responses for each characteristic by: type of plans (Question 1); type of executive plan (Question 2); early adoption (Question 3); and liability/asset position (SFAS 36 tape).

The grand totals across the 3 characteristics indicate that 57.9 percent of the 152 companies with usable responses employ only defined benefit plans, and 42.1 percent have both defined benefit and defined contribution plans (Table 2). Most of the firms use bonus plans tied to GAAP

Table 2. Profile Analysis (Distribution of Responses %)

			Group Characteristics						
					Exec. Comp.		*Early Adoption*		
Question			*Liability/Asset*		*Yes*	*No*	*Yes*	*No*	*Grand Total*
			{1234}[a]	{5678}	{1256}	{3478}	{1357}	{2468}	
Types of Plans[b]		A[c]	55.8	60.0	56.3	66.7	61.0	55.7	57.9
	1	B	44.2	40.0	43.7	33.3	39.0	44.3	42.1
Executive Compensation		Y	83.3	74.0	na	na	79.3	75.0	77.5
	2	N	16.7	26.0	na	na	20.7	25.0	22.5
Early Adoption		Y	42.6	59.0	100.0	48.6	na	na	53.6
	3	N	57.4	41.0	—	51.4	na	na	45.8
Liability or			na	na	54.6	25.7	28.0	43.1	35.0
Asset			na	na	45.4	74.3	72.0	56.9	65.0

[a]See Table 1 for the coding of the group numbers.
[b]Responses 'C' and 'D' are omitted here. Four companies chose response 'C' (defined contribution only). They were omitted from the analyses of the data.
[c]See Questionnaire for description of responses.

(77.5 percent). Approximately 54 percent adopted early and 46 percent late. Finally, 35 percent of the firms were underfunded and 65 percent were overfunded.

Interestingly (and consistent with Ayres's findings [1986]), 100 percent of companies with executive compensation plans tied to GAAP voluntarily chose to implement SFAS 87's provisions early, even though 55 percent of their plans were underfunded. A possible explanation is that the agency based compensation factor outweighs the costly contracting renegotiation cost factor. As was expected, the majority of early adopters were overfunded (72.0 percent compared to 56.9 percent for late adopters). Consequently, the regulators may have unwittingly created a lengthy transition period during which managers were able to exercise their own self-interests.

Companies that adopted SFAS 87 early were asked to indicate why they chose that action. Only 2.7 percent answered that soundness of the rules was the motivating force (Table 3).[15] On the other hand 32.4 percent claimed that reason was 'unimportant.' The responses to the financial report effects and the cost of implementation questions also appear in Table 3. Note that 47.3 percent indicated that the impact on the financial reports was minimal (responses 1 or 2 to Question 3.2).

Table 3. Reasons for Early Adoption

			Distribution by Group (%)			
	Question	*Response*[b]	*1*[a]	*5*	*7*	*Overall*
Conceptually Sound	3.1	1	—	5.3	—	2.7
		2	14.3	18.4	23.1	20.3
		3	52.4	34.2	23.1	36.5
		4	4.8	10.5	15.4	8.1
		5	28.6	31.6	38.5	32.4
Minimal Effect on Fin. Reports	3.2	1	25.0	38.5	30.8	32.4
		2	25.0	10.3	15.4	14.9
		3	35.0	25.6	30.8	31.1
		4	10.0	10.3	15.4	9.5
		5	5.0	15.4	7.7	12.2
Cost of Implementation	3.3	1	17.6	17.9	7.7	15.5
		2	29.4	17.9	23.1	21.1
		3	11.8	28.2	15.4	22.5
		4	23.5	15.4	30.8	18.3
		5	17.6	20.5	23.1	22.5

[a]See Table 1 for the coding of the group numbers.
[b]See Questionnaire for description of responses.
Group 3 is omitted due to the small sample size.

Kruskal-Wallis (K-W) tests were performed for H1.1–1.3. No significant differences were found among groups 1, 5 and 7 with respect to the reasons for the choice to voluntarily adopt SFAS 87 early.

Question 3 also provided space for other, anecdotal responses. Fifteen of the 24 respondents stated that the reason for early adoption was due to its positive effect on income. Two indicated that it is general policy to adopt early. Another 2 claimed that there were no benefits from postponing the decision. One company stated that its motive was in order to terminate a plan. Three plans were able to reduce their contributions as a result of being overfunded. Finally, one regulated company indicated that the choice was related to its rate making strategy. Although, no scientific conclusions can be drawn from this evidence, it does provide regulators with insights about the factors involved in the early implementation choice.

A summary of the group means, medians and alpha levels for the K-W test statistics for Questions 4–10 appears in Table 4. The results indicate that differences which are highly significant exist among the groups for Questions 5, 6 and 7 (effect on earnings, liabilities and cash flow). Consequently, we reject H3, H4, and H5 (but not H2, H6, H7, or H8).

The distribution of responses to H8 (Appendix C) reveals a particularly important finding: none of the respondents indicated that significant renegotiation costs were expected to be incurred. Although the failure to reject H8 means that we did not observe a costly contracting effect, the results cannot be used to refute the theory for two reasons. First, it is possible that SFAS 87 did not have a sufficiently large effect on leverage to matter. Second, even if the Statement did have a substantial effect, the contracting adjustments may have occurred in anticipation of the new accounting requirements. These confounding actions almost reduce costly contracting to a tautology. (See the conclusions below for further, anecdotal evidence.) Therefore, regulators need to study the renegotiation problem more carefully. The claims made by companies during the deliberation period about substantial renegotiation costs are not observed in the data.

Table 5 presents the means, medians and K-W levels of significance for the three ancillary hypotheses associated with H2–H8 (for alpha levels up to 20 percent as explained above). The results indicate that:

1. Liability vs. Assets—The asset group's estimate of the increase in earnings is significantly greater than the liability group's estimate (Table 5; 2.0 vs. 2.5) at the 0.8 percent level. The liability group expects a slight increase in liabilities (2.5), and the estimate is significantly different from

Table 4.

Panel A:

Question Means by Group

Group Number	*4 True Cost*	*5 Earnings*	*6 Liabilities*	*7 Cash Flow*	*8 Alternatives*	*9 Benefits*	*10 Renegotiation*
1@	2.9	2.6	3.0	2.8	2.8	4.0	4.2
2	3.3	2.7	2.5	3.2	2.5	3.7	4.1
3	nm	nm	nm	nm	nm	nm	nm
4	3.8	2.4	2.5	3.0	2.4	3.8	4.0
5	3.0	1.9	3.1	2.8	2.8	4.0	4.2
6	3.0	2.5	3.1	3.0	2.6	3.8	4.1
7	3.4	2.2	3.0	2.9	2.9	4.0	4.4
8	3.8	2.0	3.4	2.7	3.0	4.0	4.1
Overall Means	3.2	2.3	3.0	2.9	2.8	3.9	4.2

Panel B:

Question Medians by Group

Group Number	*4 True Cost*	*5 Earnings*	*6 Liabilities*	*7 Cash Flow*	*8 Alternatives*	*9 Benefits*	*10 Renegotiation*
1	3.0	2.0	3.0	3.0	3.0	4.0	4.0
2	3.0	2.0	2.0	3.0	2.0	4.0	4.0
3	nm	nm	nm	nm	nm	nm	nm
4	4.0	2.5	3.0	3.0	2.0	4.0	4.0
5	2.5	2.0	3.0	3.0	3.0	4.0	4.0
6	3.0	2.0	3.0	3.0	2.0	4.0	4.0
7	3.0	2.0	3.0	3.0	3.0	4.0	4.0
8	4.0	2.0	3.0	3.0	3.0	4.0	4.0
Overall Medians	3.0	2.0	3.0	3.0	2.5	4.0	4.0
K-W	*	1.9	3.2	2.4	*	*	*

@ See Table 1 for the coding of the group numbers.
K-W: Alpha level of significance for Kruskal-Wallis test statistic
*K-W's alpha exceeds 20%
nm Not meaningful due to group size

the asset group's estimate of no increase (3.0) at the 0.7 percent level. Therefore, only H3.1 and 4.0 (out of the set H2.1–8.1) are rejected.

2. Companies With vs. Without GAAP Based Bonus Plans—Companies without such plans disagree with SFAS 87 more strongly than do their counterparts (4.0 vs. 3.0) at the 3.6 percent level. Hence, H2.2 is rejected.[16]

Table 5. Responses by Composite Groups

Panel A: Means

Question	*4 True Cost*	*5 Earnings*	*6 Liabilities*	*7 Cash Flow*	*8 Alternatives*	*9 Benefits*	*10 Renegotiation*
Composite Group							
Liability	3.2	2.7	2.7	3.0	2.6	3.9	4.1
Asset	3.1	2.2	3.1	2.9	2.8	3.4	4.2
Exec. Yes	3.1	2.3	3.0	2.6	2.7	3.9	4.2
Comp. No	3.6	2.2	3.0	2.8	2.8	4.0	4.3
Early Yes	3.1	2.2	3.1	2.8	2.8	4.0	4.3
Adopt. No.	3.3	2.5	2.9	3.0	2.6	3.8	4.1

Panel B: Medians

Question	*4 True Cost*	*5 Earnings*	*6 Liabilities*	*7 Cash Flow*	*8 Alternatives*	*9 Benefits*	*10 Renegotiation*
Composite Group							
Liability	3.0	2.5	2.5	3.0	2.0	4.0	4.0
Asset	3.0	2.0	3.0	3.0	3.0	4.0	4.0
K-W	*	0.8	0.7	*	*	*	*
Exec. Yes	3.0	2.0	3.0	3.0	2.0	4.0	4.0
Comp. No	4.0	2.0	3.0	3.0	2.5	4.0	4.0
K-W	3.6	*	*	*	*	*	*
Early Yes	3.0	2.0	3.0	2.5	3.0	4.0	4.5
Adopt. No	3.0	2.5	3.0	3.0	3.0	4.0	4.0
K-W	*	5.7	*	0.2	*	14.2	8.0

K-W: Alpha level of significance for Kruskal-Wallis test statistic
*K-W's alpha exceeds 20%

3. Early vs Late Adopters—There is evidence of significant differences between the two groups with respect to estimates of accounting income, cash flow and renegotiation costs. Both expect income to increase slightly, but early adopters' estimates are higher. Cash flow is expected to increase very slightly by early adopters. Contrary to the regulators concerns, neither group expects significant renegotiation cost will be incurred. Early adopters are stronger in their expectations. Finally, there is some support (alpha of 14.2 percent) that early adopters are less likely to cut back pension benefits as a result of SFAS 87. Thus, we reject H3.3, 5.3, and 8.3.

Table 6 contains K-W levels of significance for tests of equality of medians within each characteristic. For example, within the composite group {1234}, which are the firms with pension liabilities, there are significant differences on Questions 6 (9.2 percent) and 7 (1.5 percent). The asset composite group reports significant differences among its groups at the 3.9 percent level. Companies with GAAP based bonus plans significantly differ from one another with respect to estimated earnings (6.1 percent), expected liabilities (1.5 percent), and expected cash flow (0.4 percent) changes due to SFAS 87. Early adopters differ among themselves at the 2.7 percent level on their projections of the effects of SFAS 87 on earnings. Late adopters differ at the 1.3 percent and 9.4 percent levels with respect to their estimates of liabilities and cash flow. Appendix B presents additional K-W levels of significance between various pair-wise tests of group medians. Appendix C presents the distribution of responses to Questions 3.1–10 for all firms.

VI. CONCLUSIONS

Our main findings are that, on average, the companies: (1) expected a slight increase in earnings and cash flow; (2) did not expect increases in debt levels or renegotiation costs; and (3) did not plan to reduce future pension benefits as a result of the new rules. Within groups, we find that there are significant differences on the expected effects on earnings, liabilities and cash flow.

Table 6. Kruskal-Wallis Significance Levels for Comparison Within Various Sets

Question	*4 True Cost*	*5 Earnings*	*6 Liabilities*	*7 Cash Flow*	*8 Alternatives*	*9 Benefits*	*10 Renegotiation*
Composite Group							
Liability	*	*	9.2	1.5	*	*	*
Asset	*	3.9	*	16.9	*	*	*
Bonus Plan: Yes	*	6.1	1.5	0.4	*	*	*
No	*	*	*	*	*	19.2	*
Early Adoption	*	2.7	*	*	*	*	*
Late Adoption	18.9	*	1.3	9.4	*	*	*

*K-W's alpha exceeds 20%.

The evidence is consistent with the positive theory of accounting choice's prediction that voluntary choice will be income increasing when executive compensation is based on accounting numbers.

We do not find evidence supporting the agency and costly contracting theories' renegotiation cost mechanism in the case of the changes mandated by SFAS 87. The mechanism assumes that, at the *margin,* costs are sensitive to accounting changes. In the case of SFAS 87, they are not, possibly due to the fact that other forces outweighed the renegotiation effect. *Consequently, the regulators may have unwisely created an unnecessary long transition period.*

Also, the follow-up to Question 10 (renegotiation costs) asked for reasons, if costs were not expected to be incurred. A total of 108 responses were received. Eighty claimed that the covenant restrictions were not affected, and 23 claimed that, although the restrictions were affected, they were not violated. Three responded that their GAAP based covenants do not roll forward. Only 2 indicated that the restrictions were violated. In one case, the lender did not force renegotiation, and in the other, the costs were insignificant. These responses corroborate our findings that the transition period may be too long. But as discussed earlier, costly contracting's prediction on the behavior of renegotiation costs, while conceptually appealing, is difficult to subject to statistical testing.

Thus, drawing on positive theory of accounting choice and agency theory, we observed that managers behave as expected: voluntary choice, positive income adjustments and management incentive plans positively related. On the other hand, the Board's concern for renegotiation costs (costly contracting theory) is not supported by the results.

The prospects for future research on the effects of pension accounting are good. A logical extension of this study is to study company responses and relative stock returns.[17] Also, the responses should be linked to financial data to determine the omitted effects of size and leverage, for example.[18] One company indicated that the provisions of the Statement were anticipated in the debt contracts. Hence, when passed, there was no problem with violating the covenants. Additional work on this type of behavior needs to be conducted.

Very little work has been performed on the nature of the worker preferences and cognitive processing styles in terms of total compensation contracts. Another area of interest is: why are workers willing to accept integrated (with social security) plans since increases in social security represent gains to the employer which are not shared?

The methodology used in this paper could be applied to measuring the

effects of accounting changes on dividend policy since it is often constrained by the debt/equity ratio (Beresford, Schwartz and Wilson [1983]). Pension funding policies are also affected (Daley [1984] and Landsman [1986]). The use of a questionnaire may provide insights on the effects of the vesting changes under the 1986 tax reform. Its likely effects on pension contracts are two-pronged: there is a direct cost since the likelihood of vesting increases (ceteris paribus) and there is a reduction in the value of the proxies (salary level and years of service) for work effort (Mielke [1986]).

This study's limitations are typical of the methodology employed. We do not know for sure who actually answered the questions. Nor do we know how conscientious respondents were. But the number and quality of the anecdotal comments provide internal evidence that the respondents were technically competent and genuinely attentive to the instrument.

There is weak evidence that nonrespondents may behave differently from respondents. Further, we did not control the sample for certain variables, such as firm size, leverage, type of firm (owner or manager controlled), and industry. Notwithstanding these limitations, the study provides important evidence and insights related to the Board's policy on the length of the transition period for future standards.

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NOTES

1. See Treynor, Regan and Priest [1976] for a discussion of the economic effects of ERISA.
2. See Rue and Tosh [1987] for a detailed discussion of this point.
3. A substantial (and divisive) issue was whether current or future salary levels should be used. The Board decided to use the former. However, future salary levels are used to measure the projected benefit obligation which is disclosed in the footnotes.
4. See SFAS 87, paragraphs 259–260 [1985].
5. The lack of comparability may be compounded by the Statement's peculiar recognition requirements. For example, plan assets are reported as offsets against the accumulated benefit obligations in the minimum liability calculation; whereas, they are not reported if the pension plan meets the Board's definition of overfunding.

6. For example, certain cognitive processing styles may lead to dissonance Gul [1984] and Festinger [1957]. Also, Wright [1980] identified subjective heuristics procedures which produce systematic biases.

7. See Baiman [1982] and Namazi [1985] for useful reviews of agency theory.

8. Interestingly, the Tax Reform Act of 1986 substantially changed the vesting rules for qualified pension plans. The changes may cause some firms to revise their plans or resort to different, perhaps more costly proxies. Under the new regulations, vesting must occur under either: (1) 100 percent vesting after five years of employment, or (2) pro rata vesting over a seven year period (Internal Revenue Code Section 411(a)).

9. Of course, one of the difficulties with all behavioral research is that the respondents' claims may not reflect their real motives and preferences. Nevertheless, important insights are possible. Further, as explained below, the quality of the anecdotal responses to the questionnaire supports the validity of the instrument.

10. At the same of sampling (Spring, 1987), the most recent data was for years ending in 1984. The tape provides the amounts of vested and unvested benefits (i.e., the liabilities) and the value of the plan's assets. The excess determines, according to the Board's viewpoint, whether the company is in a net liability or net asset position.

Since the date of the regulation is December 1985, the net liability or net asset position as of the end of 1984 appears to be a reasonable point of reference for classification. We assume that the 1984 initial condition is an important factor that helps drive the voluntary decision to adopt the regulation during the transition period. However, as noted by one of the reviewers, if companies frequently flip-flop from one category to the next, our taxonomy may be meaningless. We analyzed the data in response to the reviewer's observation. We found that only 5.5 percent of our sample would have been classified differently had 1983 been used. Hence, we conclude that the 1984 positions are reliable for classification.

11. See Appendix A for the instrument which was pretested by two of our colleagues for content and construct validity.

12. To test for nonresponse bias, late responses were compared statistically to the "on-time" responses. Response distributions were compared using the Kruskal-Wallis test. There were no significant differences for Questions 4, 6, 7, 8 and 10. The alpha levels for Questions 5 and 9 were 11.1 percent and 3.5 percent, respectively. Hence, we conclude that, if there is a response bias, it is limited primarily to Question 9.

13. In addition, four companies with only defined contribution plans were received but not included in the analysis of the data since the project applies to defined benefit plans only.

14. See Conover [1971] for the necessary data characteristics for the Kruskal-Wallis (K-W) test of equality of sample medians. When there are two samples, the K-W test and the Mann-Whitney U test are equivalent.

15. However, to conclude that firms are not concerned with the conceptual soundness is incorrect. Anecdotal comments question whether the Board was successful in achieving soundness.

16. One of the reviewers observed that this effect may be confounded with the size of the company, which is reserved for future study.

17. Some preliminary work has indicated that classification according to over or under-funding alone is insufficient to detect abnormal returns. Additional work on portfolios of the eight separate groups, however, seems warranted based on the findings in this study.

18. As one of the reviewer's pointed out, firm size and existence of bonus plans in certain industries are highly correlated. The theory which we have drawn upon suggests that both variables are important. Additional design is a matter beyond the scope of the present analysis.

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APPENDIX A:

Pension Questionnaire

1. What type of retirement plan does your company have (please circle).

Year Adopted

A. Defined Benefit Pension Plans
B. Defined Benefit and
Defined Contribution Pension Plans
C. Defined Contribution Pension Plans
D. Other (please identify)

2. Does you company maintain an executive compensation (bonus) plan for management which is based upon reported earnings?

Yes No

3. Did your company choose to adopt the provisions of SFAS 87 earlier than required?

Yes No

If yes, mark the relative importance of the following factors on the decision to adopt early (1 indicates very important and 5 indicates not important):

1. SFAS 87 is conceptually sound	1	2	3	4	5
2. SFAS 87 has minimal effect on the financial reports	1	2	3	4	5
3. The cost of implementation is insignificant	1	2	3	4	5
4. Other (please explain and rank)					

4. Based upon your experience with your company, do you think that SFAS 87 measures the true cost of pension contracts?

1. Strongly agree	4. Disagree
2. Agree	5. Strongly disagree
3. Neither agree nor disagree	6. Unable to answer

If your response to Statement 4 was 3, 4, or 5, please indicate why:
1. Pension assets are not recognized when the plan is overfunded
2. Pension liabilities are incorrectly measured
3. Other (please explain)

5. What is the expected effect of SFAS 87 on your company's *earnings*?

1. Increases signficantly	4. Decreases slightly
2. Increases slightly	5. Decreases significantly
3. No effect	6. Unable to answer

6. What is the expected effect of SFAS 87 on your company's *liabilities*?

1. Increases significantly	4. Decreases slightly
2. Increases slightly	5. Decreases significantly
3. No effect	6. Unable to answer

7. What is the expected effect of SFAS 87 on your company's *cash flow*?

1. Increases signficantly	4. Decreases slightly
2. Increases slightly	5. Decreases significantly
3. No effect	6. Unable to answer

8. With respect to the determination of pension expense, SFAS 87 significantly restricted your company's measurement alternatives.

1. Strongly agree	4. Disagree
2. Agree	5. Strongly disagree
3. Neither agree nor disagree	6. Unable to answer

9. The provisions in SFAS 87 will cause your company to offer less pension benefits than originally anticipated.

1. Strongly agree	4. Disagree
2. Agree	5. Strongly disagree
3. Neither agree nor disagree	6. Unable to answer

10. With respect to bond convenants, SFAS 87 has caused (or will cause) your company to incur significant renegotiation costs.

1. Strongly agree	4. Disagree
2. Agree	5. Strongly disagree
3. Neither agree nor disagree	6. Unable to answer

Please answer the following only if your response to statement 10 is 3, 4 or 5. Your response is due to:

1. Convenant restrictions are not affected
2. Convenant restrictions, although affected, are not violated
3. Convenant restrictions are violated but the lender did not force renegotiation because:
   A. Interest rates are lower
   B. Your company is a valued client
   C. Other (please explain)
4. Covenant restrictions determinations are based upon accounting standards in existence at date of contract and do not roll forward
5. Covenant restrictions already treated unfunded pension costs as debt
6. Renegotiation costs incurred are insignificant
7. Other (please explain)

APPENDIX B:

Kruskal-Wallis Significance Levels For Comparison of Various Sets

Group	*Group Comparisons*			*Question*	*Significance*
Liab/Asset	{1234}	vs	{5678}	5	0.8
				6	0.7
	1	vs	5	5	3.2
	2		6	6	0.5
	3		7	3.2	18.9
				5	6.5
				6	16.1
	4		8		ns
Exec. Comp.	{1256}	vs	{3478}	4	3.6
	1	vs	3	3.2	12.3
				6	11.8
	2		4		ns
	5		7	5	5.0
	6		8	4	10.7
				5	15.2
				7	10.5
Early Adopt	{1357}	vs	{2468}	5	5.7
				7	0.2

(*continued*)

APPENDIX B (*Continued*)

Kruskal-Wallis Significance Levels For Comparison of Various Sets

Group	*Group Comparisons*			*Question*	*Significance*
				9	14.2
				10	8.0
	1	vs	2	4	19.6
				6	1.9
				7	0.3
	3		4	5	15.7
				10	4.6
	5		6	5	1.0
				7	4.6
	7		8		ns

APPENDIX C:

Summary Distributions

Question	3.1	3.2	3.3	4	5	6	7	8	9	10
Response										
1	2.7	32.4	15.5	1.5	16.8	3.5	2.1	7.6	0.0	0.0
2	20.3	14.9	21.1	36.3	58.0	20.4	12.6	41.4	4.9	0.0
3	36.5	31.1	22.5	21.5	9.7	54.9	79.7	20.0	17.6	12.9
4	8.1	9.5	18.3	26.7	10.5	17.6	5.6	28.9	59.2	55.6
5	32.4	12.2	22.5	14.1	4.9	3.5	0.0	2.1	18.3	31.5
Cases	76*	76	73	137#	146	145	146	148	144	126

*The total possible number of cases for Questions 3.1–3.3 is 88.
#The total for Questions 4–10 is 152.

APPENDIX D:

Sample Letter

Date

Mr.

Industries

Chicago, IL 60606

Dear Mr. _____:

Professors Sami and Lipka are conducting research on the important question of the economic consequences of the pension changes mandated by SFAS 87 (Employers' Accounting for Pensions).

The Department of Accounting and I wish to express in advance, our appreciation for your cooperation in answering the short questionnaire enclosed (or forwarding it to the appropriate member of your staff). The questionnaire is a part of a comprehensive research project which is dependent upon your responses.

Naturally, your responses will remain confidential. Only statistical summaries of the findings will be published.

A self-addressed envelope is enclosed for your reply. Once again, thank you for your assistance in this important research project.

Sincerely,

Steve Fogg, Ph.D., CPA
Chairman, Department of Accounting

AN ANALYSIS OF THE DEVELOPMENT OF EDUCATION AND EXPERIENCE REQUIREMENTS FOR CPAs

Philip H. Siegel and John T. Rigsby

ABSTRACT

The changing educational and experience requirements needed to enter and remain in the accounting profession are examined in this paper. The requirements are reviewed at five different points in time (1915, 1934, 1951, 1965, and 1985) and important changes are discussed. The goal is to place some of the present developments concerning education and experience requirements in a broader perspective and to improve understanding of the changes taking place.

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Presently there is considerable interest in the education and experience requirements of the accounting profession. The members of the American Institute of Certified Public Accountants (AICPA) have recently voted to increase the educational requirement of all new members of accountancy contemplating adopting the 150-hour education requirement must grapple with whether and how to adjust the experience requirement for any such increase in educational requirements. Substantial conflict exists between those in the profession who believe that the CPA certification process should measure competency in the practice of public accounting, versus those who view certification as representing the achievement of a certain degree of knowledge and academic preparation. Contributing to the confusion in the profession on the education/experience trade-off is the fact that some states take a two-tier approach. Although they require only academic accomplishment to receive the CPA certificate, they do require experience to obtain the license to practice public accounting. Examining both past and present trends should help to clarify the educational and experience issues. In the interest of better understanding (and of recognizing) the many common goals of those with differing viewpoints, this paper will review the changes in state certification and licensing requirements from the turn of the century to the present.

I. DEVELOPMENT

The paper examines the educational and experience requirements for the years 1915, 1934, 1951, 1965, and 1985. Availability of data and keeping the number of years examined to a minimum were the main factors influencing our choice of the years. However, these particular years appear to be generally representative of changes in the entrance requirements to the accounting profession. Influences from the early formative years of the profession are reflected in the entrance requirements of 1915. Subsequent changes during the boom years of the 1920s and the beginning of the Great Depression are examined as of 1934. Entrance requirements are then examined in 1951, after the end of the Depression and World War II, and more recently in 1965 and 1985. These years cover the entire period from the legal establishment of the accounting profession to the present.

A. 1915—The Formative Years

As shown in Table 1, the first accountancy law was passed in the state of New York in 1896. Subsequently every state in the union passed CPA legislation legally establishing the public accounting profession. Each state has always had the authority to establish its own entrance standards and otherwise regulate the profession. As of 1915, the first year examined, 38 states had passed CPA legislation.

The education requirements in 1915 are shown in Table 2. Twenty-six states required a high school degree or its equivalent, one state specifically left the education requirement to the discretion of the state board, and

Table 1. Schedule of CPA Legislation by Year

State	*Year*	*State*	*Year*
1. New York	1896	28. Nevada	1913
2. Pennsylvania	1899	29. Delaware	1913
3. Maryland	1900	30. Maine	1913
4. California	1901	31. Wisconsin	1913
5. Washington	1903	32. Oregon	1913
6. Illinois	1903	33. Tennessee	1913
7. New Jersey	1904	34. South Carolina	1915
8. Michigan	1905	35. Kansas	1915
9. Florida	1905	36. Texas	1915
10. Rhode Island	1906	37. Iowa	1915
11. Utah	1097	38. Arkansas	1915
12. Colorado	1907	39. Kentucky	1916
13. Connecticut	1907	40. Oklahoma	1917
14. Ohio	1908	41. South Dakota	1917
15. Louisiana	1908	42. Alabama	1919
16. Georgia	1908	43. Arizona	1919
17. Montana	1909	44. Idaho	1919
18. Nebraska	1909	45. Mississippi	1920
19. Minnesota	1909	46. Indiana	1921
20. Massachusetts	1909	47. New Hampshire	1921
21. Missouri	1909	48. New Mexico	1921
22. Virginia	1910	49. District of Columbia	1923
23. Wyoming	1911	50. Hawaii	1923
24. West Virginia	1911	51. Puerto Rico	1927
25. Vermont	1912	52. Alaska	1937
26. North Carolina	1913	53. Virgin Islands	1942
27. North Dakota	1913	54. Guam	1967

Source: "State Public Accounting Laws," *The Accounting Law Reporter* (June 1968), p. 40.

Table 2. Summary of Educational Requirements

Level	Educ. Index	Number of States 1915#	1934^	1951*	1965+	1985@
College:						
5 Years	6	0	0	0	0	2
4 Years	5	0	0	2	12	39
2 Years	3	0	0	1	13	6
1 Year	2	0	0	1	0	0
Some	2	0	0	2	0	0
High School or Equivalent	1	26	49	45	28	7
Discretion of Board	1	1	0	0	0	0
No Requirement	0	11	2	1	0	0
TOTAL STATES		38	51	52	53	54
EDUCATION INDEX (0 To 6 Scale)		.71	.96	1.23	2.40	4.29

#American Association of Public Accountants, *Report of Committee on Education* (AAPA, 1915), pp. xxii–xxvii.
^New York State Society of Certified Public Accountants, *Final Report of the Committee on Legislative Survey* (NYSSCPA, 1935), pp. 14–19.
*Lydus Henry Buss, *CPA Examination Requirements* (Urbana, IL.: American Accounting Association, 1951).
+Robert P. Behling, *CPA Requirements* (Wisconsin State University-Whitewater, 1965).
@AICPA/NASBA, *Digest of State Accountancy Laws and State Board Regulations, 1985* (New York: American Institute of Certified Public Accountants, Inc./The National Association of State Boards of Accountancy, 1985), pp. 70–73.

11 states had no education requirement. An educational index is used in Table 2 as a rough gauge to measure the *relative* progress in educational requirements based on a 0 to 6 scale. The index should not be used to measure the absolute educational requirements since it may underestimate or overestimate the actual educational requirements. For example, in 1915 when the educational index was calculated at .71, which is below a high school education, the actual educational level may have been lower as a result of the allowance by some states for the substitution of experience for education. The reverse situation is more likely in the later years because of the increase in educational level among new candidates entering the profession. Studies in both 1925 and in 1955 [Winkler, 1925; Perry, 1955] indicated a substantially higher educational level among new candidates than the minimum legislative requirements.

During these formative years as the new CPA laws were passed by the states, the legislatures recognized that it was unrealistic to require a high school education since most people before World War I did not have this

education [Previts and Merino, 1979]. There also was a strong populist view among state legislatures opposing any formal educational requirements as tending to restrict entry into the profession. Instead, legislatures usually required a "high school diploma or its equivalent" or there were no educational requirements. In the states requiring a high school diploma, enforcement and interpretation was generally left to each state's examining board. Though some states did strictly enforce the educational requirement, many states during the earliest period did not [Sterrett, 1905], resulting in still further differences among the states' educational requirements. To some extent these initial differences are probably accounted for by differences in educational facilities available and the types of services performed [Commission, 1956], since industrial states would have greater demands and more resources to meet those needs than less industrialized states.

The experience requirements for issuance of a CPA certificate in 1915 are shown in Table 3. One state, New York, required 5 years, 16 states required 3 years, 5 states required 2 years, 4 states required 1 year, 1 state left the experience requirement to the discretion of the state board, and 11

Table 3. Summary of Experience Requirements for Issuance of a CPA Certificate

Years of Experience Required	*Number of States*				
	1915#	*1934^*	*1951**	*1965+*	*1985@*
6	0	0	2	3	4
5	1	3	6	2	0
4	0	3	8	12	5
3	16	25	19	18	7
2	5	14	12	11	29
1	4	2	2	4	6
Discretion of Board	1	0	0	0	0
No Requirement	11	4	3	3	3
Total States	38	51	52	53	54
Mean Years of Experience	1.79	2.59	3.02	2.94	2.39

#American Association of Public Accountants, *Report of Committee on Education* (AAPA, 1915), pp. xxii–xxvii.
^New York State Society of Certified Public Accountants, *Final Report of the Committee on Legislative Survey* (NYSSCPA, 1935), pp. 14–19.
*Lydus Henry Buss, *CPA Examination Requirements* (Urbana, IL.: American Accounting Association, 1951).
+Robert P. Behling, *CPA Requirements* (Wisconsin State University-Whitewater, 1965).
@AICPA/NASBA, *Digest of State Accountancy Laws and State Board Regulations, 1985* (New York: American Institute of Certified Public Accountants, Inc./The National Association of State Boards of Accountancy, 1985), pp. 70–73.

states did not have an experience requirement. Since the profession during this period generally was not able to increase education requirements, experience tended to be emphasized to a greater extent than education in qualifying individuals to enter the accounting profession. Previts and Merino state that "the recommended practical experience requirement for CPAs was consistently lengthened by both state and national organizations" prior to World War I [1979, pp. 155–156].

The mean number of years of experience required to enter the accounting profession in 1915, however, was only 1.79 years. Though most states with an experience requirement required either 2 or 3 years of experience, a large number of states (11 out of 38) did not require any experience to enter the profession. The lack of an experience requirement in so many states at this time is somewhat surprising given its importance in establishing the qualifications of an individual to enter the accounting profession. The failure to require experience (or education) may be explained to a certain extent by opposition to the legal establishment of the public accounting profession. During this period many opponents of CPA legislation believed that the purpose of such legislation was to exclude other accountants from working in the field and to create a monopoly [Montgomery, 1926]. Also noncertified accountants placed pressure on legislatures to allow entry with minimal qualifications, e.g., through 'waiver certificates' [Carey, 1969]. As a result, the best that proponents of CPA legislation could do in many cases was to support as sound legislation as possible. Then, once the profession became better established, more realistic entrance requirements could be implemented. In later years the number of states without an experience requirement substantially declined (see Table 3).

B. 1934—Further Progress

As shown in Table 1, 51 jurisdictions had passed CPA legislation by 1934. Table 2 shows that 49 jurisdictions had a high school or equivalent requirement, with just 2 states not having an educational requirement. California was the only state specifically requiring high school graduation. The majority of states required either a high school education or equivalent (28) or a 'four-year' high school education or equivalent (18), with several of these states (e.g., Tennessee, Alabama, and Pennsylvania) allowing the substitution of varying amounts of experience for education. Texas required 1 year of study and practice in accounting and was included in this category only because some of the states previously

mentioned also allowed experience as a substitute. New Jersey specified a certificate of education from the state. Only Georgia and Washington had no educational requirement. Almost all of the states had moved toward the flexible standard of requiring a high school diploma or its equivalent and as a result the educational index increased to .96.

In 1934 three jurisdictions (the District of Columbia, Iowa, and Maryland) had begun the movement toward higher education requirements by requiring some college of CPA candidates. However, experience could be substituted for the additional education requirements in all 3 states. Therefore, to encourage the additional education, 2 of the jurisdictions, the District of Columbia and Iowa, reduced their experience requirement for candidates with some college education. The District of Columbia allowed the reduction of the experience requirement from 3 years to 1 year with graduation from a school of accountancy, while Iowa allowed the reduction of its experience requirement from 3 years to 1 year if the candidate had 3 years of college.

The mean number of years of experience required jumped substantially from 1915 to 1934, going from 1.79 to 2.59 years (Table 3). There was a definite shift toward requiring greater practical experience to enter the accounting profession. The experience requirement is further adjusted in Table 4 for those states that allowed a reduction for some college. This adjustment did not have a substantial effect on the average number of years required, since it only reduced the mean from 2.59 to 2.51 years of experience.

The accounting profession during the 1920s and 1930s generally did

Table 4. Revised Experience Requirements Adjusting for College Graduation, the Two-tier Approach, and Graduate Education

	Average Experience Required (Years)				
	1915	*1934*	*1951*	*1965*	*1985*
1. Using Lowest Education Required	1.79	2.59	3.02	2.94	2.39
2. Adjusting for College Graduation		2.51	2.02	1.98	1.76
3. Adjusting for College Graduation and the Two-Tier Approach			1.96	1.92	1.22
4. Adjusting for Graduate Education				1.87	1.30

not use legislation as a means to increase the educational requirements to enter the profession. Though there was some support in the profession for a legislative solution, new legislation could have resulted in the loss of the progress that had been made to date [Commission, 1956]. Legislatures continued to resist placing restrictions on entry into the accounting profession, and organizations of noncertified accountants also influenced the state legislatures to view their members as members of the profession. Only one state during this period, New York, passed a law requiring that every candidate sitting for the CPA examination have a college degree and, though it was passed in 1929, it did not go into effect until January 1, 1938. Therefore, Robert Montgomery, a leader in the accounting profession, recommended that the profession direct its efforts toward greater coordination between the state and national bodies [Montgomery, 1926].

As an alternative to legislative action, the American Institute of Accountants (AIA) sought through its own powers to increase the educational level of candidates. In 1916, the AIA passed a rule requiring all new members of the Institute to have 5 years of experience and to pass an examination prepared by the Institute. By 1937, 43 states had adopted the Uniform CPA examination as their own [AIA, 1938]. Because the Uniform CPA examination is basically an academic examination, many CPA candidates completed additional education in order to prepare themselves to pass it. A study in 1925 by the American Association of University Instructors found that of the practicing accountants who had passed the CPA examination more than 60 percent either were college graduates or had additional education prior to taking the examination [Winkler, 1925]. Thus, the accounting profession was able to effectively increase the educational level of candidates without having to go through the legislative process.

An important result of the Uniform CPA examination was the shift in emphasis from experience to education as a requirement to enter the public accounting profession. This effect is shown in the amount of experience auditors acquired before taking the examination. Whereas prior to 1915 many of the candidates had four to five times the required years of experience before they took the CPA examination, subsequently the majority of candidates tended to take the examination as soon as possible and with the minimum of experience [International Congress of Accounting, 1930]. Thus education replaced experience as the main criterion for entry into the profession, though experience remained an important requirement.

C. 1951—Post World War II

Among the 6 states in Table 2 requiring college in 1951, only New York and New Jersey required the completion of a college degree program in accounting. California required 2 years of college, while Illinois required 1 year (30 semester hours) in accounting and business subjects. Louisiana and Mississippi required a number of accounting and business courses in addition to a high school education. Among the 45 states classified as still requiring a high school diploma or equivalent, Oregon and Maryland did require some college but allowed the substitution of experience for the additional education. Of the remaining 43 states, 1 required a high school diploma, 32 required a high school diploma or equivalent, and 10 states required a high school diploma or equivalent with the substitution of either experience or passing an examination allowed. Pennsylvania was the only state having no educational requirement [Buss, 1951].

Though the educational index increased in 1951 to 1.23, which is above a high school education, the educational requirements remained fairly low. The majority of states still only required a high school diploma and even among the states that had higher educational requirements there remained some substitution of experience for education. Little progress had been made in legislatively increasing the educational requirements. However, many CPA candidates who passed the examination continued to have significantly more education than the minimum required by law. One author notes that 75 percent of the CPA candidates taking the examination at that time were college graduates [Perry, 1955].

By 1951, the experience requirements increased even further in a number of states. According to Table 3 the mean experience required increased from 2.59 in 1934 to 3.02 years in 1951. Thus the experience requirement increased in spite of the shift in emphasis away from experience toward education. This shift reflects the trend among the states to use higher experience requirements as an encouragement for additional education.

The experience requirement in Table 3 is based upon the lowest education requirement. By 1951, 26 states allowed the reduction of the experience requirement for candidates with additional education. Table 4 adjusts for the effect of college graduation with an accounting concentration. The result is a decrease in the mean experience required from 3.02 to 2.02 years of experience or a 33 percent decrease. A comparison of the figures between 1934 and 1951 indicates that the mean experience required of

those with the minimum education had increased while the experience requirements of those with college graduation had decreased so that now there was a year's difference between the two.

An important move by the AICPA during the 1950s was to promote a public legislative agenda to increase the minimum education required of CPA candidates to a four-year degree. Previously the profession had encouraged additional education mainly by trading off experience for education as previously shown. In the next decade the push by the profession to legislatively increase the educational requirements, often called the 'university plan,' began in earnest. One of the first steps was the creation by the AICPA in 1952 of an independent Commission on Standards of Education and Experience for CPAs which issued a report in 1956 recommending that all new entrants to the accounting profession be college graduates [Commission, 1956], and the substitution of an apprenticeship program for the experience requirement. Certification would basically mean that the candidates met the *educational requirements* needed to enter the accounting profession. Many members of the profession, however, disagreed with this recommendation. As a result, a committee appointed by the AICPA to study the Commission's report rejected the elimination of the experience requirement. The committee members recommended that the CPA certificate should indicate "demonstrated competency for the practice of public accounting" [Council of AICPA, 1959, p. 66], and that the baccalaureate degree should be supplemented with at least two years of experience or one year plus a graduate degree in accounting. The conflict about what the CPA certificate should represent was an important problem in the 1950s and remains an important and ongoing one today.

In 1951, the only state which had adopted an approach equating certification with meeting the educational requirements to enter the accounting profession was Illinois. Illinois used a two-tier method with no experience required to receive the CPA certificate and three years of experience required in order to receive a permit to practice. This approach effectively separated the issuing of the CPA certificate from the recognition of competency in the practice of public accounting. In effect, receiving the CPA certificate was recognition of educational achievement and receiving the permit to practice was recognition of competency in the profession. All of the other states required *both* experience and education to receive the CPA certificate, except for Montana and Nebraska which only required education and Pennsylvania which only required experience. This fact indicates that most states continued to view the certification process as one repre-

senting competency in the public accounting profession. Since only one state was using the two-tier approach in 1951, adjusting the experience requirement in Table 4 for its effect only reduced the mean experience required from 2.02 to 1.96 years.

D. 1965—The University Plan

For the 1965 analysis the Virgin Islands had been added to the list of jurisdictions. The education requirements are shown in Table 2. Twelve states now had the 4-year college degree requirement, 13 states required 2 years of college, and 28 still retained a high school diploma or its equivalent educational requirement. There had been a substantial increase in the education required to enter the accounting profession as shown in the increase from 1.23 to 2.40 in the educational index, although a number of states still had the high school requirement.

The overall experience requirements remained about the same, as Table 3 indicates. The mean number of years of experience in 1965 decreased only slightly from 3.02 to 2.94, even though a number of states had adopted higher educational standards with lower experience requirements. Presumably some states requiring only the high school diploma or equivalent had increased their experience requirements. The states retaining lower educational requirements were examined for evidence of a shift in experience requirements, and 7 of the 12 states requiring 4 years of experience in 1965 had required less experience in 1951.

The mean experience requirement of 2.94 calculated for 1965 assumes only the lowest education requirement is met. Table 4 adjusts for college graduation with a concentration in accounting. The mean experience required drops to only 1.98 years. Comparing the mean requirement of 1.98 in 1965 with the 2.02 requirement in 1951, overall there has been hardly any reduction in the experience requirements for college graduates. A further analysis of states which had adopted the two-tier approach indicates that Illinois remained the only state to have adopted it. Mean experience decreased only marginally from 1.98 to 1.92 years of experience.

Graduate education became another factor in 1965, and is also considered in Table 4. Six states (Florida, New York, North Carolina, Tennessee, Texas, and Utah) allowed credit against the experience requirement for graduate education. New York reduced its experience requirement to two years from three years; North Carolina, Tennessee, Texas and Utah reduced their experience requirements from two years to

one year; and Florida reduced its experience requirement to zero with the fifth year of graduate education. The net effect on mean experience was small, only reducing the mean experience requirement from 1.92 to 1.87 years. The shift to encouraging graduate education indicates that the university plan had achieved its goal to a certain extent and several states had moved on to the next phase, encouraging even further education.

D. 1985—150 Hour Requirement

As shown in Table 1, the only jurisdiction added since 1965 is Guam. According to Table 2, Florida and Hawaii had increased the education requirement to 150 hours, 39 states had the 4-year degree requirement, 6 states required 2 years of college, and 7 states still had the high school or equivalency education requirement on the books. The vast majority of the jurisdictions (41 out of 54) now required at least a 4-year college degree and there had been substantial improvement in the educational index (from 2.40 to 4.29). However, there had been very little development to the next stage requiring graduate hours.

As illustrated in Table 3, the majority of states in 1985 required two years or less experience. The only states that required more than three years of experience were those states with a two year or less educational requirement. With the increase in the number of states requiring a college degree, the mean experience needed using the lowest educational requirements dropped from 2.94 in 1965 to 2.39 in 1985.

Adjusting the experience requirements in Table 4 for college graduation resulted in a drop in the experience required from 2.39 to 1.76 years. Additional details of the adjustments to the experience requirements in 1985 are presented in Table 5. Three jurisdictions, i.e., North Dakota, Oklahoma, and Puerto Rico, dropped the experience requirement altogether for candidates with a baccalaureate degree in accounting. As a result, the number of states not requiring experience for the CPA certificate increased from three to six.

Table 5 also makes an adjustment to the experience requirement for states using the two-tier approach. Since 1965 the number of states using this method had dramatically increased from 1 to 16. As shown by the adjustment from column 1 to column 2 in Table 5, the number of states not requiring any experience to receive the CPA certificate went from 6 to 22 states (and correspondingly reduced the number of jurisdictions included in the 1, 2, and 3 years of experience categories). The result was a further reduction in the experience requirement from 1.76 years to 1.22 years.

Table 5. Revised Experience Requirements Adjusting for College Graduation, the Two-tier Approach, and Graduate Education–1985

	Number of States		
Years of Experience Required	*1. With College Graduation (Acct. Majors)*	*2. Adjusting Column 1 for the Two Tier Approach*	*3. Adjusting Column 1 for Graduate Education*
6	0	0	0
5	0	0	0
4	0	0	0
3	5	4	2
2	37	26	19
1	6	2	26
No Requirement	6	22	7
Total States	54	54	54
Mean Years of Experience	1.76	1.22	1.30

The large increase in the number of states using the two-tier approach indicates an important change in the perception of what the CPA certificate represented; the change is *not related* to the trade-off of experience for additional education, as the previous decreases in experience requirements generally were. Instead, there was a change in these states from perceiving the CPA certificate as representing competency in the practice of public accounting to viewing it as the attainment of a certain level of knowledge and academic preparation. The difference in approach by the states was a *practical response* to the great numbers of people taking the CPA examination and the recognition that a large percentage of them probably would either never practice public accounting or do so only for a short period of time. Many candidates were taking the CPA examination because the prestige of passing it would be helpful to the advancement of their careers in industry or in the educational field. The states began adopting the two-tier method in recognition of the usefulness of certification to these individuals through the separation of the granting of the CPA certificate from the issuance of a permit to practice public accounting. The approach recognized the CPA certificate as a general utility certificate which indicates a certain degree of academic preparation and which is useful in a variety of areas in accounting besides public practice.

The reduction of the experience requirements for candidates with graduate education is also examined in Table 5. The adjustment is made from column 1 directly to column 3 and reflects the reduction in the experience

requirement for those with a graduate degree. The mean experience required is reduced from 1.76 to 1.30 years. This reduction is about the same as for the two-tier approach. However, the major difference is that just one additional state, Colorado, eliminated the experience requirement. Only seven states issued the permit to practice public accounting in 1985 without experience. The majority of states still required at least a year of experience for those candidates expecting to practice public accounting *even with* graduate education. The dramatic difference in the number of states eliminating the experience requirement between columns 2 and 3 in Table 5 indicates that competency remains an important factor in the CPA certification process.

Next to be considered is the effect adopting the 150-hour educational standard has had on the amount of the experience requirement. Only two states had passed the 150-hour requirement in 1985, Florida and Hawaii. Florida had eliminated the experience requirement altogether while Hawaii had retained a two-year experience requirement. Florida made this adjustment in order to pass the 150-hour legislation. Unlike the two-tier approach which recognizes the use of the CPA as a general utility certificate, the elimination of the experience requirement by Florida was a necessary political action to increase the education requirement. The need for graduate education was seen as so important that the state was willing to give up the experience requirement altogether. Hawaii, however, did not have to make the same political compromise and retained an experience requirement.

E. CPE Requirements

A discussion of legislation dealing with educational requirements for CPAs would not be complete without reviewing the development of Continuing Professional Education (CPE) requirements for public accountants. Again discussing the development of requirements chronologically, there were no CPE requirements for public accountants in 1915, 1934, and 1951, while the courses offered by the AICPA in 1965 were voluntary. Iowa's State Board of Accountancy was the first to require CPE in 1969 as part of a continuing requirement to maintain certification [Schlosser, Lee, and Rabio, 1987]. Table 6 shows the CPE requirements of the states in 1985. These requirements are generally based upon both state law and board regulations, though some states may only have one or the other. Forty-three states had CPE requirements, 2 states (the District of Columbia and Illinois) had passed CPE legislation but their CPE re-

Table 6. Continuing Professional Education Requirements–1985

CPE Hours Required	*Number of States*
40 Hours/Year 80 Hours/2 Years 120 Hours/3 Years . . .	33
64 Hours/2 Years. . . .	1
30 Hours/Year 60 Hours/2 Years 90 Hours/3 Years. . . .	4
Not more than 24 Hours/Year. . . .	1
20 Hours/Year. . . .	3
12 Hours/Year. . . .	1
Passed legislation, but no CPE requirements yet. . . .	2
No Requirements. . . .	9
	54

Source: AICPA/NASBA, *Digest of State Accountancy Laws and State Board Regulations, 1985*, New York: American Institute of Certified Public Accountants, Inc./The National Association of State Boards of Accountancy, 1985, pp. 84–93.

quirements were not yet available, and 9 states did not have CPE legislation. Thirty-three of the 43 states with CPE requirements had a 40 per year requirement, making it by far the most popular. The remaining 10 states varied in their CPE requirements from 12 hours per year to 32, with 30 hours being the general alternative to 40 hours per year. Texas required 20 hours in 1985, but changed to 40 hours thereafter, indicating further support for the 40 hour per year CPE requirement. Illinois has since begun requiring 80 hours of CPE every 2 years, while the District of Columbia's requirements are still not available [AICPA/NASBA, 1988]. By 1988, 48 jurisdictions had adopted CPE requirements.

The rapid acceptance and passage of CPE legislation has been a real success story for the profession. As with the original CPA legislation creating the public accounting profession, there was general recognition of the need for such legislation. Unlike the original legislation, however, little opposition developed. As a result CPE laws swept the country. CPE legislation is based on the broad recognition that accountants must continue the education process once they are certified in order to maintain their competency to practice public accounting in our complex and rapidly changing world.

II. CONCLUSION AND OBSERVATIONS

The following discussion of conclusions and observations resulting from the study is presented in two parts. The first section examines the direction which the educational requirements in the profession appear to be going, while the second section discussed developing issues dealing with the experience requirement.

A. Education

As Table 2 shows, there has been a tremendous increase in the minimum educational requirements and most of it has taken place in the last two periods, from 1951 to 1965 and from 1965 to 1985. The accounting profession has been very successful in increasing its minimum educational requirements once it combined *greater coordination* among the accounting organizations with a *legislative agenda* in the 1950s, even though a state-by-state approach has had to be used because of the legal structure of the public accounting profession. The length of time required as well as the many differences among the states' educational requirements indicate that increasing the educational standards of the profession is a slow and difficult process. Nonetheless, the accounting profession appears to be committed to the endeavor.

One consequence of the difficulty of changing the educational requirements in the profession has been that the educational requirements of state boards of accountancy tend to follow the actual educational level among the candidates taking the CPA examination. This relationship, however, is also indicative of a third element of the profession's overall plan to improve the educational requirement for entry into the profession. In addition to greater coordination and a legislative agenda, the third critical element of the continually increasing educational requirements is the profession's ability to directly influence the educational level of entrants to the desired level through its own *internal actions*. Since the legal education requirements *do* tend to follow the educational level already achieved in the profession, such internal actions by the profession provide greater assurance of the eventual acceptance of the higher educational requirements.

The passage by the AICPA in January 1988 of a requirement that all new members after the year 2000 must meet the 150-hour educational requirement is an example of this type of internal action. It is reminiscent

of a similar internal action by the AIA in 1916 to require all new members to have five years of experience and to pass an examination prepared by the Institute. While the real power to determine the entrance requirements to the profession rests with the state boards of accountancy based upon the state laws establishing the profession, the AICPA as the lead organization in the profession has been able to exert significant influence over the educational level of entrants to the profession and consequently on the educational requirements of state boards.

As a result of the AICPA's action, educational institutions across the country are gearing up to meet the new standard [Mills, 1987]. For example, four-year institutions with the resources, such as Stetson University in Florida, have established five-year programs. Four-year institutions without the resources to set up a graduate program consider instead the possibility of setting up feeder relationships with universities that do have such programs. The concern of institutions with good four-year programs is that if they do not offer either a graduate program or a transfer relationship, then many of the *better* students in the future will prefer schools which do offer these choices. Since good students are the essence of good programs, the need to plan ahead appears essential to these institutions. Schools offering the fifth year are also expected to come under greater pressure in competing for the better students. However, the pressure in competing for good students for these schools is expected to come mainly from the need to achieve and maintain an accredited status or to become a professional school of accountancy. The accounting programs of a number of schools across the country are now being accredited at both the graduate and undergraduate levels through the American Assembly of Collegiate Schools of Business (AACSB). In addition, professional schools of accountancy are being promoted by the Federation of Schools of Accountancy (FSA).

Accepting a long-term and piecemeal approach, the accounting profession appears again to be positioning itself so that it does not have to totally depend on the political vagaries of the legislative process among the states. Through the internal actions of the AICPA and the combined efforts of accounting organizations (e.g., the AICPA, AAA, FSA, and others) and educational institutions, the educational level among candidates is likely to rise dramatically over the next decade whether or not the 150-hour requirement legislatively moves across the nation as rapidly as many desire. A rising educational level positively affects the movement to the 150-hour educational standard.

Other factors positively affecting the movement to the 150-hour educa-

tional standard are the expansion of services offered by the public accounting profession and the growth of accounting specialties. The profession has responded to the increasing integration of information processing throughout society by adding a variety of new services and developing a new vision of the future [see Previts, *The Scope of CPA Services,* 1985]. Acknowledging the growth of these areas, a recent recommendation of Mednick, a member of the AICPA's Committee on Governance and Structure, was that the AICPA consider recognizing various areas of specialization and also broadening the definition of experience to consider the new services that are being offered [Mednick, 1988]. The expanding scope of the profession offers additional opportunities for students: one of the Bedford report [1986] recommendations was that the fifth year should provide students the chance to specialize in an area of accounting. The increased emphasis on specialization can accelerate the general acceptance of 150-hour programs by improving the benefits for everyone concerned. Specialization benefits students, since they become more attractive to firms and are able to make significant contributions substantially faster. Schools with specialized programs are more likely to attract the better students, who may be interested in areas outside the attest function. Firms are also benefited, since they have a larger pool of qualified personnel from which to draw. Thus, the greater scope and complexity of the profession should increasingly provide incentive for the adoption of the 150-hour requirements. Some of the specialized masters degrees that may be developed are in the areas of (1) Taxation, (2) EDP Auditing, (3) Management Advisory Services, (4) Personal Financial Planning, and (5) Governmental Accounting [Sutton, 1988].

Another interesting consideration is that the upward movement in the educational standard for the accounting profession is not likely to stop with the 150-hour educational standard. Already there is serious discussion among some forward-looking members of the accounting profession in both academic and professional circles of the development of an accountancy doctorate (A.D.) after the year 2000. This degree would be much like the M.D. and the J.D. for the physician and the attorney in that it would be the ultimate degree for those both in academe and in practice. Such a degree would be consistent with the upgrading of the profession to a LEARNED one where both the practitioner and the academic have the same formal education at the graduate level. Currently the career academic accountant generally receives much more formal education than most practitioners. The implication at least is that the same intellectual rigor has not fully been applied to screen all practitioners in accounting as in

those professions which do have equivalent educational requirements at the highest level.

B. Experience

One of the most interesting findings of the study is related to the two-tier approach by the states and the adjustments for graduate education shown in Table 5. Many states are apparently viewing the CPA as a general utility certificate indicating the attainment of a certain degree of knowledge of accounting and are issuing CPA certificates upon the passage of the CPA examination. Among the 22 jurisdictions that had eliminated the experience requirement to receive the CPA certificate in 1985, 16 of them used the two-tier approach. However, even assuming a graduate education, only 7 jurisdictions eliminated the experience requirement for those receiving the license to practice public accounting. The majority of states apparently still view the CPA certificate as representing audit competency. Such competency, however, is only required of those who intend to practice public accounting. Since 1985, three additional states (Delaware, Tennessee, and Virginia) have passed two-tier legislation, increasing the number of states with such legislation from 16 to 19 [AICPA/NASBA, 1988]. This trend suggests that other states may pass legislation separating the issuance of the CPA certificate from the permit to practice public accounting.

There is concern in the profession over the use of the two-tier method. The purpose of this approach is to meet the needs of two different classes of accountants, i.e., those who want to enter the practice of public accounting and those who use the CPA certificate only for advancement in their careers. The purpose of the CPA examination, however, is that of a licensure examination regulating entry into the public accounting profession and assuring that successful candidates have met the minimum standards of education and judgment needed in providing auditing services [Higley and Baker, 1987]. Its purpose is *not* to be a general qualifying examination for all accountants. As a result, some in the profession believe that the examination should be shifted back to more of a "licensure" examination for those actually entering the public accounting profession. However, any solution should recognize that the basic problem being addressed by the two-tier method concerns certification of varying *classes* of accountants. Otherwise only symptoms are being dealt with. The most realistic long-term solution is the creation of multiple certifica-

tions, which ties in very well with the expected increase in specialization during the next decade.

A second area of interest is whether or not the profession should retain the experience requirement as the move to the 150-hour educational standard is made. An examination of the 4 states that have passed the 150-hour requirement to date (Florida, Hawaii, Utah, and Tennessee) indicates that 3 of the 4 states continue to have an experience requirement even with the additional education [AICPA/NASBA, 1988]. Florida remains the only state with the 150-hour standard to have eliminated the experience requirement. The finding is most interesting and indicates that even with the additional education many states prefer to retain an experience requirement.

The National Association of State Boards of Accountancy (NASBA) has shown support for the experience requirement. In 1984, when the AICPA and NASBA jointly issued a Model Accountancy Bill, though both organizations supported the 150-hour educational requirement they differed on the experience requirement. The AICPA would eliminate it, while NASBA supported retaining a one-year experience requirement. As a result, the experience requirement was made optional when the model bill was published [Heaston, 1984]. Some of the principal arguments that have been advanced supporting the experience requirement are that: (1) advanced education is not a sufficient substitute for experience if auditors are to be prepared, (2) the growth in complexity in the profession only increases the need for an experience requirement, and (3) specializations in other areas recognize the need for experience in learning the practical applications of the art (Barley and Freidman, 1982]. The usefulness of experience in preparing auditors for the public accounting profession appears to be better recognized by the profession generally than in the AICPA.

The AICPA lack of support for an experience requirement dates back to the Commission's report in 1956 and has generally been based upon the difficulty of establishing a uniform standard for experience. More recently a special Committee on Governance and Structure was appointed by the AICPA [*Journal of Accountancy,* March 1988, p. 4] and, since one of its responsibilities is to make recommendations on licensing, it has investigated differences in experience requirements. Two specific problems were mentioned in discussions with members of the task force. First, since different states require different types of experience, the experience that is acceptable in one state may not always be acceptable in another. This is especially a problem with larger firms with many trans-

fers of personnel between states. A second problem is the requirement of specific accounting or auditing experience in a number of states. Because of the rapid growth of the profession in areas other than the attest function, many individuals in the profession are hired directly into an area such as tax or systems. Once these individuals have passed the CPA examination, firms are presently being forced to temporarily transfer them over to auditing in order to provide the specific accounting and audit experience required under state regulations. Another example is that of a smaller firm which does mainly tax and compilation work and which periodically must convert a compilation to an audit in order to provide staff with the needed experience.

These inconveniences to public accounting firms indicate the possibility that the experience requirements of the states may not have kept up with the expansion of the profession. A broader definition of experience could be more appropriate in today's environment. The article by Robert Mednick, one of the members of the AICPA's task force on governance, suggests the possibility of a compromise in dealing with the ground swell of strong support in the profession for an experience requirement. The general standards which he recommends are: (1) 150 semester hours, (2) 'broadly defined' experience in a firm registered to practice public accounting, (3) and adherence to a uniform code of professional conduct [Mednick, 1988]. Many of the problems that public accounting firms have with the experience requirement could be better dealt with if the acceptable experience were more *broadly* defined in recognition of the rapid change of the accounting profession toward a broader range of services.

The compromise approach should be accepted with a grain of salt, however, because the AICPA has worked with NASBA and other accounting organizations in attempting to develop greater reciprocity, uniformity, and enforcement among the states for many years [see *Journal of Accountancy*, March 1986, p. 53]. The attempt has not been very successful and the lack of progress in developing greater uniformity of entry standards tends to reinforce the AICPA's perception of the necessity to eliminate the experience requirement as the profession moves to the 150-hour educational standard.

The third and last area to be discussed is the trend in the public accounting profession for greater national coordination among the various accounting organizations, e.g., the AICPA and NASBA. The trend is expected to continue and become even more important.

To a large extent the public accounting profession is being regulated on

a national scale by such federal agencies as the Securities and Exchange Commission (SEC) and the Federal Trade Commission (FTC). The move to the 150-hour educational standard is at least partially in response to the demands of the SEC and of Congress to improve the quality of services provided the public. However, the demands of these agencies may be conflicting. The FTC might view the same increases in the educational and experience requirements more as an attempt to create entry barriers to the profession than as a response to improve the profession's ability to deliver quality service. For example, an empirical study by David Young [1986] suggested that accounting licensure was not related to service quality and also resulted in many small businesses incurring higher costs for accounting services. As a result of the increased regulatory interest in recent years, Higley and Baker [1987] analyzed the educational and experience requirement in the accounting profession as compared to architects, attorneys, dentists, nurses, and physicians. The results indicate that accounting's requirements in both areas are among the lowest of the major professions. However, scrutiny by regulatory agencies and others is likely to continue for many years, and increases the need for accounting organizations such as the AICPA and NASBA to coordinate and consider the implications and possible impacts of their actions on a national scale. A possible effect in the next decade is greater consultation and coordination of the entry standards at the *national* level.

An important factor encouraging this development is the potential conflict of state control with federal regulation of the profession. A recent study of state control of the profession found that when the CPA examination was graded by the individual states (i.e., California and Illinois from, respectively, 1922 to 1945 and 1920 and 1956) the examination's failure rate was affected by downturns in the economy, whereas there was no statistical relationship after the states adopted the AICPA's Advisory Grading Service [Young, 1988]. These results indicate that barriers to entry are more likely to be created by individual states than by a national grading service. This improvement has substantially increased the fairness with which the examination was administered.

As an example along these lines, discussions with two members of the AICPA's Committee on Governance and Structure indicate that the committee recently began considering a step similar to the move to a national Advisory Grading Service. With agreement from the states, the AICPA would set up a qualification service to determine uniform national entry requirements to take the CPA examination. If the state boards of accountancy accept such an approach and adopt it, a long-term goal of the

profession to develop greater uniformity in both the educational and experience requirements in the profession may finally be achieved.

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REGULATION AND RESPONSE: THE CASE OF LEASE DISCLOSURE IN THE U.K.

Neil Garrod

ABSTRACT

Regulation is a complex and multifaceted concept. It is incumbent upon regulators, however, to support the imposition of rules, additional to 'natural laws,' deemed necessary to ensure the smooth and efficient operation of organizations or functions being regulated.

Using the leasing standard in the U.K., [SSAP21], as a vehicle, two important regulatory questions are addressed in this paper:

1. Does the regulation bring new, previously unavailable information to the investment market?
2. Is management behavior affected by the new regulation?

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Both of these are very broad questions and are proxied empirically in this research by (1) a market price reaction test, and (2) an evaluation of changes in management decisions regarding financial leverage.

The price test indicates that the new disclosure, following enactment of the standard, eliminates positive abnormal returns previously enjoyed by non disclosing companies. Also, this same group of companies reduce their non lease debt levels prior to first disclosure of their lease information, relative to those companies that voluntarily capitalized leased assets prior to any regulation.

INTRODUCTION

The question of off-balance sheet financing is one that has been receiving increasing interest by regulatory bodies worldwide in both a reporting [e.g., FASB, 1987; ASC, 1988] and an operational [e.g., IASC, 1987] context. Off-balance sheet activities are invariably economic events with real current or future cash flow consequences. However, the resulting *economic* assets and liabilities related to the event are not currently recognized as *accounting* assets and liabilities and, thus, do not appear in accounting reports. From an informational viewpoint this is disturbing since all off-balance sheet activities involve, to some degree, transfers of interest rate risk, credit risk and liquidity risk.

An early form of off-balance sheet financing is the leasing of productive assets. Accounting regulators on both sides of the Atlantic have already tackled the issue of how these items should be reported in the periodic accounting reports [Financial Accounting Standards Board, 1976; Accounting Standards Committee, 1984]. Evidence regarding the success of such regulation may well prove useful when guiding any new regulation regarding alternative forms of off balance sheet financing.

The use of leased assets in the U.K. has been a growing phenomenon. Indicative of this growth are the total assets acquired for leasing in the period 1977 to 1987, as reported by the Equipment Leasing Association [1988]:

Year	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
£m	675	1214	1802	2359	2674	2834	2894	4012	5757	5182	6024

These assets, not owned by the companies which operate them, historically did not appear on their balance sheets. However, they may well contribute significantly to reported profitability. Two companies with

identical products, markets and operational characteristics, but different levels of leasing, may produce quite different balance sheets and income statements. This creates difficulties when comparing the two companies if information regarding the levels of leasing is not freely available. Specifically, the nature of long-term finance lease agreements commits companies to lease payments which, in total, approximate the cost of the asset and financing charges. They may total slightly less if the lessor company is able to benefit from more favorable capital allowances than the lessee company; or slightly more if the lessee is prepared to pay a premium due to cash flow or excess leverage problems which prevent outright purchase of the asset.

An important issue for regulators is whether forced disclosure of any leasing agreements which a company may have will be of use to external users. Since the seminal work of Ball and Brown [1968] the release of 'useful' information is often associated with stock price revisions. Several studies indicate that a change in reporting practice by companies has an insignificant impact upon security prices [e.g., Ball, 1972; Beaver and Dukes, 1973; Foster, 1975; Sunder, 1973; 1975]. These findings along with the work of Benston [1973], Hagerman [1975] and Stigler [1964] highlight the necessity for regulatory bodies to demonstrate the need for any new reporting rules. As Benston says:

> the disclosure requirements of the Securities Exchange Act of 1934 had no measurable positive effects on the securities traded on the NYSE. There appears to have been little basis for the legislation and no evidence that it was needed or desirable. Certainly there is doubt that more required disclosure is warranted [Benston, 1973, p. 153].

A study into the price impact of leasing information in the U.S.A. was carried out by Ro [1978]. His general conclusions are that there is a significant price movement for companies which disclose both balance sheet and income statement information but there is no such movement for companies which only report balance sheet information. Finnerty, Fitzsimmons and Oliver [1980], however, could identify no significant effect on the market's assessment of systematic risk pre- and post-lease disclosure.

The work of Prakash and Rappaport [1977], however, highlights the limitations of restricting any measure of regulatory effectiveness to share price response tests. Managers themselves are aware of potential impacts of newly disclosed information, and may well respond to new disclosure requirements by adjusting their internal management decisions. These

internal decisions are likely to disguise the full effect of the regulatory changes on external users of published accounts. Nonetheless, any reduction in information asymmetry between managers and owners of a firm would indicate prima facie evidence supporting the use of reporting regulation. This is, of course, a much more difficult question to resolve empirically than the question of market response and has received, perhaps consequentially, much less research interest. It is, however, a question of considerable importance to regulators.

The research reported in this paper attempts to assess the effectiveness of the British Statement of Standard Accounting Practice 21 [SSAP21] in increasing information flows between the managers of a company and the users of its published reports. First, a security price test is carried out to establish whether the new standard provides new information for the security markets. Second, an investigation of company debt levels is made to assess any impact the standard may have had on the management and operating decisions of the firm.

I. IMPACT ON SECURITY PRICES

A. Methodology

The firms included in this study were selected from those listed on Datastream.[1] This data bank contains, inter alia, company accounts data on all U.K. quoted industrial companies, USM quoted and 500 of the largest unquoted U.K. companies. Companies that appear in the FT600 list were searched to see if they reported leasing data in 1985 or 1986 (the two calendar years during which SSAP21 became operative) and 117 such companies were identified. FT600 is a list of the 600 largest quoted companies on the London Stock Exchange, as reported by the *Financial Times* and maintained as a search category on Datastream. The search was limited to this group of companies as the Institute of Chartered Accountants in England and Wales (ICAEW) Annual Survey of Published Accounts has consistently indicated the much higher level of compliance with accounting standards of the larger publicly quoted companies.

It is always important when utilizing market reaction tests to isolate the impact of the phenomenon of interest from other more general factors. This is seldom totally successful but is attempted in this study by matching a control group to the sample companies. Each company in the

sample is matched with another company of similar size and operating in a similar industry sector but which has never reported leasing data. Other matching variables could have also been incorporated but Foster [1986] has indicated the importance of these two factors, and the information on market capitalization values and industry sector was again readily obtainable from Datastream. It was not possible to successfully match all 117 companies from the FT600 list and so the sample size was reduced to 84 companies, each of which had a paired control company for comparative purposes.

The information on equity returns of the 2 sets of 84 companies was obtained from the London Business School Risk Measurement Service. Information published in these quarterly documents includes, inter alia, the calculation of company and abnormal returns. These are calculated using the familiar market model:

$$R_j = \alpha_j + \beta_j R_m + \epsilon_j$$

where α_j, β_j = regression coefficients
R_m = return on the market portfolio
ϵ_j = error term with $E(\epsilon_j) = 0$
and $COV(\epsilon_i, \epsilon_j) = 0$ for $i \neq j$

The regression equation is calculated using monthly return data (dividend yield plus capital appreciation) usually over a five year period. Abnormal quarterly returns are then calculated by comparing the theoretical return predicted by the model and the actual return. It is to be recognized that the use of quarterly rather than weekly or daily data will make the isolation of any trend difficult. However, this partly is indicative of the paucity of access to computer based data sources regarding company and market information in the U.K. and partly indicative of the practical difficulties encountered in the estimation of betas. The work of Scholes and Williams [1977], Dimson [1979], Fowler and Rorke [1983] and Cohen, Hawawini, Maier, Schwartz and Whitcomb [1983] all indicate the sophistication required when computing accurate estimates of systematic risk. It is therefore felt preferable to use published data from a respected source rather than make estimates based on more frequently quoted share prices. Also, the isolation of any trend using quarterly data would indicate the strength of any such trend.

If the reported abnormal return is positive this would suggest the arrival of some unexpected good news, and if it is negative, the arrival of unexpected bad news. In this study it is being hypothesized that any

abnormal returns, good or bad, are a function of industry, size and newly disclosed leasing information. By subtracting the abnormal return of the control company from that of its corresponding sample company it is hoped to isolate the abnormal return which is due to the lease information alone.

B. Results

The quarterly abnormal returns were collected for all 168 companies from June 1979 until December 1986 inclusive. Any importance attached by investors to the lease information may be judged by comparing the abnormal returns of the disclosing companies with those of their paired controls. The differences in abnormal returns are averaged over 83 pairs of companies for each quarter of the study period to produce the reported statistic:

$$\text{Meandiff}_j = \frac{1}{n} \sum_{i=1}^{n} [\text{AR}(S_{ij}) - \text{AR}(C_{ij})]$$

where Meandiff_j = mean difference in abnormal returns for period j
$\text{AR}(S_{ij})$ = abnormal return for sample company i in period j
$\text{AR}(C_{ij})$ = abnormal return for control company i in period j
n = sample size

Missing values account for the variations in sample size from period to period.

Based on the same quarterly abnormal return data the cumulative abnormal returns (CAR) are calculated in the normal way:

$$\text{CAR}_{kj} = \prod_{i=1}^{j} (1 + \text{AR}_{ki})$$

where AR_{ki} = abnormal return for company k in period i
CAR_{kj} = cumulative abnormal return for company k, to period j inclusive

The mean cumulative abnormal return difference between sample and control companies is then calculated as:

$$\text{CARdiff}_j = \frac{1}{n}\left[\sum_{k=1}^{n} \left[\prod_{i=1}^{j} (1 + \text{AR}(S_{ki}) - \prod_{i=1}^{j} (1 + \text{AR}(C_{ki})) \right] \right]$$

Where:

$AR\ (S_{ki})$ = abnormal return for sample company k in period i
$AR\ (C_{ki})$ = abnormal return for control company k in period i
n = sample size

As the cumulative abnormal return calculations require a run of consecutive abnormal return figures, the missing values in the abnormal return data set lead to a reduced sample size in the cumulative abnormal return data set. Also, as we are dealing with abnormal return differences and

$$\prod_{i=1}^{n} (x_i - y_i) \neq \prod_{i=1}^{n} x_i - \prod_{i=1}^{n} y_i$$

it is not possible to generate the cumulative abnormal return difference values from the tabulated abnormal return difference figures.

A difficulty in interpreting these statistics from the given data set is that the sample is heterogeneous in two respects. First, some of the sample companies disclose leasing information voluntarily while others only report this information following enactment of the disclosure standard. Second, the data set contains abnormal return data for periods in which lease information is not available and other periods subsequent to the reporting of such information. In an attempt to clarify any message contained in the data, the abnormal return data are partitioned four ways:

Subsample 1 (SS1):	abnormal return data, pre-lease disclosure for companies who first disclose prior to SSAP21
Subsample 2 (SS2):	abnormal return data, post-lease disclosure for companies who first disclose prior to SSAP21
Subsample 3 (SS3):	abnormal return data, pre-lease disclosure for companies who first disclose post SSAP21
Subsample 4 (SS4):	abnormal return data, post-lease disclosure for companies who first disclose post SSAP21

Thus subsample 1 and subsample 2 constitute those companies that disclose lease information prior to the requirements of SSAP21 (i.e., in respect to financial statements relating to accounting periods beginning on or after 1 July 1984 for balance sheet information). This group includes companies whose first lease disclosure appears in annual accounts

Table 1. Abnormal Return Differences and Cumulative Abnormal Return Differences: Sample-Control

DGROUP Voluntary Disclosers

	Abnormal Returns					*Cumulative Abnormal Returns: (Starting Quarters)* −16					−12					−8					−4					0				
	N	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*
Quarter Relative to 1st Disclosure																														
−16	21	−.19	5.06	−.04		18	0.03	0.05	0.67																					
−15	23	3.35	3.39	0.99		18	0.07	0.07	0.98																					
−14	25	−5.7	5.16	−1.1		18	0.07	0.10	0.67																					
−13	25	−1.1	4.61	−.23		18	−.02	0.13	−.13																					
−12	25	2.04	3.62	0.56		18	−.02	0.14	−.17		20	0.03	0.04	0.72																
−11	26	−2.6	3.39	−.77		18	−.09	0.15	−.59		20	−.02	0.05	−.45																
−10	28	6.18	4.19	1.47		18	−.02	0.16	−.15		20	0.10	0.07	1.41																
−9	28	2.64	4.14	0.64		18	0.01	0.15	0.08		20	0.14	0.10	1.38																
−8	29	−6.2	3.47	−1.8	*	18	−.03	0.18	−.15		20	0.10	0.10	0.98		23	−.05	0.04	−1.3											
−7	29	−6.3	3.94	−1.6		18	0.01	0.18	0.05		20	0.12	0.11	1.09		23	−.04	0.05	−.77											

-6	28	5.86	4.34	1.35		18	0.14	0.22	0.63		20	0.25	0.16	1.57	23	0.03	0.09	0.32									
-5	29	-4.2	3.45	-1.2		18	0.16	0.23	0.69		20	0.29	0.21	1.39	23	0.03	0.12	0.25									
-4	27	-3	3.31	-.90		18	0.14	0.26	0.56		20	0.30	0.23	1.31	23	0.02	0.14	0.15	23	-.04	0.04	-1					
-3	29	-1.2	4.24	-.28		18	0.13	0.25	0.50		20	0.30	0.23	1.32	23	0.03	0.16	0.19	23	-.03	0.07	-.39					
-2	29	3.41	2.62	1.30		18	0.25	0.25	0.97		20	0.40	0.24	1.67	23	0.13	0.17	0.76	23	0.05	0.09	0.54					
-1	29	-.83	3.50	-.24		18	0.31	0.29	1.08		20	0.51	0.32	1.59	23	0.19	0.25	0.75	23	0.05	0.12	0.42					
0	31	0.42	2.90	0.14		18	0.40	0.34	1.18		20	0.67	0.42	1.59	23	0.29	0.32	0.90	23	0.09	0.17	0.55		23	0.01	0.03	0.28
1	32	-1.1	2.83	-.37		18	0.34	0.34	1.01		20	0.65	0.43	1.52	23	0.26	0.32	0.82	23	0.09	0.20	0.45		23	-.01	0.05	-.15
2	32	-.56	3.53	-.16		18	0.36	0.37	0.96		20	0.69	0.46	1.51	23	0.29	0.34	0.84	23	0.10	0.21	0.49		23	-.00	0.08	-.05
3	32	0.28	3.45	0.08		18	0.33	0.35	0.93		20	0.66	0.44	1.48	22	0.28	0.33	0.82	22	0.09	0.21	0.46	*	22	-.01	0.08	-.15
4	33	-6.1	3.11	-2	*	18	0.19	0.29	0.64		20	0.49	0.40	1.25	22	0.15	0.29	0.51	22	0.03	0.23	0.14		22	-.07	0.09	-.70
5	34	5.88	3.15	1.87	*	18	0.17	0.26	0.65		20	0.51	0.40	1.26	22	0.14	0.26	0.55	22	0.09	0.26	0.35		22	-.01	0.10	-.15
6	34	-1.1	3.10	-.37		18	0.13	0.26	0.50		20	0.55	0.47	1.16	22	0.15	0.30	0.50	22	0.12	0.32	0.38		22	-.04	0.11	-.37
7	33	4.27	3.97	1.08		18	0.21	0.31	0.67		20	0.62	0.56	1.11	22	0.21	0.37	0.57	22	0.24	0.41	0.57		22	0.04	0.17	0.20
8	35	0.94	3.29	0.29		18	0.22	0.29	0.77		20	0.61	0.55	1.12	22	0.20	0.37	0.54	22	0.23	0.41	0.56		22	0.03	0.18	0.17
9	28	4.89	3.44	1.42		15	0.10	0.31	0.32		17	0.23	0.38	0.61	19	0.01	0.30	0.02	19	0.03	0.33	0.08		19	-.13	0.13	-.98
10	25	-1.3	4.17	-.31		12	-.02	0.30	-.07		14	0.37	0.59	0.62	16	0.08	0.44	0.19	16	0.21	0.49	0.43		16	-.08	0.17	-.46
11	23	6.48	2.87	2.26	**	10	-.15	0.29	-.50		12	0.37	0.69	0.53	14	0.03	0.50	0.05	14	0.33	0.57	0.58		14	-.01	0.21	-.06
12	13	-9.5	3.38	-.82	**	6	-.26	0.20	-1.3		8	0.45	0.74	0.61	10	0.00	0.53	0.00	10	0.38	0.59	0.64		10	-.10	0.24	-.40

N = Sample Size. Varies due to missing values in data source.
Mean = Mean difference of (cumulative) abnormal returns of sample company and control company
Std. Err = Standard error of difference statistic.
* = Significant at 0.1 level, two tail.
** = Significant at 0.05 level, two tail.

for year ends up to and including June 1985. While subsamples 3 and 4 include companies whose first lease disclosure is after July 1985. There are 38 companies in the first group and 46 companies in the second. The differences in abnormal and cumulative abnormal returns between sample and control companies for these 4 subsamples are found in Tables 1–2.

The results in Table 1 indicate that for the companies which voluntarily disclose leasing information prior to SSAP21, there are no significant cumulative abnormal return differences for any quarter prior to, or following, the first disclosure of lease information. To investigate whether this is true for subperiods of the sample period, the starting date for the calculation of the cumulative abnormal return differences is varied. The results contained in Table 1 indicate that starting dates (i.e., i = 1 in the cumulative abnormal return calculation) of 16, 12, 8, 4 and 0 quarters prior to first disclosure all produce similar results. There are five significant values for the quarters taken singly, but as four of these are positive/negative pairs it seems unlikely that any underlying factors are affecting the abnormal return figures.

In contrast, Table 2 indicates that the companies that only reported leasing information following SSAP21 achieved significant positive cumulative abnormal return differences for all starting dates 16 to 4 quarters prior to first disclosure. As the starting date for the cumulative abnormal return calculations approaches initial disclosure the difference between sample and control companies increases as does the associated level of significance. These significant differences abruptly disappear with a starting date at first disclosure, suggesting that any difference between sample and control company returns dissipates with the disclosure of lease information. A graph of the differences for a starting date for the CAR calculations of 12 periods prior to first disclosure (as representative) depicts the familiar shape since Ball and Brown [1968] of significant cumulative abnormal return differences until the time of disclosure, followed by no significant differences subsequently (see graph 1).

It must be pointed out that the maximum positive difference occurs in period +2, rather than period 0 as might be expected. This may be caused either because of the timing difficulties, addressed earlier, connected with the use of quarterly data or, more likely, due to the fact that the year end date, rather than the publication date, was taken as the period reference point. This was not considered to be a serious problem in this case as informational market efficiency is implicit in the experimental design. It is the market reaction to the newly disclosed information which is more

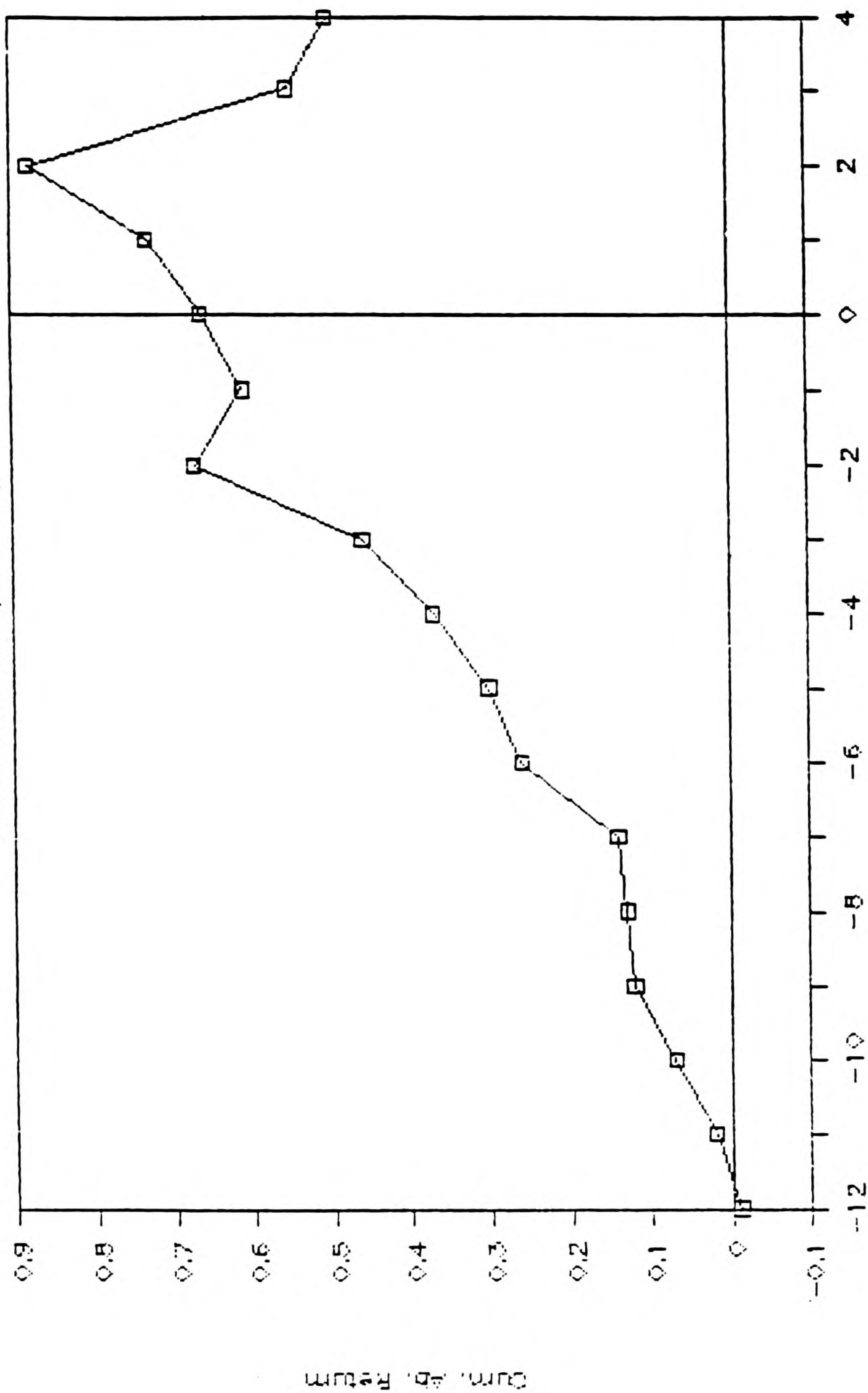
Table 2. Abnormal Return Differences and Cumulative Abnormal Return Differences: Sample-Control

DGROUP Forced Disclosers

	Abnormal Returns					*Cumulative Abnormal Returns: (Starting Quarters)* −16					−12					−8					−4					0				
Quarter Relative to 1st Disclosure	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*	*N*	*Mean*	*Std. Err*	*T-Valu*	*Pr*
−16	36	−3.7	3.23	−1.2		30	−.04	0.03	−1.2																					
−15	35	−5.7	4.04	−1.4		30	−.08	0.06	−1.4																					
−14	36	1.89	3.21	0.59		30	−.06	0.08	−.70																					
−13	38	−8.1	6.30	−1.3		30	−.10	0.10	−1.1																					
−12	38	−2.7	3.99	−.67		30	−.12	0.11	−1.1		30	−.01	0.04	−.33																
−11	37	4.03	2.97	1.36		30	−.09	0.13	−.74		30	0.02	0.06	0.26																
−10	39	3.49	6.28	0.56		30	−.04	0.15	−.27		30	0.07	0.08	0.85																
−9	41	2.39	3.59	0.67		30	0.02	0.16	0.14		30	0.12	0.08	1.47																
−8	41	0.54	4.12	0.13		30	0.06	0.17	0.36		30	0.13	0.10	1.36		30	0.03	0.04	0.81											
−7	41	6.07	3.59	1.69	*	30	0.03	0.17	0.19		30	0.14	0.10	1.37		30	0.06	0.05	1.06											
−6	40	7.60	4.99	1.52		30	0.18	0.18	0.99		30	0.26	0.12	2.21	**	30	0.12	0.06	1.87	*										
−5	41	1.37	3.76	0.36		30	0.21	0.22	0.98		30	0.30	0.16	1.91	*	30	0.14	0.08	1.80	*										
−4	41	0.17	2.87	0.06		30	0.27	0.23	1.19		30	0.37	0.18	2.09	**	30	0.19	0.10	1.85	*	30	0.03	0.03	1.01						
−3	41	5.22	3.16	1.65		30	0.35	0.24	1.43		30	0.46	0.20	2.37	**	30	0.29	0.13	2.27	**	30	0.09	0.05	1.75	*					
−2	41	6.61	3.35	1.97	*	30	0.54	0.30	1.77	*	30	0.67	0.25	2.68	**	30	0.45	0.13	3.36	***	30	0.20	0.06	3.20	***					
−1	42	−3.5	3.53	−.99		30	0.45	0.30	1.52		30	0.61	0.23	2.68	**	30	0.42	0.13	3.17	***	30	0.17	0.07	2.35	**					
0	44	2.36	2.10	1.13		30	0.48	0.28	1.72	*	30	0.66	0.21	3.18	***	30	0.47	0.14	3.35	***	30	0.22	0.08	2.78	***	30	0.03	0.02	1.33	
1	41	−5	2.59	−1.9	*	28	0.54	0.31	1.70	*	28	0.73	0.25	2.93	***	28	0.50	0.15	3.32	***	28	0.20	0.10	2.09	**	28	−.01	0.04	−.22	
2	37	4.57	3.10	1.48		25	0.81	0.31	2.60	**	25	0.88	0.27	3.22	***	25	0.60	0.17	3.47	***	25	0.30	0.11	2.62	**	25	0.07	0.05	1.40	
3	29	−8.8	5.16	−1.7		21	0.41	0.27	1.54		21	0.55	0.15	3.80	***	21	0.45	0.18	2.53	**	21	0.22	0.16	1.31		21	−.08	0.13	−.61	
4	25	−1.6	2.75	−.60		17	0.31	0.34	0.91		17	0.50	0.19	2.68	**	17	0.38	0.23	1.62		17	0.12	0.24	0.49		17	−.22	0.19	−1.1	

N = Sample Size. Varies due to missing values in data source.
Mean = Mean difference of (cumulative) abnormal returns of sample company and control company.
Std. Err = Standard error of difference statistic.

* = Significant at 0.1 level, two tail.
** = Significant at 0.05 level, two tail.
*** = Significant at 0.001 level, two tail.



Graph 1

critical. In addition, ex ante, one would expect publication date to follow the reported year end.

Another issue worthy of comment is the fact that as the starting date for the cumulative return calculations is moved further back in time, relative to first disclosure, the significance of the differences disappears. This may be expected if one assumes that the *voluntary* disclosers comprise largely the companies that have been utilizing leased assets for a longer period. Thus the further back in time one investigates, for the *forced* disclosers, the lower the level of leased asset usage one would expect. This lower usage level will lead to fewer significant differences in cumulative abnormal returns between sample and control firms.

The results in Tables 1 and 2 indicate that there does seem to be a relative over estimation in the value of companies using nonreported leased assets as reflected by the significant cumulative abnormal returns in the periods prior to disclosure. Post disclosure, however, the differences in cumulative abnormal returns between sample and control companies disappear as the market is now able to value both types of companies on comparable information sets.

It has been implicitly assumed in the above analysis that the companies that only reported lease obligations following the adoption of SSAP21 had, in fact, such obligations prior to the date of their first disclosure. Clearly this may not be the case. If some, or all, of the companies that constitute SS3 and SS4 simply only started using leased assets following the date at which SSAP21 became effective, one would not expect to isolate a difference in CARs between sample and control companies prior to the first use of the leased assets. As such the difference that is found would indicate that some, if not all, of the forced disclosers were utilizing leased assets prior to their disclosure in the company's balance sheet.

B. Discussion

Generalizing market impact test results is a very hazardous and, often, fruitless task. This is particularly true when the data used is quarterly. The volatility of security markets to multiple (mis) information sources means that weekly or even daily data are much more sensitive to identifying the impact of a particular event or information source. Quarterly data grey the point in the model at which new data is assumed to become available. However, the use of paired controls in this study mitigates against these difficulties, and interesting patterns do emerge. Following the enactment of the reporting standard there is no significant change in

the returns of companies that disclose lease information prior to the standard. This would be expected even in a market which only approximated to semi-strong efficient. However, for those companies that had to change their reporting practice following the standard, there is a significant shift when comparing returns pre- and post-disclosure. The results indicate that positive cumulative abnormal return differences achieved prior to disclosure do not perpetuate following the dissemination of leasing information. Even if leasing information is not reported in balance sheet form any approximation of efficiency would mean that the market is aware of the occurrence of nonreported leases and those companies to which it relates. The unanswered question would be the level of unreported leases. The results of this research indicate that market estimates of unreported leases are inadequate, leading to higher average abnormal returns for nondisclosing companies. Once the lease information is disclosed this anomaly disappears.

These conclusions provide conflicting evidence as to the efficiency of security markets. While the information processing efficiency would seem to be confirmed by the market response to disclosed lease information, the positive cumulative abnormal returns enjoyed by nondisclosing companies would indicate inadequate alternative information sources. Rational expectations, market efficiency and recognition by the market of the existence of nonreported leases would result in no cumulative abnormal return differences in aggregate. The existence of such differences points to a market failure in information collection which was corrected by the new disclosure requirements of SSAP21.

While the results of this study indicate that information concerning leased assets is useful in the valuation process, they also highlight why earlier studies may have come to conflicting conclusions. Significant differences only occur in the cumulative and not the periodic abnormal returns and, in some cases, only at suprisingly low levels of significance. Perhaps more pertinently, all abnormal return activity takes place prior to disclosure. If additional disclosure is expected to provide new and valuable information to the market, one might well expect any reaction to take place post disclosure. As the market is aware of leased asset use, pre-balance sheet capitalization, from lease payments recognized in the income statement, it seems unlikely that unexpectedly high earnings alone, resulting from such use, could lead to the levels of cumulative abnormal return differences identified in this study. Rather, the pre-disclosure returns identified in Graph 1 may have resulted from market reaction to other disclosed changes which affect risk and return relationships. Fol-

lowing balance sheet disclosure of lease activity, however, these other changes are recognized as illusory due to the contemporaneous use of the previously undisclosed leased assets. The next section of this research attempts to investigate an hypothesis regarding changes that may have occurred to the sample companies, other than lease reporting, which may help explain the market response results.

II. FINANCIAL LEVERAGE AND THE LEASE DECISION

It is generally accepted that an increase in a company's level of borrowing will increase the variability of corporate earnings and thus tend to increase the risk associated with share holders' earnings [Modigliani and Miller, 1958]. Evidence exists [Bowman, 1980] to suggest that lease financing is considered equivalent to an increase in debt liabilities. In assessing the efficacy of any reporting standard or leases, therefore, it would appear important to investigate what, if any, changes occur in debt levels during the period of the market reaction test. General economic and industry forces are eliminated by the use of a control group but it has been implicit in the previous section that all other factors remain constant. Given the close affinity between lease and debt financing it would appear sensible to investigate whether the assumption of constant debt levels is valid or not. In the U.S.A. Bildersee and Ronen [1984] found that the lead time to the enactment of a standard on leasing was such that management had ample opportunity to adjust their debt borrowing prior to the mandated disclosure of the lease information. Thus the total level of borrowing, now including the lease figures, is not significantly different from the pre-lease reporting figure.

If this same management response occurred in the U.K. one would expect a relative decrease in debt levels between leasing and nonleasing companies. More specifically one would expect such a decrease for those companies which only reported leasing information post SSAP21 (the forced disclosers) and a much less marked movement for the pre-standard companies (the voluntary disclosers).

A. Methodology

To test this hypothesis the debt to total capital ratios for lease reporting companies and their controls are compared. The debt, lease and equity

information was obtained from Datastream. For each sample company any change in the debt-capital ratio is compared with the similar change, over the same period, in the paired control company.

$$\text{DEL} = \left[\frac{d_i - l_i}{c_i} - \frac{d_j - l_j}{c_j} \right] - \left[\frac{d_{ik}}{c_{ik}} - \frac{d_{jk}}{c_{jk}} \right] \qquad j > i$$

where d_i = total debt for lease reporting company in year i
l_i = level of leases reported in year i
c_i = total capital for lease reporting company in year i
d_{ik} = debt for nonlease reporting control company in year i
c_{ik} = total capital for nonlease reporting company in year i.

Thus the DEL statistic is produced by subtracting the change in the debt to capital ratio, between year i and year j (where j>i), of the control company from the same ratio change for its corresponding sample company. If the debt to capital ratio is decreasing faster, or increasing slower, for the lease reporting companies than for the control companies, as hypothesized, the DEL statistic will be positive. If the findings of Bildersee and Ronen are replicated in the U.K. setting then one would see positive DEL statistics for the forced disclosers, prior to first disclosure, and no such effect in the voluntary disclosers.

B. Results

The mean DEL values (t statistic in brackets) for the voluntary disclosers are set out in Table 3 and for the forced disclosers in Table 4. They indicate that, if anything, debt levels of leasing companies seem to be increasing faster than their control companies. However, there is a marked difference between the voluntary and forced disclosers. The former group displays predominantly increasing debt levels compared with their control counterparts (negative DEL values), particularly over the longer time spans. In contrast the forced disclosers produce very few values significantly different from zero. Thus, while companies that reported leasing information voluntarily expanded their debt base, those companies forced to report lease information for the first time by the adoption of SSAP21 maintained, or even reduced, their debt levels. This pattern becomes even clearer if the debt levels prior to first disclosure are analyzed. From Table 5 we can see that debt levels for pre-standard reporters are generally increasing at a significant level prior to their first

Table 3. Voluntary Disclosers, DEL Statistic Showing the Relative Change in the Debt to Capital Ratio (DCR) for the Sample Companies as Compared to their Paired Controls, for Different Time Periods

DEL calculated as: (DCR for sample company in row year − DCR for sample company in column year) − (DCR for control company in row year − DCR for control company in column year)

	1976	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*
1975	− 0.0162	− 0.0071	− 0.0461	− 0.0502	− 0.0822	− 0.1201	− 0.1278	− 0.1277	− 0.151	− 0.1474	− 0.11
	(−0.46)	(−0.16)	(−0.73)	(−0.83)	(−1.27)	(−1.42)	(−1.46)	(−1.66)	(−1.47)	(−1.84)*	(−0.48)
1976	----------	0.0133	− 0.0233	− 0.0275	− 0.0536	− 0.0864	− 0.1005	− 0.099	− 0.1183	− 0.1137	− 0.014
		(0.59)	(−0.66)	(−0.70)	(−1.28)	(−1.46)	(−1.57)	(−1.74)*	(−1.59)	(−1.85)*	(−0.09)
1977	----------	----------	− 0.0347	− 0.0377	− 0.0706	− 0.0988	− 0.1193	− 0.1155	− 0.1335	− 0.1226	− 0.04
			(−1.36)	(−1.14)	(−1.83)*	(−1.73)*	(−2.04)*	(−2.32)**	(−1.93)*	(−2.21)**	(−0.33)
1978	----------	----------	----------	0.0024	− 0.0372	− 0.0815	− 0.113	− 0.0999	− 0.1126	− 0.1112	− 0.0166
				(0.11)	(−1.23)	(−1.58)	(−2.26)**	(−2.40)**	(−1.82)*	(−2.39)**	(−0.22)
1979	----------	----------	----------	----------	− 0.0338	− 0.0717	− 0.0924	− 0.0875	− 0.1041	− 0.0938	− 0.0527
					(−1.53)	(−1.50)	(−1.68)	(−1.90)*	(−1.63)	(−1.76)*	(−0.61)
1980	----------	----------	----------	----------	----------	− 0.0391	− 0.0513	− 0.0367	− 0.0696	− 0.0644	0.007
						(−1.12)	(−1.19)	(−0.89)	(−1.38)	(−1.46)	(0.10)
1981	----------	----------	----------	----------	----------	----------	0.004	0.017	− 0.0299	− 0.015	0.1005
							(0.12)	(0.43)	(−0.99)	(−0.35)	(1.15)
1982	----------	----------	----------	----------	----------	----------	----------	0.0176	− 0.0276	− 0.0016	0.1425
								(0.80)	(−0.86)	(−0.05)	(2.84)**
1983	----------	----------	----------	----------	----------	----------	----------	----------	− 0.0452	− 0.0192	0.1211
									(−1.17)	(−0.67)	(1.95)
1984	----------	----------	----------	----------	----------	----------	----------	----------	----------	0.0039	0.1102
										(0.12)	(1.14)
1985	----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	0.0407
											(1.29)

*significant at 0.1 level, two tail
**significant at 0.05 level, two tail

Table 4. Forced Disclosers, DEL Statistic Showing the Relative Change in the Debt to Capital Ratio (DCR) for the Sample Companies as Compared to their Paired Controls, for Different Time Periods

DEL calculated as: (DCR for sample company in row year − DCR for sample company in column year) − (DCR for control company in row year − DCR for control company in column year)

	1976	*1977*	*1978*	*1979*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*	*1986*
1975	0.0036	− 0.0370	− 0.0678	− 0.0123	0.0195	0.085	0.228	0.210	0.199	0.0297	− 0.023
	(0.17)	(−1.30)	(−2.30)**	(−0.20)	(0.29)	(0.75)	(1.30)	(1.06)	(1.03)	(0.36)	(−0.14)
1976		0.0431	− 0.0707	− 0.065	0.0169	0.066	0.186	0.164	0.154	0.0202	0.018
		(−1.99)*	(−2.87)***	(−0.12)	(0.25)	(0.61)	(1.19)	(0.95)	(0.91)	(0.28)	(0.11)
1977			− 0.0267	0.0415	0.0602	0.115	0.222	0.187	0.189	0.0600	0.082
			(−1.13)	(0.68)	(0.86)	(1.05)	(1.34)	(1.01)	(1.04)	(0.78)	(0.53)
1978				0.0577	0.0875	0.1290	0.230	0.207	0.199	0.0437	0.0827
				(1.30)	(1.74)*	(1.45)	(1.61)	(1.29)	(1.26)	(0.54)	(0.93)
1979					0.0285	0.0921	0.919	0.145	0.142	− 0.0330	− 0.1201
					(1.28)	(1.28)	(1.52)	(1.01)	(1.01)	(−1.46)	(−1.35)
1980						0.0402	0.139	0.112	0.107	− 0.0510	− 0.1335
						(0.60)	(1.10)	(0.79)	(0.76)	(−0.74)	(−1.72)
1981							0.0946	0.060	0.062	− 0.0397	− 0.1107
							(0.96)	(0.42)	(0.44)	(−0.46)	(−1.38)
1982								− 0.0291	− 0.0249	− 0.124	− 0.1654
								(−0.49)	(−0.40)	(−1.12)	(−2.41)**
1983									− 0.0043	− 0.042	− 0.1874
									(−0.18)	(−0.33)	(−3.21)**
1984										− 0.008	− 0.846
										(−0.06)	(−0.89)
1985											− 0.016
											(−0.13)

*significant at 0.10 level, two tail
**significant at 0.05 level, two tail
***significant at 0.01 level, two tail

Table 5. Voluntary Disclosers

	Mean	*t-value*		*Mean*	*t-value*
75-YRB	−0.1183	−1.57	−2-YRB	−0.0122	−0.34
76-YRB	−0.0913	−1.66	−3-YRB	−0.057	−1.37
77-YRB	−0.1093	−2.19**	−4-YRB	−0.082	−1.72*
78-YRB	−0.0955	−2.29**	−5-YRB	−0.1012	−2.15**
79-YRB	−0.082	−1.79*	−6-YRB	−0.1225	−2.25**
80-YRB	−0.0447	−1.17	−7-YRB	−0.1092	−2*
81-YRB	0.0193	0.48			
82-YRB	0.0231	0.67			
83-YRB	−0.0548	−1.03			

disclosure of lease information. Interestingly, that significance dissipates as the date of first disclosure approaches. This could be due either to the replacement of assets purchased using borrowed funds by leased assets or an indication of management's awareness of the price impact of disclosing higher total borrowings. This is confirmed in Table 6 where, for the forced disclosers, there are no significant changes in pre-reporting debt levels.

Table 6. Forced Disclosers

	Mean	*t-value*		*Mean*	*t-value*
75-YRB	0.164	0.86	−2-YRB	−0.0472	−0.73
76-YRB	0.139	0.84	−3-YRB	0.038	0.28
77-YRB	0.178	1.01	−4-YRB	0.091	0.65
78-YRB	0.135	0.84	−5-YRB	0.054	0.38
79-YRB	0.075	0.52	−6-YRB	0.094	0.63
80-YRB	0.041	0.29	−7-YRB	0.116	0.69
81-YRB	0.054	0.39	−8-YRB	0.157	0.96
82-YRB	−0.039	−0.62	−9-YRB	0.159	0.86
83-YRB	−0.0203	−0.87			
84-YRB	−0.0337	−0.56			

Where:

75-YRB calculated as: (DCR for sample company in 1975 − DCR for sample company in year prior to first disclosure) − (DCR for control company in 1975 − DCR for control company in year prior to disclosure year of sample company)

−2-YRB calculated as: (DCR for sample company 2 years prior to first disclosure − DCR for sample company in year prior to first disclosure) − (DCR for control company 2 years prior to disclosure year of sample company − DCR for control company in prior to disclosure year of sample company)

*significant at 0.1 level, two tail

**significant at 0.05 level, two tail

C. Discussion

The striking factor of these results in comparison with those of Bildersee and Ronen [1984] in the U.S.A. is the increasing level of debt for the lease reporting companies. It is not clear why this difference should occur. It could be that the different time periods used in the two studies had an impact or it may be due to more institutional factors. Perhaps U.K. companies realized the benefits of financial leverage later than their U.S.A. counterparts. In this case a willingness to try leasing might reflect a more open attitude to debt financing in general which in turn might be reflected in these figures.

Certainly an analysis of the data indicates an atmosphere of generally increasing debt levels during the period of the survey. Table 7 indicates that the total debt levels of the leasing companies are increasing more significantly than their nonleasing counterparts. Ang and Peterson [1984] have shown that lease and debt financing are complementary rather than substitute goods. The results contained in Tables 3 and 4 would suggest that this may be a phenomenon in the U.K. setting.

III. CONCLUSIONS

Market reaction tests are often quoted as an indication of the information content or usefulness of a particular event or type of information. Such a

Table 7. Annual Increases in Total Debt Levels Over Period of Study

	Sample Companies				*Control Companies*			
	N	*Mean*	*S.E. Mean*	*t-value*	*N*	*Mean*	*S.E. Mean*	*t-value*
1975–76	83	2829	841	−3.36**	83	3054	1651	−1.85
1976–77	83	2775	1148	−2.42***	83	1331	1145	−1.16
1977–78	83	1514	4409	−0.34	83	2270	2834	−0.8
1978–79	83	4416	4621	−0.96	83	2672	2773	−0.96
1979–80	83	3977	3700	−1.07	83	1924	1701	−1.13
1980–81	83	11800	6015	−1.96**	83	6839	3863	−1.77*
1981–82	83	6018	4082	−1.47	83	16646	8866	−1.88*
1982–83	83	8148	3039	−2.68***	83	9287	7374	−1.26
1983–84	83	16821	10827	−1.55	83	23503	16304	−1.44
1984–85	83	18129	13009	−1.39	83	−437	4626	0.09

*significant at 0.1 level, two tail
**significant at 0.05 level, two tail
***significant at 0.01 level, two tail

test was developed to test the information content of the new data disclosed by companies following the adoption of the leasing standard SSAP21 in the U.K. The major difficulty in designing such tests is to ensure that only the event under consideration has an impact on security prices. In this study external factors are minimized by utilizing a control group for comparative purposes. Security price movements are investigated for periods prior to and post publication of the lease information to see if there is any response to the new information.

The new disclosure, following enactment of the standard, eliminates positive cumulative abnormal returns previously enjoyed by nondisclosing companies. This would indicate that a more useful information set is available to the market for valuation purposes as a result of the new standard. However, the size and significance of the change is smaller than might have been anticipated. Taken in conjunction with the contradictory results of earlier studies in the U.S.A. it is hypothesized that other factors are playing a role.

It is clear that company management may not be passive to the adoption of a lease reporting standard. If leases are considered by security markets as debt equivalents then companies may well respond to the disclosure of leasing information by reducing the level of their other forms of debt. Market reaction tests of lease information, then, must consider any changes which take place in reported debt levels.

The results of this study indicate that while debt levels of leasing companies are generally increasing, there is a marked difference between the companies that disclose leasing information voluntarily prior to the standard, and those companies that only disclose after the standard. For the former group, debt levels increase throughout the period leading up to their first lease disclosure and beyond. For the latter group, however, there is no such increase leading up to first disclosure thus suggesting a relative decrease in debt ratios between the two groups.

The results from the two parts of this study indicate that the leasing standard SSAP21 had a marked impact on company operations and evaluation. In the first instance it enabled security markets to revalue firms that utilize previously undisclosed leased assets. The abnormal returns enjoyed by these companies prior to disclosure disappear as the market is better able to assess the risk of holding securities in those companies. In the second place, the forced disclosure of the debt equivalent lease information leads managers to reassess their levels of alternative forms of debt. By this reduction they can lessen the impact on the total debt figure of increasing levels of lease financing.

A number of important points and directions for future research are indicated by the results.

1. Considerable care must be taken in the design of market reaction tests. Closely related variables must be considered simultaneously with the independent variable under investigation.
2. SSAP21 has had a favorable impact in that it would appear to have improved the information level and flow between companies and market participants.
3. Further consideration of possible structural differences which may have caused the difference in results between this study and Bildersee and Ronen (1984) in the U.S.A. may be particularly informative.

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NOTES

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CULTURAL DETERMINISM AND PROFESSIONAL SELF-REGULATION IN ACCOUNTING:

A COMPARATIVE RANKING

Ahmed Belkaoui

ABSTRACT

This study examines the international differences in professional self-regulation and relates these differences to cultural influences. The results show that the extent of professional self-regulation was influenced by various cultural dimensions. Cultural differences create different social environments for a promotion of professional self-regulation in accounting.

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I. INTRODUCTION

Regulation of Accounting standard setting and of the accounting profession is recognized internationally as a way of securing the reliability of accounting statements [Buckley and Weston, 1980]. The type of regulation differs from one country to another varying in general in the degree of professional self-regulation [Al-Hashim, 1980; Gray et al., 1984]. The hypothesis of this paper is that these differences are attributable to culture. Culture is "the learned, socially acquired traditions and life styles of the members of a society, including their patterned, repetitious way of thinking, feeling and acting (i.e., behaving)" [Harris, 1987, p. 6].

Culture has been considered an important environmental factor impacting the accounting environment of the country [Mueller, 1967; Nobes, 1983, 1984; Hofstede, 1987; Schneuder, 1987; Belkaoui, 1984, 1985, 1988, 1989; Perera and Mathews, 1987]. It has also been argued that (a) accounting is in fact determined by the culture of the country [Violet, 1983], and (b) the lack of consensus across different countries on what represents proper accounting methods is because the purpose of accounting is cultural not technical [Hofstede, 1985]. These arguments reflect a cultural determinism in accounting, in the sense that the culture of a given country determines the type of standard setting and working of accounting institutions. This study uses the latter part of the cultural determinism thesis in accounting to investigate the observed differences in professional self-regulation internationally. More specifically, four cultural dimensions proposed by Hofstede [1983], namely (a) individualism, (b) power distance, (c) uncertainty avoidance, and (d) masculinity are investigated in terms of their impact on the degree of professional self-regulation of the accounting profession internationally.

II. THEORETICAL JUSTIFICATION AND HYPOTHESES

Culture has been defined as the collective mental programming, a part of the conditioning that people of a nation share among themselves but not with members of other regions, nations or groups [Hofstede, 1983, p. 76]. Hofstede identified four dimensions that reflect the cultural orientations of a country and explain 50 percent of the differences in value

systems among countries [Hofstede, 1980, 1983]. These are (a) individualism versus collectivism, (b) large versus small power distance, (c) strong versus weak uncertainty avoidance, and (d) masculinity versus femininity.

Individualism versus collectivism is a dimension that represents the degree of integration a society maintains among its members. While individualists are expected to take care of themselves and their immediate families only, collectivists are expected to remain emotionally linked in cohesive groups that protect them in exchange for unquestioning loyalty.

Large versus small power distance is a dimension that represents the extent to which members of a society accept the fact that power in institutions and organizations is distributed unequally. In large power distance societies, there is a tendency for people to accept a hierarchical order in which everybody has a place that needs no justification, whereas in small power distance, there is a tendency for people to ask for equality and demand justification for any existing power inequalities.

Strong versus weak uncertainty avoidance is a dimension that represents the degree to which the members of a society feel uncomfortable with uncertain and ambiguous situations. In strong uncertainty avoidance societies, people are intolerant of ambiguity and try to control it at all cost, whereas in weak uncertainty avoidance, people are more tolerant of ambiguity and accept living with it.

Masculinity versus feminity is a dimension that represents the nature of social divisions of sex roles. Masculine roles imply a preference for achievement, assertiveness, making money, sympathy for the strong, etc. Feminine roles imply a preference for warm relationships, modesty, care for the weak, preservation of the environment, quality of life, etc.

The cultural determinism thesis espoused in this study postulates that these four cultural dimensions determine the degree of professional self-regulation in accounting internationally as depicted in Figure 1. Four hypotheses are proposed:

Hypothesis 1: *The greater the power distance within a society, the lower is the degree of professional self-regulation in accounting.*

In effect, the greater the power distance within a society, the greater is the compliance with legal requirements, statutory control and governmental regulation, and consequently the lower the degree of professional self-regulation in general and in accounting in particular. Gray [1985] argued that the degree of professionalism preferred in an accounting

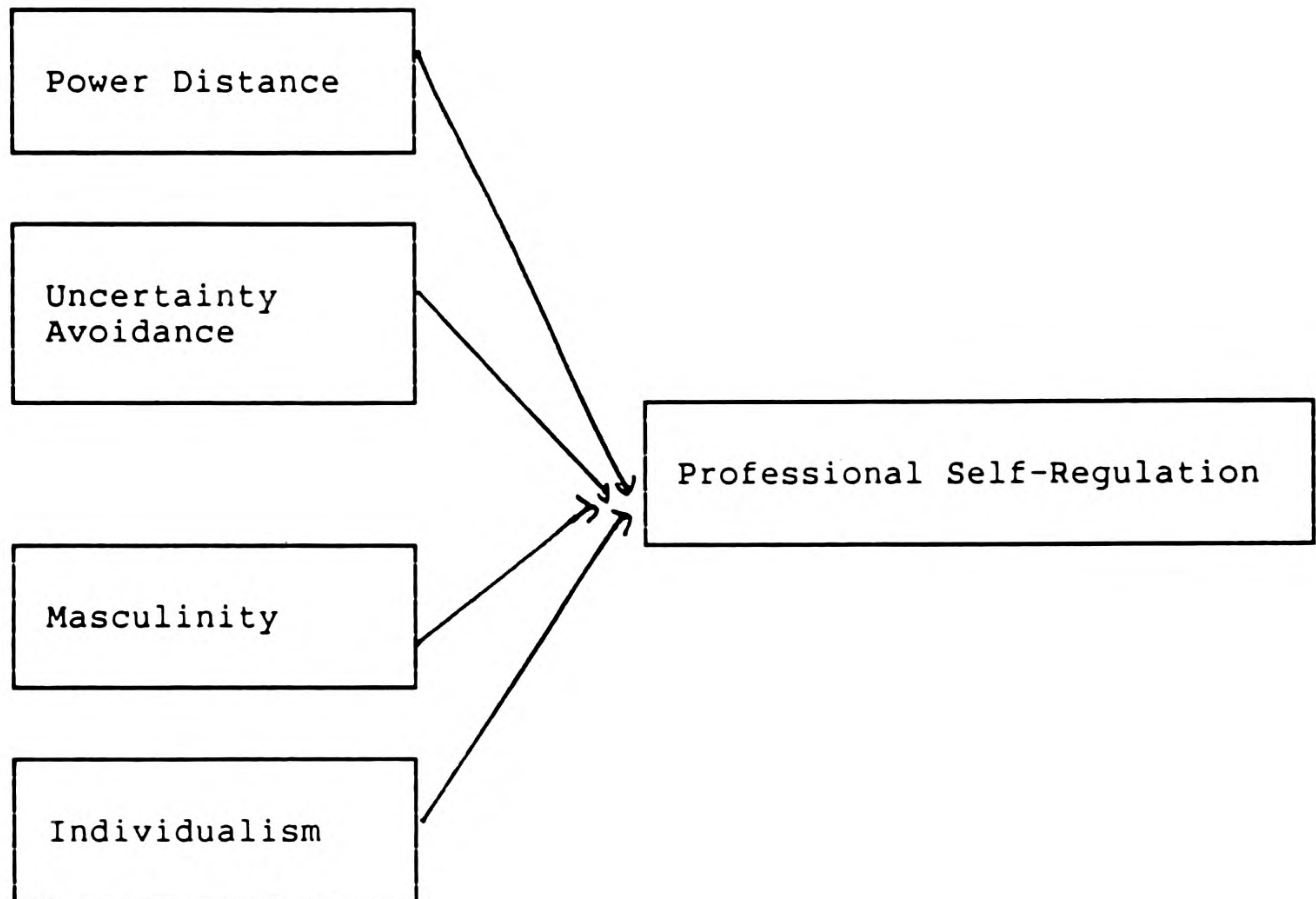

Figure 1. Model of Accounting Professional Self-Regulation

context would influence the nature of authority for the accounting system. Professionalism works best when there is a preference for the exercise of individual professional judgment and the maintenance of self-regulation. Accordingly, Gray [1985] argued for a negative relationship between professionalism and uncertainty avoidance.

Hypothesis 2: *The greater the uncertainty avoidance within a society, the lower the degree of professional self-regulation in accounting.*

In effect, the greater the uncertainty avoidance within a society, the greater its intolerance of the ambiguity created by professional autonomy and independence and the greater the need to control through governmental regulation. Professional self-regulation in general and in accounting in particular would thrive best in weak uncertainty avoidance societies which are flexible enough to accept the ambiguities created by the professional autonomy of the profession and to accept living with them. Hofstede [1987, p. 8] argued that in large power distance countries, the

accounting system will be used more frequently to justify the decisions of top power holders, and as a tool to present the desired image and to twist the figures to this end. The described scenario calls for weak professional self-regulation and a loss of independence by the accounting profession.

Hypothesis 3: *The greater the individualism within a society, the lower the degree of professional self-regulation in accounting.*

Professional membership arises partially from the need of professionals to remain emotionally integrated into cohesive-groups, like a profession, which protect them in exchange for unquestioning loyalty. In individualist societies, the need for professionalism and professional self-regulation is less pronounced as the individuals claim to be able to take care of themselves.

Hypothesis 4: *The greater the masculinity within a society, the higher the degree of professional self-regulation in accounting.*

In a masculine society characterized by competitiveness, achievement motivation, assertiveness and the enjoyment of material success, the professions need to be able to protect their members' trade monopoly, achievement and the nature and quality of their service, hence a strong need for self-regulation. Only then can the profession create the appropriate institutional arrangement to harness both the egoistic motives for career success and altruistic motives for helping others, and to channel them into professionally competent behavior [Merton, 1982].

PROCEDURES

A. Methodology and Sample

The dependent variable in this study is a professional self-regulation score. Independent variables were the four dimension identified by Hofstede [1983] as reflecting the cultural orientations of a country. These are (a) individualism versus collectivism, (b) large versus small power distance, (c) strong versus weak uncertainty avoidance, and (d) masculinity versus feminity.

To be included in our sample a country must have available data to measure both the dependent and independent variables. Twenty eight countries met this test. They are shown in Table 1.

Table 1. Countries and Professional Self-Regulation Score

Countries	*Professional Self-Regulation Score*	*Countries*	*Professional Self-Regulation Score*
Argentina	2	Malaysia	2
Australia	3	Mexico	3
Belgium	2	New Zealand	3
Brazil	1	Philippines	3
Chile	2	Portugal	1
Colombia	2	South Africa	2
Denmark	2	Spain	1
Finland	1	Switzerland	3
France	1	Thailand	3
Germany	2	United Kingdom	3
Indonesia	2	United States	3
Ireland	3	Uruguay	1
Italy	1	Zambia	3
Japan	2	Zimbabwe	3

B. Variable Measurement

A recent study presented a survey of international accounting principles and techniques and environmental conditions [Gray, Campbell and Shaw, 1984, hereafter GCS]. The first chapter of the GCS data base included questions on influences on accounting development. The extent of professional self-regulation was determined by the following question: "To what extent can it be said that the government keeps its intervention to a minimum relying instead on self-regulation within the financial community (based in professional standards, training, and a high standard of ethical behavior)?" There were three kinds of professional self-regulation for this study: (1) high, (2) medium, (3) low. For the purposes of this study these levels were coded as follows:

Classification	*Professional Self-Regulation Score*
1. High	3
2. Medium	2
3. Low	1

The professional self-regulation scores are shown in Table 1. The independent variables of individualism, power distance, uncertainty avoidance and masculinity were provided in Hofstede's study of the

dimensions of national cultures in 50 countries and 3 regions [Hofstede, 1983].

IV. RESULTS AND DISCUSSION

A multiple regression analysis was used to determine the association between the professional self-regulation score with the cultural dimensions of power distance, uncertainty avoidance, individualism and masculinity. The use of a discontinuous dependent variable creates, however, three problems: nonnormal error terms, nonconstant error variance and constraint on the response function. When the error term is not normal, the least squares method still provides unbiased estimates which, under general condition, are asymptotically normal [Neter and Wasserman, 1974, pp. 323]. The solution adopted for the other two problems was to use a weighted least squares method. Table 2 presents the results of the regression.

The effect of the independent variable of power distance was not significant but had the correct sign. The three independent variables of uncertainty avoidance, individualism, and masculinity were significant and had the correct sign. As hypothesized, uncertainty avoidance and individualism were negatively related to the extent of professional self-regulation while masculinity was positively related. The overall regression was also significant (F significant at $\alpha = 0.01$) and the 4 independent variables explain 51.06 percent of the variations in the dependent variable of professional self-regulation.

The results of the study suggest that the degree of professional self-regulation in accounting internationally is negatively influenced by the

Table 2. Regression Results

Independent	*Intercept*	*Power Distance*	*Uncertainty Avoidance*	*Individualism*	*Masculinity*
Coefficients	3.3909	−0.0068	−0.0206	−0.0215	0.0188
t statistic	5.10*	−0.99	−3.94*	−2.38**	2.74*
R^2	51.06%				
F	6.26*				
n	28				

*Significant at $\alpha = 0.01$.
**Significant at $\alpha = 0.05$.

uncertainty avoidance and individualism dimensions and positively by the masculinity dimension. Basically, societies where people are essentially tolerant of ambiguity, are collectivist in their relations with others and show a preference for competitiveness, achievement motivation, assertiveness and the enjoyment of material success, have strong conditions for professional self-regulation. This result supports the cultural determinism in accounting, and contributes to an explanation of the difference in the degree of professional self-regulation internationally. Basically, cultural differences in the degree of professional self-regulation from one country to another is significant. A universalistic claim is not warranted on the basis of this evidence and at this stage in the development of professional self-regulation internationally. One consequence of this situation is the difficulty countries may encounter in their efforts to harmonize accounting and auditing principles and facilitate the exchange of accounting services internationally. This cultural determinism is not to be taken, however, as a fixed phenomenon. In the long-run, people, irrespective of culture, may be compelled to adopt industrial attitudes and behaviors such as rationalism, secularism, and mechanical time concerns in order to comply with the imperatives of industrialization [Kelly et al., 1987]. This competing hypothesis, know as the convergence hypothesis, maintains that basically managerial beliefs are correlated with stages of industrial development [Harbison and Myers, 1959].

As a result of these changes, one may expect in the future a convergence towards a greater degree of professional self-regulation in accounting as countries reach similar stages of industrial development. Further research is needed to test the cultural determinism versus the convergence hypothesis by examining the relationships between the changes in the degree of professional self-regulation in accounting and changes in the stages of industrial development internationally.

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A COMPARISON OF REGULATION THEORIES:

THE CASE FOR MANDATED AUDITING IN THE UNITED STATES

Haim Falk

ABSTRACT

Competing theories explaining the economic regulation phenomena are examined in this paper in the context of the 1934 mandatory auditing requirements for publicly traded firms in the United States. The demand for and supply of auditing services in a nonregulated setting is analysed, followed by an analysis of the evolution that led to the mandatory auditing requirements. While some support for the economic incentive driven (capture) theories is found, those theories fall short of fully explaining the observed phenomena. It is suggested that theories emphasizing the role of

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ideology, ethics and self satisfaction on the part of legislators may better explain the mandating of audits for publicly traded firms in the United States.

I. INTRODUCTION

There are many theories which attempt to explain the economic regulation phenomena. These theories may be clustered in four broadly defined groups: (1) economic incentive driven, (2) public interest, (3) ideology motivated, and (4) power base theories. These four groups of theories are examined in this paper through an analysis of events preceding the 1934 Securities Exchange Act which mandates auditing by CPAs of financial statements of publicly traded firms. The analysis illuminates the events surrounding the 1934 mandatory audit legislation, and is helpful in understanding the legislative process. This understanding may be useful in better predicting the future voting behavior of legislators in similar circumstances.

In the absence of regulatory intervention, agency theory suggests an economic role for auditing in economic contracting settings [Watts and Zimmerman, 1986, Chapters 8 and 13]. The hiring of independent auditing services is motivated by the possibility of information asymetries and moral hazard on the part of agents. This, as Benston's [1979] analysis demonstrates, is expected both in settings where managers are sole owners of their firms (with or without borrowed capital), and in those where managers own less than 100 percent of their firm.[1] Wallace [1987] offers two additional hypotheses in support of demand for auditing services: the so-called (1) information, and (2) insurance hypotheses. The former suggests, according to Wallace, that auditing reduces risk and leads to "the enhancement of decisions and an increase in profit" (p. 14), and the latter hypothesizes that "trustees, investors and creditors wish to both demonstrate their exercise of prudence and insurance against losses" (p.16) (the deep-pockets phenomena). She also suggests that regulators interested in isolating "themselves from criticism" tend to increase the demand for audit services. External audit, according to Wallace [1987] and others, enhances control [Mautz, Tiessen, and Colson, 1984] and lends credibility to managers' reports [Simunic and Stein, 1986].

Sufficient evidence for the demand and supply for auditing services in a nonregulated setting may be viewed as supportive of agency theory.

This may render regulation unnecessary for the public good. Therefore, I will review the evidence for auditing services before the enactment of the 1934 Securities Act. Since auditing of publicly traded firms by a CPA was made mandatory by the 1934 Act in spite of evidence for the voluntary acquisition of such services, I shall examine the events that may have led to the regulation. The results of that examination will then be used to help explain the mandatory auditing phenomenon in light of the four competing groups of regulation theories.

II. REGULATION THEORIES

Economic regulation has attracted considerable attention by researchers in economics and related areas (e.g., accounting). As mentioned earlier, the competing theories which attempt to explain economic regulation phenomena can be classified into four broadly defined categories: (1) the economic incentive driven theories, also known as capture theories [Stigler, 1971; Posner, 1971; Peltzman, 1976; Abrams and Settle, 1978; Peltzman, 1982] or producer protection hypothesis [Jordan, 1972]; (2) the public interest theories [Buchanan and Tullock 1965; Downs, 1957; Lev, 1988]; (3) a group of mixed theories claiming that neither the first nor the second group of theories fully explain the economic regulation phenomena, [Mitchell [1979], Kau and Rubin [1979], Kalt [1981], and Kalt and Zupan [1984] and instead emphasizes the role of ideology ethics and self-satisfaction on the part of regulators [Stigler, 1972] in economic regulation; and (4) the power-base theory (discussed but dismissed in Lev, 1988), suggesting that economic regulation serves legislators and regulators in increasing their economic power.

The economic incentive driven theories stipulate that economic regulation is granted to those who seek it. Economic regulation is explained by economic incentive on the part of legislators (and regulators) and the soliciting group, since both parties expect to benefit from it. According to these theories, altruistic public goals are insignificant in the political process that results in the regulations. In contrast, public interest theories suggest that regulators are concerned with the advancement of socially desired goals. Objectives such as consumer protection, helping the poor, or enhancement of equitability prompt economic regulation. According to the public good theories, economic incentives on the part of either the regulator or the regulated are not necessary for the initiation of regulation. A weakness of these theories is that public good is poorly defined.

The group of theories that emphasizes the role of ideology and self-satisfaction on the part of legislators centers around the following arguments: (1) public interest or good does not necessarily contradict human behavior motivated by economic incentives; (2) since public goals or public good are hard to define and to measure, legislators' personal definitions of "public interest" (ideology) play a central role in legislators' votes. Legislators may resort to ideology because: (a) They face uncertainty with respect to items that will be on the agenda during their term in office and, gathering information regarding this and constituents' preferences is costly and not always practical. (b) An ideological vote ("to do the right thing") is accompanied with self-satisfaction, (self-satisfaction is a private good, whereas political gains or economic benefits, which result from the granting of regulation, must be shared with other legislators). (c) Legislators are elected for a defined period of time, and expulsion or censure as a result of an ideological vote is not likely. Since election platforms are composed of a large number of issues, an ideological vote on one or more issues (even contrary to the platform) on the part of a legislator may not please some of his constituents, but may not be too costly to him.

Nevertheless, an ideological vote may be risky. Some or all the constituents may not share the specific ideology of the legislator, and some may be negatively affected by the passing of the new regulation. Thus, legislators, according to this group of theories, are more tempted to exercise an ideological vote early in their terms in office. That is because voters normally possess decaying memories, and it is costly for voters to monitor the voting record of their representative for a long period of time.

According to the power-base theory, economic regulations increase the economic power of the regulating agency because it commands more resources to carry out the regulatory responsibilities, which in turn may lead to further economic or political gains for legislators and regulators. Economic incentives on the part of the regulated group or groups, or solicitation of regulation by nonlegislators are not necessary conditions for the initiation of economic regulations.

As I examine the markets for audit services prior to 1934, evidence for the demand for audit services in the pre-regulated periods is demonstrated. I then examine the four groups of theories. Since no apparent economic benefit to legislators from voting for the audit provision is identified, the economic incentive driven theories do not gain sufficient support. Congress rejected a suggestion to allocate the audit work to government, an act contradicting the power base theories. No public cry demanding mandatory audit of financial statements of publicly traded

firms was documented during or preceding the pre-legislation debate in Congress. While the New York Stock Exchange and other exchanges strongly opposed the mandatory audit provision, no strong support was voiced by affected parties other than the accountants. Thus, the (pure) public good theories did not gain strong support. The analysis of the voting patterns of members of both the House and the Senate, among other findings, lend support to the group of ideology motivated theories.

III. AUDITING SERVICES PRIOR TO REGULATION

The first American companies were established by British shareholders, who hired British accountants to audit the financial statements of those firms [Benston, 1979]. Thus, a short review of the pre-mandatory auditing services in Britain may be useful.

Although the British Companies Act of 1845 made it lawful to hire auditors [Littleton, 1933, p. 289],[2] British law did not require limited liability corporations to provide audited financial statements until 1900. Such audits were to be performed by members of a recognized accounting profession. Banking corporations in Britain have been subject to mandatory audit since the beginning of the nineteenth century, but the Act of 1862 rescinded that requirement, which was reinstated in 1879. Reported evidence suggests, however, that few banks ceased to be audited between 1862 and 1879 [Parker, 1986, p.34; Previts, 1985, p.27].

Previts [1985] documents evidence that accountants advertised their (audit) services in Britain as early as 1824 [p.16], and that railway companies appointed professional auditors as early as 1849 [p.25], although they were not required to be audited until 1867 [1985, p.22]. Nonrailroad limited corporations used auditing services as early as 1864. By the second half of the nineteenth century, professional auditors in Britain replaced the audit committees of shareholders, and by the end of that century, 2,700 chartered accountants served the British Empire [Previts, 1985; p. 17]. Benston [1979, 1975] documents additional evidence regarding the voluntary acquisition of auditing services in Britain.[3]

Advertisement of services by American public accountants as early as the 1880s has been reported [Previts, 1985, p. 49]. Carey [1969] provides evidence concerning voluntary auditing as early as 1890 [p. 144]; he reports that many large U.S. firms, especially railroads, began to have their financial statements audited between 1886 and 1905 [p. 26].[4] In 1926, 82 percent of the firms listed on the New York Stock Exchange (NYSE) published audited annual financial statements [Benston, 1979].

Chow's [1982] findings suggest that, in that year the audited firms were generally large companies that had a high debt-to-firm value ratio, and had more debt covenants than unaudited firms. In 1932, the New York Stock Exchange required all firms to provide annual audited financial statements [Carey, 1974b] and in 1933 all 1,157 firms on the NYSE provided annual reports (60 percent also provided quarterly reports) [Seligman, 1982, p. 48]. By 1934, before the Congressional hearings concerning the 1934 Securities and Exchange Act began, 93 percent of the NYSE firms had provided audited statements [Benston, 1969].

Voluntary auditing was common in the noncorporate sector prior to regulation. Wallace [1987, p. 9] reports findings indicative of wide use of auditing service by municipalities in the 1900s before such services became mandatory in some cases. The fact that Price Waterhouse entered the field of municipal auditing (and accounting) in 1913 indicates the demand for these services [Previts, 1985, p. 51].

Evidence suggests that before becoming mandatory, audit services were in demand. Carey [1969] provides indirect evidence as to the demand for voluntary audits. In 1908, the American Bankers Association recommended that financial statements of note brokers be audited by CPAs [p. 291]. A 1908 survey of 850 bankers nationwide by the American Association of Public Accountants (AAPA) indicated that most bankers had a very positive attitude toward certification by CPAs of financial statements of loan applicants and borrowers [p. 291]. In 1915, the National Association of Credit Ratings requested that rating books indicate whether ratings were based on audited statements [p. 293] and, in 1920, commercial banks began to press for audited financial statements of firms applying for loans [p. 145]. Interestingly, the membership of the American Institute and the American Society increased from 26 in 1887 to 4,815 in 1930 [Previts, 1985, p. 4]. In the two years after auditing of publicly traded corporations became mandatory, membership in the profession reflected a very minor increase.[5] This very minor increase in membership of the organized CPA profession during the years after auditing was made mandatory suggests that, the demand for audit services did not increase, at least not significantly, immediately after 1934.[6]

IV. PROMOTION OF AUDITING SERVICES

A year after its establishment, the *Journal of Accountancy* advocated, in an editorial in its August 1906 issue, the periodic auditing of insurance corporations by independent public accountants. In 1912, editorials in the

Journal of Accountancy promoted the idea that stockholders (as opposed to management) elect independent auditors for their firms. The *Journal* also urged accountants to state clearly their qualifications in their report to enhance its acceptance by the public [Carey, 1969, p. 80–83]. In 1915 the Association of Public Accountants actively promoted the idea that financial statements related to commercial papers should be audited by an independent auditor [Carey, 1974b].

The organized accounting profession looked for partners in the business community to promote the mutual interest of auditing services. In 1926, George O. May addressed an annual meeting of the Institute on Auditing and Accounting Standards. He suggested approaching the NYSE and cooperating with the latter to establish such standards [Carey, 1974b]. Acting upon his advice, in 1927, President West of the Institute offered the NYSE the Institute's cooperation in setting auditing standards. This offer was rejected, but was repeated later that year. In 1930, the Institute's efforts resulted in some success when the NYSE invited the Institute to establish a joint committee on reporting and auditing [Carey, 1974b].[7] Later that year, the Institute also established its own committee on auditing practices chaired by George O. May [Carey, 1969, p. 165].

To promote additional auditing services and to make them more appealing, a special committee of the Institute suggested, in 1932, the establishment of "standard auditing language" [Carey, 1969, p. 166]. Such standard language, it was argued, would make the auditor's report and services more appealing to the business community. In 1933, the NYSE proposed a uniform audit report form [Carey, 1969; pp. 177–178; Seligman, 1982, p. 82].

The organized profession was not alone in promoting auditing services. As previously indicated, the National Association of Credit Ratings requested, in 1915, that rating books indicate whether their ratings were based on audited financial statements [Carey, 1969, p. 293]. In 1916, Chairman Hurley of the Federal Trade Commission (FTC) suggested registration of auditors that would be acceptable to the FTC and the Federal Reserve Bank (FRB) [Carey, 1969, p. 130]. Hurley believed that such action would enhance the reputation of auditors and promote a demand for audited statements, but the Institute opposed such a requirement citing the possibility of creating a two-tiered membership: one for those who were allowed to practice before the FTC and FRB, and one for those who were not. Hurley's suggestion was never translated into regulation.

In 1917, the Federal Reserve Board published, as its own bulletin, prepared by the Institute, *Approved Methods for Preparation of Balance*

Sheet Statements. Its purpose was to promote the demand for auditing services and to outline what an audit should cover. Some additional help in promoting auditing services came from William Ripley, a professor of political economy at Harvard University and later a close adviser to President Roosevelt. In 1926, Ripley, known for his sharp and harsh criticism of accounting practices and the accounting profession, advocated that the NYSE require all listed firms to have their financial statements audited [Chatov, 1975, p. 19]. It should be remembered that during that year, less than half of the firms traded on the NYSE filed quarterly reports and did not disclose, in their annual reports, items such as sales, gross income, depreciation policies, and inventory methods [Parrish, 1970, p. 404]. The concentrated effort to promote auditing was successful in 1932, when the NYSE required all listed firms to provide financial statements audited by qualified accountants [Carey, 1969, p. 169].[8] There is no evidence, however, that other exchanges followed the NYSE action.[9]

In 1933, the publication *Audit of Corporate Accounts Report,* jointly issued by the Institute and the NYSE, was endorsed by the Controllers Institute of America [Carey, 1969, p. 178]. This pamphlet, which emphasized the importance and the contribution of the auditing function, was widely distributed in 1934 (prior to the commencement of Congressional hearings) to promote interest in audited statements [Carey, 1974b].

This evidence suggests that the accounting profession found some important allies, such as the National Association of Credit Ratings, the American Institute of Controllers, FRB, and the NYSE, as well as influential political figures, in its effort to promote audit services. By 1932, the NYSE required all listed firms to have their statements audited. What, then, motivated the profession to actively seek regulation to make the audit mandatory? Indeed, there is some indirect suggestion that at that time, additional audit requirements would have exceeded the profession's capability or capacity to render such services. In June 1934, before the enactment of the 1934 Act, the Institute strongly objected to having quarterly statements audited by independent auditors [Carey, 1969, p. 194].

V. PROMOTION OF MANDATORY AUDITS

The accounting profession actively solicited legislation for a mandatory audit long before the 1934 Act was conceived. In 1906, the AAPA

appointed a special committee to support legislation for mandatory audit of financial statements issued by life insurance corporations to be performed by public accountants [Carey, 1969, p. 57]. Editorials in the *Journal of Accountancy* in 1907 supported mandatory audit of financial statements issued by banks, railroads, and insurance corporations [Carey, 1969, pp. 54–55]. In 1914, however, it was evident that this concentrated effort had not been successful. The Federal Reserve Board announced that for the time being firms under its jurisdiction would not be required to have their financial statements audited [Carey, 1969, pp. 62–63]. Further, in that year, the Comptroller of Currency required that national bank examiners issue two reports, one to the Comptroller and the other to the banks' directors. That was intended to save the banks the expense of an outside audit [Carey, 1969, p. 61].

In 1917, the two CPA organizations joined efforts by establishing a committee composed of Montgomery, May, and Chase to lobby federal authorities to mandate the audit of financial statements that were submitted to the FRB and the FTC [Carey, 1969, p. 131]. The unsuccessful lobbying efforts of President Gord of the Institute in 1917 regarding having the Treasury Department mandate audits of tax returns have been documented by Carey [1969, p. 216].

The profession's efforts for mandatory audit regulations intensified in 1919 to 1922. Editorials in the *Journal of Accountancy* urged Congress to mandate audits for all public offerings [Carey, 1969, p. 145]. On May 12, 1921, the American Society of CPAs was incorporated in the District of Columbia. An explicit objective of this body, which employed about twenty members, was to solicit legislation for mandatory audits and to restrict public accounting to CPAs [Carey, 1969, p. 330]. Previts [1985, Chapter 2] provides ample evidence as to the accounting professions' lobbying "to have the profession confirmed in legislation." Indeed, by 1921, all 48 states had CPA legislation granting "legal franchise to CPAs" [Previts, 1985, p. 34]. After this important goal was achieved, editorials in the *Journal of Accountancy* in 1922 urged Congress to follow the lead of Britain, which had already mandated the audit of financial statements of practically all corporations [Carey, 1969, p. 161].

There was "little indication, however, that Congress was much concerned or even interested in the necessity of having CPAs audit financial statements" [Wiesen, 1978]. The first draft of the 1933 Security Act proposed mandating audits only for cases involved in FTC inquiries. The Institute then began to lobby Congress directly for audit legislation for all publicly traded firms [Carey, 1969, p. 184]. In 1933, Arthur Carter,

President of the New York State Society, testified before a senate committee and strongly advocated mandating audited financial statements for all prospectuses [Carey, 1969, p. 185–86; Previts, 1985, p. 121]. In 1934, CPAs held meetings to voice their demand for mandatory audits of publicly traded corporations' financial statements by independent certified public accountants.[10] According to Carey [1969, p. 183], the Institute hired former Judge Harry Covington to monitor the hearings and to lobby for mandatory audit; his lobbying efforts were most effective. Carey assessed that Covington, "who was well tuned in government circles," was the person who convinced legislators to mandate audits of all publicly traded firms in the 1934 Act.

Although the auditing of financial statements of publicly traded firms appears common before the enactment of the 1933 and 1934 Acts, the profession had good reasons to worry about losing its gains. A Senate committee seriously considered mandating audit by government officials before it rejected the idea [Arthur Andersen, 1972, p. 48]. Although the NYSE mandated audit, other exchanges across the country did not enforce such requirement.[11] The promotional efforts by the profession conform with the economic incentive driven theories [Stigler, 1971; Posner, 1971; Peltzman, 1976, 1982; Abrams and Settle, 1978].

VI. WHAT COULD THE PROFESSION GAIN?

Benston [1979] and others have suggested that a short-term advantage to the profession of mandatory audit requirements was to increase the demand for audit services. This would have resulted in increased income for members of the profession, at least until others could join the profession and share the work and the income. The possibility that increased income was a motivating factor cannot be ignored.[12] Stigler [1971] reports that the average income of CPAs increased significantly following certification. Similarly, Young's [1986] findings suggest that licensing leads to higher fees with no higher quality.

Joining the profession requires passing the CPA Examination, which could be used as a barrier to entry. In 1921, only 13 percent of the candidates passed the exams [Wallace, 1987, p. 24]. Dopuch and Simunic report, however, that between 80 and 90 percent of candidates who repeated the exams eventually pass them; consequently, the exam is not a barrier to entry.[13] However, it is argued that audit regulations may provide auditors with an opportunity to create more "make work" rules

(Watts and Zimmerman, 1986, p. 313) and thereby increase the demand for their services.

VII. WHAT DID REGULATORS GAIN?

The economic incentive driven theories suggest that both regulators and legislators must benefit by granting economic regulation. One incentive for legislators' actions is the desire to increase their chances for reelection. In this particular situation, however, the membership in CPA organizations was, at the time of legislation, about 4,800[14] in the 48 states—not a large portion of the electorate. Although the demand for mandatory auditing was sporadically supported by other business organizations, the benefits per capita were unlikely to be high. The support of the mandatory audit by other groups such as bankers, insurance organizations, and controllers was not strongly demonstrated during the hearings that preceded legislation. Chairman Rayburn of the House Commerce Committee assessed that in 1928 there were 18 million stockholders in the United States [*The New York Times*, May 6, 1933], yet the press did not report a public cry for or even testimony on behalf of stockholders requesting mandatory audit. (See also Benston [1979]).[15] Thus, it is unlikely that politicians' perceived that their vote on this issue would affect their reelection.

Economic incentive driven theories may support the theory that voters consider candidates' records when a contract is at stake but not when a specific policy is considered. The intervals between elections are in years (note that both a president and one-third of the Senate had been voted into office shortly before the enactment of the security acts); political ownership is not transferable during the intervals, and issues may be forgotten before the next election. Additionally, the market for politicians is not competitive, barriers to entry into politics exist, and gathering information as to politicians' behavior and policing their behavior are costly.[16] Therefore, one may conclude that the audit legislation was not likely influenced by economic incentives on the part of legislators.

VIII. IDEOLOGICAL MOTIVES

Roosevelt's election campaign platform promised the regulation of security tradings. Thus, the passage of the 1933 and 1934 Acts fulfilled an election promise. It could be argued that mandatory auditing was perceived as part of this package, but it was not. Indeed, as indicated earlier,

the mandatory audit of financial statements was not a high priority for Congressional committees.[17] By the time it was made mandatory, the audit of financial statements of publicly traded firms was already a common phenomenon. However, the NYSE strongly opposed both the 1933 and 1934 Acts. Although it had required audited statements from listed corporations beginning in 1933, there was no assurance that it would not reverse its decision after the enactment of the 1934 Act.[18] Further, as noted, other exchanges did not have such requirements. Thus, it is not unreasonable to assume that legislators, after recognizing the value of the audit function to the public, wished to assure the continuation of the auditing of financial statements of publicly traded firms after 1933.

The added value of the mandatory audit by CPAs to the public is threefold. First, although the traditional role of the voluntarily hired auditor was to detect and report breaches of implicit or explicit contracts (i.e., stewardship) the auditor's role intended by legislation, according to Wiesen [1978, Chapter 1], was to monitor management disclosure of information assumed to be used in investor decisions. This significantly extended the scope of the audit. Second, auditors' independence (the probability that they report detected breaches of contracts and rules) was enhanced by the imposition of the legal liability provisions in the act. Third, granting audit rights to members of an organized profession created an improved mechanism to convey information concerning independence and competence of professional auditors [Watts and Zimmerman, 1983]. Further, membership in an organized profession serves as additional collateral bond: as with the loss of reputation, the loss of membership may lead to loss of clientele and fees. Thus, the professional organization adds value to the service.

These arguments support the public interest and ideologically driven theories. Because of the heterogeneity of the CPA profession, an ideological vote for or against the mandatory audit provision was not costly for legislators. Although such a vote could have affected all publicly traded firms, many of those firms began to be audited long before the enactment and the NYSE requirement. Further, the cost of the nonvoluntary audit to individual shareholders (voters) was not likely to be a consideration. Indeed Chow [1983] found no effect of the 1934 Act on the wealth of shareholders.[19]

The New York Times did not report on the ideological beliefs of the various members of Congress who voted for the 1933 or 1934 Acts. However, it is not inconceivable that the following statistics, cited by Chairman Rayburn the day the 1933 Act passed the House, influenced the legislators to vote for both the 1933 and 1934 acts, including the audit

provision. Chairman Rayburn asserted that between the end of World War I and 1933, $50 billion worth of new securities, of which $25 billion had proved worthless, had been floated. At that time the United States had approximately 300,000 corporations with assets of over $200 billion. The 200 largest corporations controlled estimated assets of $81 billion, and 2,000 directors controlled about half of the corporate wealth. It was estimated that 18 million shareholders were investing in publicly traded firms [*The New York Times,* May 6, 1933]. It was also estimated that by 1933, 1.5 billion of defaulted bonds had been issued by foreign governments and agencies [*The New York Times,* May 9, 1933].

Indeed, the House passed the 1933 Act *unanimously* after a six-hour debate on May 5, 1933. On May 8, 1933, the Senate passed the Act "without the formality of a record vote" after less than two hours of debate. *The New York Times* [May 5, 1934] reported that "Republicans join Democrats sending measure to Senate by vote of 280 to 84" after a two-day debate. It was also reported that Mapes, assistant to the Republican Leader Snell (who voted against the bill) fiercely supported the 1934 Act and several amendments that Snell opposed. The 1934 Act was passed on May 12, by a vote of 62 to 13. Important to the subject of this paper is the fact that dissatisfaction and opposition focused on sections dealing with margin requirements and trading rules. There was no mention of opposition to Section 13a, which mandates auditing. Analysis of the votes show that 47 Democrat and 15 Republican senators supported the 1934 Act and one Democrat joined 12 Republicans who voted against the bill. Clearly, more than a few Republicans and at least one Democrat voted contrary to their respective party lines. *The New York Times* noted that "not in years has a bill of such a controversial nature been passed by an overwhelming majority." It seems, therefore, that the motivation for the positive vote was, at least in part, the conviction that "that is the right thing to do" or (pure) ideology [Kalt and Zupan, 1984].

IX. POWER BASE THEORY

Before passage of the Acts, two avenues were open to Congress: to have government employees administer the auditing function or to leave the auditing to the CPA profession but continue to have the SEC supervise the quality control. The latter option was much cheaper for the SEC and constitutes to some extent taxation by regulation [Posner, 1971]. The choice of the latter contradicts the power base theory. Indeed, the system approved works quite efficiently. The staff of the SEC's chief accountant

has been quite small since its establishment in 1935, and the Commission has exercised full control on the auditing function, as the following examples indicate.

After voluntary actions by the profession failed, the SEC mandated in January 1935 that audit certificates must indicate the scope of audit [Chatov, 1975, p. 101]. During that year, rule 2e(1), which authorizes the SEC to deny the right to practice before it and to discipline auditors who practice before the Commission [Turner and Jensen, 1987, p. 37], was enacted. Indeed, as Kunitake [1987] reported, from 1935–1985 the SEC investigated 130 practitioners and 47 firms. Except for 5 cases involving individuals and with 3 CPA firms, no action was taken. Enforcement actions by the SEC include censure (in 6 individual and 13 cases), temporary suspensions (involving 48 and 19, respectively), permanent suspensions (33 and 3 cases), agreement on voluntary resignations, and other settlements.

A. Conclusion

This paper offers an analysis of the demand and supply of audit services in pre-regulation periods, and documents that by the time the 1934 Securities Exchange Act was enacted, audits of publicly traded firms were already a common phenomenon. Accountants and others promoted voluntary and mandatory audits of financial statements long before 1934. Since membership in professional CPA organizations, and the number of candidates seeking entry to the profession did not increase in the two or three years after 1934, it seems that regulation did not significantly add to the existing demand for audit services by CPAs. Yet, CPAs actively solicited regulation for mandatory audits in 1933 and 1934. That may be explained by the fear that the demand for voluntary audit might decline (i.e., the NYSE might have revised its 1932 decision to require audited financial statements, and other exchanges would not require audits, and fear that government bodies might take over the audit function). Further, it is possible that the profession thought that if the system worked, mandatory audits might be extended to additional firms. Indeed, in 1964 the act was amended to include the OTC firms under the mandatory auditing provision [Previts, 1985, p. 101]. Thus, the mandatory auditing provision was expected to increase CPA's wealth and reduce the risk of losing business.[20] Thus, an incentive on the part of CPAs to seek regulation of mandatory audits (besides the "public good" argument) has been demonstrated.

It is conceivable that the public interest played a role in the regulation of mandatory audits [Landis, 1934, p. 41]. It seems, however, that given pre-election promises by Roosevelt for the regulation of securities trading, the strong opposition of the NYSE to the 1933 and 1934 legislations, the enormous amount of defaulted securities, and probably some convincing by former Judge Covington, the majority of members of the Senate and House felt that mandatory audits was "the right thing to do" ideologically [Kalt and Zupan, 1984]. Of course, these regulations also provided a "power base" for regulators [Lev, 1988, p. 11]. The latter, however, is a questionable argument in light of the rejection of the suggestion, in early discussions, to allocate the audit to government bodies. In retaining the oversight function within the SEC, but allocating the mandatory audit practice to public accountants, regulators ensured that even if the NYSE (and other exchanges) had second thoughts and reversed the 1932 requirements for audited statements, publicly traded firms would continue to have their statements audited[21], and the cost of audits, to the government would be small. By "delegating" the audit practice to public accountants, the SEC not only reduced its costs, but also reduced ex ante complaints "and risk of being held responsible for (possible) scandals ex post."[22] Of course, by imposing audit costs on firms which otherwise would not have acquired auditing services, regulators taxed those firms and imposed on them the cost which would have been born by government (all taxpayers) for the public good.[23]

The analyses in this paper partially support that accountants were driven by economic incentives. Such incentives on the part of legislators were not evident. No strong support for the pure public interest theories of regulation was found. It seems that the evolution of mandatory audit for publicly traded firms in the United States supports the third group of theories advocating ideological motives. Though the ideologies of the individual supporters of the acts were not disclosed, voting patterns in the House and Senate support such arguments.

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NOTES

1. Jensen and Meckling [1976] explore management and bond holders' incentive to hire auditors. Smith [1979] looks at managers' incentive to hire auditors when the firm has outstanding debt. Fama [1980] examines superiors and subordinate managers' incentives to monitor each other (hire auditors), and Fama and Jensen [1983] analyze the incentives for outside directors to hire audit.

2. It was a requirement, though, that an auditor must own at least one share in the audited corporation [Previts, 1985, p. 18].

3. Watts and Zimmerman [1983] trace the provision for audited reports to the English joint stock companies in the late sixteenth century.

4. For example, in 1902, Price Waterhouse was elected auditor of U.S. Steel, which began publishing audited reports in 1903 [Carey, 1969, p. 28] and in 1906 the president of Equitable Life Assurance Society announced that the Society's accounts would be audited and published as of 1907 [Carey, 1969, p. 57].

5. Young [1988, Table 1] reports on the number of candidates who sat for the CPA exams in the states of Illinois and California during the period 1919 to 1969. In 1930, 538 and 325 candidates in the respective states sat for the exams, and in 1936, the respective numbers were 463 and 296. The geometric average growth rates were −0.02 and −0.02. The growth rates for the years 1933, 1934, 1935 were −0.07, −0.09 and −0.18 for Illinois, and −0.16, −0.04 and 0.06 for California. These figures may be indicative of the decline in the marginal demand for entry into the CPA profession despite the poor economic conditions during those years (average national unemployment rate for that period was 18.8 percent). Taken as a whole, these findings may suggest that the demand for audit services did not increase after the issuance of regulations, which made them mandatory.

6. In fact membership declined in 1935 to 4,515 (from 4,815 in 1930). This might have been a reaction to the new liabilities and responsibilities imposed on auditors by the 1933 Act. One can not infer with certainty from the minor changes in membership that the demand for audits before regulation was approximately the same as that after regulation. It is possible that an increase in demand for audit services was satisfied by the hiring of non-CPAs by auditing firms. The evidence in note 5, however, suggests otherwise. The author is not aware of publicly available evidence for the demand for audits in 1933–1935. Nevertheless, the fact that 93 percent of the NYSE firms were audited in 1934 before audits were mandatory [Benston, 1969] may indicate approximately stable demand.

7. Nevertheless, in his testimony before the House on March 22, 1934, Mr. Whitney, the chairman of the NYSE, assailed the accounting provision saying that "the existence of such rules would tend to crystallize and prevent all future progress in the accounting art. Accounting is and always must be so much a matter of judgement that the best that can be done is to try by common consent to narrow in certain instances the limits within which judgement may be properly exercised" [*The New York Times,* March 23, 1934, p. 2].

8. It might be argued, however, that that requirement by NYSE was prompted by the anticipation of legal requirements as to audits. The NYSE opposed the 1933 and 1934 Acts and, by requiring audited statements, it might be argued, the NYSE attempted to demonstrate that no legislation was needed. However, in his testimony and written sub-

mission to the Senate Committee, during the hearings that preceded legislation, the NYSE Chairman did not oppose audit requirements.

9. However, as is evident from Whitney's testimony on March 22, 1934, consultation between the NYSE and exchanges in ''other major cities'' were taking place in preparation for his testimony. [*The New York Times,* March 23, 1934]. It is reasonable to assume, therefore, that the NYSE did not act unilaterally.

10. For an example of such a meeting, see *The New York Times* [March 23, 1934]. It reported on a 22 March 1934 CPA meeting at which changes to the 1934 proposed act were required. ''Several accountants declared that the bill appeared to leave a loophole for uncertified accountants. This would deal a blow to the movement for independent audit which has been lead by the Stock Exchange and the associations of accountants in recent years.''

11. Okcabol [1987] provides some indirect evidence to this effect.

12. For example, Previts [1985, p. 136] reported that audit fees earned by the big eight accounting firms in 1984 constituted between only 68 and 50 percent of their total operating income, a decline from between 79 and 62 percent in 1974. The clients' average dollar expenditure on audit per million dollars of revenue also declined as follows [Previts, 1985, p. 141]:

Industry	*1974*	*1984*
Manufacturing	$ 630	$ 480
Oil and Gas/mining	642	408
Financial	1,482	1,007
Insurance and Utility	306	243
Retail/Services	429	268
Average all industries	698	481

This, however, may be due to increase in efficiency of audit services and diversification of services offered by CPA firms, or some spill over between audit and related work. The relevant measure would be income from audit per unit effort (e.g., hours). No statistics are available to the author in this regard.

13. But, see also Young [1988] who suggested that such barriers existed before states adopted the Advisory Grading Service scheme initiated by the AIA in 1917, and that states increased qualification requirements afterwards [p. 290].

14. It is conceivable that not all of the CPAs were in public practice. Some were probably employed by government and industry and, therefore, had a lesser stake in the audit provision.

15. Screening of *The New York Times* of the relevant period did not reveal cases, except for Convington's lobbying, where audit by *CPAs* (or independent auditors) has been advocated before a House or Senate committee.

16. It might be argued that at least some politicians could have gained by increasing their employment opportunities after leaving office. Although information in this respect is not available, it is unlikely that many senators were thinking of joining the CPA force.

17. Nevertheless, the restoration of public confidence in the securities markets had been on the agenda of legislators since the crash of 1929. The Senate Banking and

Currency Committee investigated the alleged securities abuse and fraud, including the well-publicized testimony by La Guardia in April in 1932. Seligman [1982] assessed that La Guardia's testimony was influential in prompting the Democrats to make securities regulations a major part of their election campaign. After Roosevelt's landslide victory, he vowed to strengthen the Senate investigation committee [*The New York Times*, 26 January 1933], an act which received widespread publicity.

18. Indeed, as Merino, Koch, and MacRitchie [1987, pp. 754–5] noted, the secretary of the NYSE wrote on May 4, 1931 to George O. May indicating that he believed that voluntary reform might deter "government institution." In a 1932 article in the *Journal of Accountancy*, Andrews asserted, however, that the audit requirements by the Exchange would not silence the demand for legislative action.

19. Note that the number of stockholders in the U.S. was estimated to be about 18 million.

20. Of course, this applies to members of the CPA profession as a whole, not to individuals. Individuals may face disciplinary actions by both the regulators and the profession and lose business to other CPAs.

21. Agency theory suggests that managers are motivated to hire auditors even in a regulation-free environment. However, note that by 1926 only 82 percent of NYSE firms had been audited and by 1934 (in spite of NYSE requirements) only 93 percent of those firms provided audited statements. It might be argued that for those firms that did not voluntarily hire audit services such services were not cost efficient. Perhaps so, but that can also be viewed as being supportive of the "public interest" and "ideology" arguments [Lev, 1988; Kalt, 1981]. As Lev stated: "The interests of the less informed investors should, in general, be favored over those of the more informed investors" [p. 13].

22. This idea was borrowed from William Kinney Jr. as cited by Lev [1988, fn. 19].

23. This, of course, assumes that legislators believed that auditing works in the public interest and/or agrees with their ideological views. This view is not inconsistent with findings offered by Benson and Strommen [1981] suggesting that voting behavior in the U.S. Congress is tied to religious and other ideological beliefs.

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THE POTENTIAL EFFECTS OF DIFFERENT VOTING RULES ON THE FASB DUE PROCESS

Prakash P. Shenoy, Keith A. Shriver and David B. Smith

ABSTRACT

The institutional legitimacy of the FASB is dependent upon a substantive and procedural due process. A major step in the due process is the combination of individual Board members' preferences into an aggregate FASB decision on a statement of financial accounting standards. Different voting rules may have varying degrees of "success" in aggregating individual Board members' preferences. The purpose of this paper is to analyze four voting rules and to demonstrate that the ultimate FASB decision about a statement of financial accounting standards may be dependent upon

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which voting rule is used, even though each rule is based on the same set of Board member preferences.

I. INTRODUCTION

According to Johnson and Solomons [1984], the institutional legitimacy of the Financial Accounting Standards Board (FASB) is dependent upon a substantive and procedural due process. The existing literature about the FASB due process tends to concentrate on the analysis of individual Board members' preferences for an accounting issue and the political influences of constituent groups on the development of those individual preferences. In contrast, this paper extends the prior research and focuses on voting rules which may be used to aggregate those individual preferences into a composite FASB decision on an accounting issue.

The remainder of the paper is organized as follows. Section II discusses the FASB due process and the importance of a voting rule to this process. Section III examines four voting rules and their potential impact on the FASB's collective choice for an accounting standard. A summary and conclusion are provided in Section IV.

II. THE FASB DUE PROCESS

The mission of the FASB is to establish and improve standards of financial accounting and reporting. The Board's decisions are based on research conducted by the FASB staff and comments received from various constituent groups. Specifically, the Rules of Procedure of the FASB require that the Board follow an extensive "due process"—a series of steps which ensure that the views of all interested parties receive careful consideration before final standards are adopted [Johnson and Solomons, 1984]. This process is modeled on the Federal Administrative Procedure Act and in several respects is more demanding than that Act [FASB, 1988; and Van Riper, 1987].

In general, six basic steps constitute the overall due process [Miller and Redding, 1988]:

1. preliminary evaluation of the problem,
2. admission to the agenda,

3. early deliberations,
4. tentative resolution,
5. further deliberations, and
6. final resolution

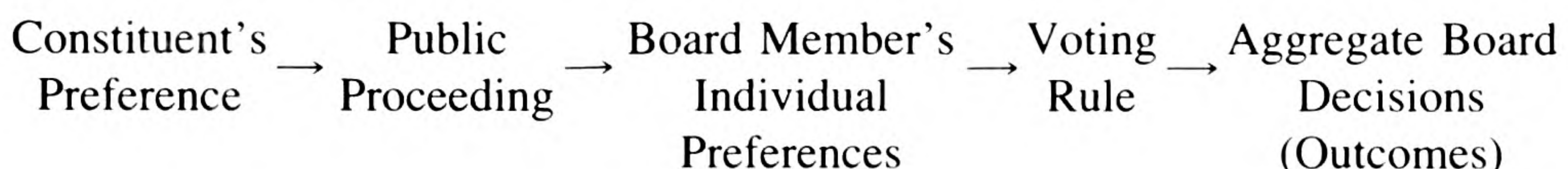
During steps 1, 2, and 3, the Board members attempt to form their individual positions on the issues. At that time the Board members are exposed to the views of the following groups: (a) the constituents (written comment letters and oral presentations at public hearing); (b) the FASB staff (research projects and drafts of proposed documents); and (c) other Board members (official Board meetings and informal discussions of issues). These interactions enable the individual Board members to identify their pre-existing preferences and to possibly develop new preferences.

The FASB staff plays a major role in the identification and development of individual Board members' preferences. Van Riper [1987, p.31] describes this role as follows:

> The board members are the decision makers and they must make many decisions on each of several projects that are under consideration at any given time. The Board must rely on staff members to spend all or a large part of their time on the details of the individual projects, gathering and organizing the information on which board decisions can be based. Therefore staff project managers, not board members, conduct the day to day work on projects, always subject to review and challenge by the board. Informal discussions among board members and between board members and staff take place frequently throughout every phase of a project.

However, because the Board members are distinguished individuals from diverse backgrounds, each Board member may not develop the same preference for an accounting issue. During steps 4, 5, and 6 of the FASB's due process, the focus shifts from the formulation of individual Board members' preferences to the coalescence of individual preferences into a composite FASB position on an issue.

At the ultimate stage of the due process, the Board members must culminate their open decision-making process into a vote on a final standard. Newman [1981] suggests a framework which describes how this process may ensue. Notice that a major step in this process is the combination of individual Board members' preferences into aggregate FASB decisions by way of a voting rule:



Though the accounting literature gives little recognition to the importance of a voting rule, the above diagram and the political science literature suggest that different voting rules may have varying degrees of "success" in aggregating individual Board members' preferences. According to Solomons [1978] and Miller and Redding [1988], the accounting policy formulation process is as much political as logical. Thus, various voting rules may have differential effects on the FASB due process and, thereby, possess potential economic consequences [Zeff, 1978]. Four voting rules are discussed and illustrated in the next section of the paper.

III. THE POTENTIAL EFFECTS OF DIFFERENT VOTING RULES

The purpose of this section is to illustrate that even with a *constant set* of individual Board member preferences, different outcomes may result based upon the selection of a voting rule. Assume that four accounting alternatives have been identified during the due process as viable versions of a statement of financial accounting standards. The four alternatives are denoted respectively by a_1, a_2, a_3, and a_4. Also assume that each of the Board members ranks the four alternatives from most preferred to least preferred as depicted in Table 1. For example, Board Member No. 1 prefers a_1 to a_2, a_2 to a_4, and a_4 to a_3, and so on. These preferences are utilized to illustrate the potential effects of four voting rules, namely plurality voting (PV), sequential binary voting (SBV), Borda rank-order voting (BROV), and approval voting (AV).

These voting rules are by no means an exhaustive list. Rather, they

Table 1. Rank Order Preferences of Seven Board Members for Four Accounting Alternatives

Board Member	*Ranking (Most Preferred to Least Preferred)*
#1	a_1, a_2, a_4, a_3
#2	a_1, a_4, a_3, a_2
#3	a_2, a_1, a_4, a_3
#4	a_2, a_4, a_1, a_3
#5	a_3, a_1, a_4, a_2
#6	a_3, a_2, a_1, a_4
#7	a_3, a_4, a_2, a_1

were chosen because they are used in political settings and because they demonstrate the potential ramifications of different voting rules. The process by which each Board member arrives at his individual preferences, prior to the application of an aggregate voting rule, is taken as a given (individual-specific) variable.

A. Plurality Voting (PV)

In this voting rule, all alternatives are considered simultaneously with each member voting for exactly one alternative. The alternative receiving the most votes is then chosen as the decision of the Board.

As shown in Table 2, a_1 would receive two votes, a_2 would receive two votes, a_3 would receive three votes, and a_4 would receive zero votes. Hence, alternative a_3 would be the Board's choice in this example based on the individual preferences in Table 1.

B. Sequential Binary Voting (SBV)

Alternatives are introduced pairwise in this voting rule so that in each round, one alternative is eliminated. The process continues until only one alternative remains, which then becomes the Board's choice.

For instance, suppose that the four alternatives are considered in the sequence a_1, a_2, a_3, and a_4 (see Panel A of Table 3). In this scenario a_2 wins against a_1, a_3 wins against a_2 and a_4 wins against a_3. Hence, a_4 is the Board's choice (based upon the individual preferences in Table 1) even though it did not receive a single vote under PV above. However, if the sequence of alternatives considered is changed to a_3, a_1, a_2, and a_4, then a_2 would be selected (see Panel B of Table 3). Therefore, the ultimate FASB decision (even with constant preferences) may be dependent upon the sequence in which the alternatives are considered.

Table 2. Plurality Voting

Alternative	*Number of Votes*	*Board Members From Table 1*
a_1	2	#1, #2
a_2	2	#3, #4
a_3	3	#5, #6, #7
a_4	0	—

Table 3. Sequential Binary Voting

Panel A—Where Sequence of Evaluation is a_1, a_2, a_3, and a_4

Round	*Alternative*	*Number of Votes*	*Board Members from Table 1*
I	a_1	3	#1, #2, #5
	a_2	4	#3, #4, #6, #7
II	a_2	3	#1, #3, #4
	a_3	4	#2, #5, #6, #7
III	a_3	3	#5, #6, #7
	a_4	4	#1, #2, #3, #4
	a_4 wins!		

Panel B—Where Sequence of Evaluation is a_3, a_1, a_2, and a_4

Round	*Alternative*	*Number of Votes*	*Board Members from Table 1*
I	a_3	3	#5, #6, #7
	a_1	4	#1, #2, #3, #4
II	a_1	3	#1, #2, #5
	a_2	4	#3, #4, #6, #7
III	a_2	4	#1, #3, #4, #6
	a_4	3	#2, #5, #7
	a_2 wins!		

C. Borda Rank Order Voting (BROV)

The Board members are asked to rank order all alternatives in this voting rule (based upon the individual preferences from Table 1). The lowest-ranked alternative is given one point, the next lowest ranked alternative is given two points and so on. The points scored by an alternative on each member's ranking are then added together and the alternative receiving the most points would be the Board's decision. Therefore, a_1 would be selected under this voting rule as illustrated in Table 4.

D. Approval Voting (AV)

In this voting rule, a member can vote for (approve of) as many alternatives as desired. The alternative that gets the most votes is then the Board's choice. Note that in this voting rule, unlike the others, a member can express to a certain extent an intensity of preferences by partitioning the set of alternatives into two subsets: approval and disapproval.

For instance, suppose that the seven members' intensities of preferences are as shown in Table 5. Assume that each member approves of all alternatives to the left of the vertical line. Then a_1 gets 4 votes (#1, #2,#3,#4), a_2 receives 3 votes (#1,#3,#4), a_3 gets 3 votes (#5,#6,

Table 4. Borda's Rank Order Voting

Board Member from Table 1	*Rank Order Scores by Alternatives*			
	a_1	a_2	a_3	a_4
#1	4	3	1	2
#2	4	1	2	3
#3	3	4	1	2
#4	2	4	1	3
#5	3	1	4	2
#6	2	3	4	1
#7	1	2	4	3
	19	18	17	16

#7), and a_4 receives 5 votes (#1,#2,#3,#4,#7). Therefore a_4 would be the FASB's collective choice under the AV rule.

IV. SUMMARY AND CONCLUSION

The purpose of this paper is to highlight the potential effects of different voting rules on the ultimate issuance of a FASB statement of financial

Table 5. Approval Voting
Intensity of Preferences of the Seven Board Members for the Four Alternatives

Board Member from Table 1	*Approve*								*Disapprove*				
#1	a_1	a_2	a_4										a_3
#2	a_1				a_4						a_3		a_2
#3	a_2	a_1		a_4									a_3
#4	a_2		a_4	a_1									a_3
#5	a_3										a_1	a_4	a_2
#6	a_3									a_2		a_1	a_4
#7	a_3				a_4				a_2				a_1
Scale	10	9	8	7		6	5	4		3	2	1	0

accounting standards. The previous examples illustrate that a *constant set* of Board members' preferences (Table 1) can result in *different outcomes* under the four voting rules (Tables 2,3,4, and 5). Alternative a_1 would be the Board's choice with the Borda's Rank Order Voting Rule; a_2 would be the winner under the second scenario for the Sequential Binary Voting Rule; a_3 would prevail with the Plurality Voting Rule; and a_4 would dominate based on the Approval Voting Rule. Thus, the selection of a particular voting rule might affect the FASB due process in a significant fashion.

This research into the potential effects of different voting rules on the FASB due process is intended to be exploratory and not confirmatory in nature. Much additional research needs to be conducted before any generalization could be made about the "best" voting rule for the FASB due process.

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ON THE LOGICAL FOUNDATION FOR SELF-REGULATION;

RULES, CORPORATIONS AND FINANCIAL ACCOUNTING

Joni Young and Orace Johnson

ABSTRACT

Drawing on general concepts from political science, we analyze the relations between rules, corporations, and financial accounting. The rule typology consists of position, boundary, scope, authority, aggregation, payoff and information rules. We use two opposing views of the business corporation (concession theory and inherence theory) to deduce different conclusions about financial accounting information rules (FAIR). We are concerned about the question, "What makes FAIR *fair* when established by separate corporate entities?" We conclude by raising a comparable question: "How *fair* is FAIR when produced by the FASB?"

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Rules, unlike biological or physical laws, are established by humans and therefore rules are subject to human intervention and change. Rules are the means "to order repetitive, interdependent relationships" and thereby achieve predictability within defined social situations [E. Ostrom, 1986, p. 5]. Thus conceived, "rules" include legal statutes, customs, games and informal relations in all kinds of organizations. In this paper we interpret rules as part of the social context affecting the structure of action situations, rather than as part of the internal motivation affecting individual behavior.

Our purpose is to address questions which are relevant for analysis at the microlevel of social interaction. We examine the microlevel of corporate accountability in relation to financial accounting information rules. Our approach is both deductive and analytical.

The first section discusses our method of study and our primary assumptions. The second section defines the terms "corporation" and "accountability," and examines the implications of these definitions for the presumed relationship between the business corporation and the State. (We use the term "State" to mean a broad idea of government rather than either an actual government entity or a theory of how government came to be.[1]) The third section draws upon these definitions and relationships to analyze the corporate duty of accountability to various possible position players. The final section summarizes the results of this line of micro inquiry and raises the question for future research, "How fair is FAIR when produced by the FASB?"

I. PRIMARY ASSUMPTIONS

The unit of analysis employed in this paper is the individual person. Methodological individualism views collective action (by the State or by an association) as the "actions of individuals when they choose to accomplish purposes *collectively* rather than individually, and the government is seen as nothing more than the set of processes, the machine, which allows collective action to take place" [Buchanan and Tullock, 1974, p.13, emphasis added]. Given this definition, research can focus on the actions of individuals within the established processes, or describe the established or proposed alternative process, or examine the effects of changes in either the process or outcome of public choice. Methodological individualism provides a normatively neutral grounding for research in either the conventional tradition of political science, or in the emergent radical

paradigm (see Lindblom, 1981, for a discussion of these issues). Methodological individualism can be employed to analyze *any* position—extreme Marxian dictatorship, Smithian laissez-faire or extreme anarchy. In this paper, we emphasize concern for developing logically consistent deductions.

In political science, seven broad rule types have been identified. We now introduce them systematically into accounting literature. They are: position, boundary, scope, authority, aggregation, payoff, and information rules [E. Ostrom, 1986, p. 19].

Position rules define position players. (Should customers, creditors and/or others as well as shareholders and managers be included as part of a business corporation?)

Boundary rules specify the number of participants and how position players enter and leave the action situation. (Should the stock market and the market for corporate control affect how managers and shareholders enter and exit their involvement with the corporation?)

Scope rules specify the outcome set and the actions linked to specific outcomes. (Should philanthropic contributions be among the goals of the corporation?)

Authority rules designate the permissible sets of actions which various players must, may, or may not take. (What investment projects should managers be allowed to undertake?)

Aggregation rules determine the level of control, the decision function used to map actions into outcomes. (Should managers maximize firm profitability?)

Payoff rules specify the distribution of benefits and costs to position players, thereby establishing incentives and deterrents to action. (What dividend payout ratio and managerial bonus plans should a corporation have?)

Information rules specify the language, frequency and form of communication as well as the channels of communication between the position players. (What should financial accounting reports include/exclude?)

> If we were fortunate enough to be studying separable phenomena, then we could simply proceed to study individual rules out of context [e.g., financial accounting information]. . . . We could then proceed to study other rules out of context, and derive separable conclusions for each type of rule. . . . However, if the way one rule operates is affected by other rules, then we cannot continue to study each rule in isolation from others . . . we need to carefully state which other rules . . . condition the relationships produced by a change in a particular rule [E. Ostrom, 1986, p. 16].

If rules are indeed configural, then attention must be given to all rule types and not simply to one type of particular research interest.[2] In other words, the impact of changes in information rules depends on the other rules which constrict the action situation. This configural gestalt means that persons in any association should consider *all* rule types when promulgating rules of any type. For example, it is incomplete for a corporation to consider only position players, payoff rules and aggregation rules in constructing its financial accounting rules. Similarly, it is inadequate for researchers to consider only financial accounting information rules in assessing the impact of changes in generally accepted accounting principles. We mention many rule types in this paper, but nevertheless consider mainly the role of position rules in the determination of corporation financial accounting information rules.

Information rules provide a lens through which to view financial accounting standards. Financial accounting can be considered a subset of information rules—those rules that specify the language and form of communication as well as the channels of communication within the corporation and to various parties. The expression "financial accounting information rules" (FAIR) as used in this paper refers to the rules for recording and reporting to external parties the results of *market transactions*. We consider several logically prior concepts in order to address specifically the *fairness* of FAIR. These concepts include: (1) alternative definitions of the corporation, (2) implications of such definitions for corporate accountability, and (3) criteria for designating FAIR players.

We do not here examine the consequences of specific financial accounting rules (that is, examples of corporate reports or FASB promulgations) because our concern is for system analysis rather than for signal evaluation. To be effective, rules must be enforceable and participants held accountable for rule infractions; but in this paper we do not examine the control problem and the means for limiting actions of position players to only those alternatives defined by the set of authority rules.

II. CORPORATIONS AND ACCOUNTABILITY

Much of the extant literature on corporate accountability implicitly assumes a particular theory rather than defining "corporation" in the context of a specific theory. Significantly different implications for corporate accountability arise from alternative theories about the relation between State and Corporation. We present alternative definitions for "corpora-

tion'' as deduced from two specific theories. Then we define ''accountability'' and examine the implications of these different theory/definitions for corporate accountability.

A. Corporation

The definitions of ''corporation'' used in this paper require consideration of of both the *natural structure* and the *origin* of the corporation. V. Ostrom [1980, p. 309] defines an artifact ''as anything created by human beings with reference to the use of learning and knowledge to serve human purposes.'' He further states ''Organizations . . . are works of art in which human beings function both as their designers and creators, and as their principal ingredient'' [p. 310]. A *natural structure* definition of ''corporation'' recognizes that the corporation is a creation of human beings with reference to their understanding of capital formation processes and the possibilities arising from labor specialization. This definitional type is consistent with the characterization of the corporation as a nexus of contracts where the firm is ''simply one form of legal fiction which serves as a nexus for contracting relationships'' [Jensen and Meckling, 1976, p. 311].

Two alternative *origin* definitions are examined in the following paragraphs. These definitions arise from alternative theories about the relationship between the corporation and the State. One definition is derived from concession theory. The second definition is derived from inherence theory. Other genetic theories exist. However, with these two polar extremes we are able to emphasize the differences drawn in our subsequent discussion. Rather than dwelling on their evolution, we describe and contrast the two theories. This paper contrasts the notion of a state taking action with the notion of individuals who comprise the State aggregating their preferences through some public choice process into collective decisions.

Concession Theory. Under the concession theory, the corporation is conceived to be a privileged creation of the State. This theory holds that every corporation ''owes its existence to governmental permission, and that through its charter a corporation obtains special privileges, such as limited liability which only a government can confer''[Hessen, 1979, p. xiii].[3] The concession theory presumes that the corporation is a ''fictitious person,'' an organic entity separate from and not decomposable into its component real persons.

Two grounds exist for rejecting the concession theory definition of the modern corporation's origin—the absence of specific corporate privileges under general incorporation laws, and the fallacy of conceptualizing the corporation as an entity unto itself. Each of these grounds is examined in turn.

To characterize the modern corporation as a privileged creature of the State requires identifying the privileges granted by the State to only the corporation. Among the alleged privileges are perpetual life, standing to sue and be sued, and limited liability. The modern business corporation does indeed have a perpetual life. However, this perpetual life implies only that the articles of incorporation need not be periodically renewed or reviewed [Hessen, 1979, p. 17]. The state does *not* guarantee that a corporation will continue in existence indefinitely.

The modern corporation can indeed sue and be sued in its own name. However, this separate entity status represents a convenience—a shorthand device, to facilitate actions for and against corporations by removing the necessity to name all shareholders as a party to a suit. Separate entity status is also available to every partnership and proprietary business [Hessen, 1979, p. 17], and does not represent a peculiar benefit of the corporation.

Similarly, the existence of limited liability for debt and torts is often represented as a corporate privilege. "[L]imited liability [for debts] does not discriminate against creditors to the benefit of shareholders. Creditors cannot be compelled to accept a limited liability arrangement" [Hessen, 1979, p. 18]. Further, "the whole issue [of limited liability] is irrelevant to giant corporations, which either carry substantial liability insurance or possess sizable net assets from which judgment claims can be paid" [Hessen, 1979, p. 21].

In describing political associations, V. Ostrom [1987, p. 39] concludes:

> [a political] association can for some purposes be conceptualized as a thing unto itself—as a shorthand device for naming and characterizing the persons who choose to act in cognizance of a common set of rules which serve as a mutual referent in coordinating their actions, one with another. But, any effort to conceive collectivities as things unto themselves is apt to give rise to a fallacy of assuming that names attribute existence, discretion, action, and responsibility apart from the associations involved.

The definition of "corporation" deduced from the concession theory can also be criticized on the grounds that this definition conceives the

collectivity as a thing unto itself. Note that the theory characterizes the corporation as a "fictitious person", confusing the shorthand device used to designate an association of individuals with the individuals themselves.

The persistence of the concession theory as describing the relationship between the corporation and the State arises from a problem of language. "Language is easily subject to abuse when the same word is used to mean different things. Such abuse can lead to confused thought and senseless discourse" [V. Ostrom, 1980, p. 312]. The use of the word "corporation" to describe an evolving economic organization form has resulted in the mistaken application of the concession theory to the inherence theory meaning of the word "corporation."

Inherence Theory. Under inherence theory, "corporation" is defined as an association created by individuals. The inherence theory avoids the fallacy of confusing the collectivity with the individuals comprising this group by "looking through" the shorthand device used to name the corporation, and by explicitly recognizing the corporation as an association of individuals [Hessen, 1979, Ch. 4]. Corporations do not purchase stock: shareholders or managers purchase stock. Corporations do not decide which products to produce and which production technology to employ: managers make such decisions.

Under inherence theory, the business corporation is an association of individuals who pursue economic goals. The individuals who comprise the corporation are responsible for determining which goods to produce, how to produce and sell such goods, and how to distribute the profits from such sales. These decisions are driven by economic goals and considerations such as profit-maximization. The members of the association allocate duties among themselves. Managers provide their practical experience and theoretical knowledge to operate the corporation. Shareholders provide capital and risk-taking abilities. Fama and Jensen [1983a, p. 302] contend "the separation of decision and risk-bearing functions survives [in many organization] . . . because of the benefits of specialization of management and risk bearing."

Given that the inherence theory conceives the corporation as an association of individuals, does the prevalence of institutional investors reduce the semantic descriptiveness of this definition? Institutional investors include pension trusts, mutual funds and other corporations. Corporate shares of stock are legally owned by the pension trust, mutual fund or corporation: shares of stock are not owned by the individual participants in a pension trust or mutual fund. These individual participants did *not* invest pension

funds, mutual funds or corporate funds in the corporate shares. Rather, the pension trustees or managers of the corporation or the mutual fund exercise their decision control, choosing to invest the pension assets or shareholder capital. The purchase of stock in the corporate or fund name is a convenient shorthand device. However, the fundamental transaction which has occurred is that agent/managers using the decision control granted to them by their principal/investors have purchased such stock. Therefore, the presence of institutional investors acting under authority rules does not impair the semantic validity of "corporation" under the inherence theory. (As noted above, our concern in this paper is for system analysis rather than for control or monitoring.)

B. Accountability

What is accountability? Accountability, as defined here, denotes the responsibility of one party (agent) to undertake only specific, allowable acts on the behalf of another party (principal). The parties can be individuals, small groups, political coalitions, business firms, government departments, etc. Implicit in the notion of accountability are two elements—accountable *for* specific, allowable actions; and accountable *to* a specific party. To discuss accountability requires specifying the parties involved as well as the possible and permissible actions to be taken by such parties. Therefore, an examination of corporate accountability requires specifying position, authority, and scope rules: to whom and for what the corporation is accountable.

Given this definition of accountability, a linkage among rule types is possible. "Accountability to whom" specifies the set of position rules, the set of position players implicit in the action situation. Position rules are necessary for determining the aggregation rules which are also implicit in the action situation. For example, if only shareholders are FAIR players, then the decision functions of managers are likely to be different than if creditors are also FAIR players. Shareholders may base their decisions on total expected future cash flows. Creditors may be interested in cash flows only over the term of a loan. Managers may be interested in maximizing only their own compensation. Specifying position players is a necessary step in determining aggregation rules. Position rules and aggregation rules are both logically prior to information rules.

"Accountability for what" specifies the authority rules and scope rules. Are corporations accountable for the externalities they impose on

others? For example, may a corporation pollute water or air in the process of manufacturing goods desired by customers? These questions illustrate the interdependence of the two rule types as elements of accountability. If corporations are not accountable to the parties whose air or water is polluted, then the act of polluting may be an acceptable action available to the corporation.

C. Corporate Origin and Accountability

Defining "corporation" is the essential first step in addressing the issue of corporate accountability: specifically, the two elements of accountability—for what and to whom. The two origin definitions discussed above provide different lenses through which to view corporate accountability. The choice of lens shifts the frame of reference. The lens selected by the researcher results in different answers when addressing corporate accountability issues.

Concession theory focuses attention on the functions of the corporation with accountability to the State, the corporation's creator. That is, the State is "ultimately responsible for overseeing the exercise of corporate powers and ensuring that they are employed for ends approved by the state" [Winter, 1978, p. 1]. This frame of reference results in emphasizing the assignment of tasks to the corporation as a function of its accountability to the State. The concession theory stresses the accountability of the corporation to the State and assumes the corporate *collectivity* exercises discretion and takes action.

In contrast, inherence theory focuses attention on the individuals creating and comprising the association, stressing the accountability of these individuals to each other. The nature of this accountability depends upon the positions held by the individuals (shareholders, managers, creditors, etc.). Corporate accountability is a composite function of all rule types, including authority rules, the specific tasks assigned to individuals. Inherence theory stresses also the accountability of the State to the individuals comprising the association which is named the corporation. (See Siegan, 1980, especially chapter 4, "*The Judicial Obligation to Protect Economic Liberties.*")

In our system of federal government, individuals have certain inalienable rights, some of which are specifically mentioned in the Bill of Rights. Our State develops rules which facilitate the development of relationships among individuals without infringing upon these inalienable rights. Such

rules facilitate this development by reducing the uncertainty and/or transaction costs resulting from such relationships. These rules of all types order the relationships by imposing duties on and stipulating the rights of individuals. If the corporation is an association of individuals, then the corporation is subject to the same duties and vested with the same rights as individuals. The relationship of the State to the corporation is then identical to the relationship which exists between the State and individuals. The State's rules with respect to contracts, torts, and property rights apply equally to individuals and to all associations of individuals.

Inherence theory implies that the corporation can pursue the economic goals of the association within the constraints imposed by the law. If the corporation is an association of individuals, then the societal constraints placed on the corporation should not differ from those placed on individuals. If individuals are allowed a zone of discretion within which their decisions are made, then the corporation should have a similar zone of discretion. The corporate zone of discretion should be identical to that of individuals who retain the right of freely associating, speaking, entering into contracts, owning and disposing of property. Under the inherence theory, corporate behavior should be circumscribed only by those limits the State also imposes on individual behavior.

III. ACCOUNTABILITY AND POSITION PLAYERS

This section assumes inherence theory and examines corporate accountability to various parties which have been characterized as corporate constituents. The parties which are often characterized as constituents include managers, shareholders, employees, customers, creditors and the community [Benston, 1982a; Williamson, 1984]. Further, this section considers which of these groups should be FAIR players.

The analysis of accountability in this section is based on the following assumptions. First, our social contract (i.e., the United States Constitution) provides for a State to serve as a means of resolving conflicts between individuals. Second, our social contract recognizes the right of individuals to form associations (First Amendment). Third, under inherence theory a corporation is created by an association of individuals pursuing economic goals. Fourth, given the definition derived from inherence theory, a corporation is both entitled to the same rights and privileges as individuals and also subject to the same duties.

A. Managers and Shareholders

The corporate form of organization allocates the risk bearing and decision control functions exercised by an entrepreneur between the shareholders and managers who form the association. Fama and Jensen [1983a] stress the specialization of duties inherent in the use of the corporate form of organization. Managers specialize in decision control while shareholders specialize in risk-bearing. The decision control of managers encompasses the product design, production, and distribution decisions of the corporation. Such decisions are necessary in order to use productively the capital provided by shareholders.

The allocation of decision control to managers implies that managers are accountable to shareholders for the productive use of capital. Productive use is defined herein as maximizing residual claims of shareholders. In order for managers to exercise their decision control, they require information. Information on the results of past decisions provides a basis for learning from past successes and failures. Given their familiarity with corporate operations, managers are in the "best" position to establish information rules to assess the results of past decisions and to form a basis for future decisions.

The specialization of decision control by managers also implies that shareholders are not involved in approving every transaction undertaken by managers. This separation of duties gives rise to the possibilities of opportunistic behavior by managers. Shareholders, as principals, require a means for monitoring the behavior of managers, their agents. FAIR may reduce managerial manipulation in reports on the results of market-based transactions [Benston, 1982a, p. 102]. FAIR can assist shareholders in determining whether managers have carried out their accountability. However, merely requiring managers to report information is not sufficient to resolve this shareholder-manager, principal-agent conflict. Managers may mis-report the required information or not report any information unless a mechanism for enforcing FAIR exists.[4]

The *potential* shareholders of a corporation include the potential buyers of existing shares as well as potential buyers of new stock issues. Potential buyers cannot be compelled to engage in exchange transactions with existing shareholders. The information requirements of future and current shareholders are similar because both are concerned for risk of and return on their investment. Similarly, existing shareholders should not be compelled to engage in transactions arising from hostile takeover attempts.

The information requirements of existing shareholders and *potential buyers of existing shares* are similar.

Potential buyers of new stock issues also require information similar to that required by existing shareholders. In addition, the investment banker generally serves as an intermediary between the corporation and such potential buyers. During the contract negotiation process, the investment banker can require the corporation to reveal desired financial information and subsequently reveal this information to potential buyers facilitating their purchase decision. Given that potential shareholders *cannot* be compelled to purchase shares of stock, potential shareholders are not classified as position players under inherence theory.

Potential managers require information on position availability and compensation. When the corporation requires additional managers, such information will be communicated. No harms are suffered by potential managers if they are excluded as position players.

Even though potential shareholders require information similar to that required by current shareholders, they cannot be compelled to enter the association through investment contract. Likewise potential managers cannot be compelled to enter the association through a labor contract. Unknown and uncertain future association members are not current FAIR players.

The discussion above suggests the harms which may arise if either managers or shareholders are excluded as position players. Excluding managers as FAIR players will reduce their ability to exercise decision control under the association's authority rules. Excluding shareholders as FAIR players will reduce their ability to monitor the behavior of managers under the association's payoff rules. Since exclusion would result in probable harm, both shareholders and managers are FAIR players under inherence theory.

B. Other Constituents

If the corporation under the inherence theory is an association only of individuals shareholders and managers, then all other possible corporate constituents (creditors, employees, customers, and the community) have no original right to be designated as FAIR players. The burden of proof under the inherence theory would require these groups to demonstrate that inequitable harms would be suffered if they were formally excluded from influencing FAIR.

The following analysis examines three problems: (1) the inherence

theory relationship between the corporation and constituent groups, (2) the financial accounting information rules required to maintain these relationships, and (3) whether such groups should be classified as FAIR players.

Creditors. The corporation's contract with creditors, especially bondholders and banks, involve the receipt of funds currently by the corporation in exchange for a promise to repay such funds in the future. These contracts are designed to reduce the opportunistic behavior of both managers and shareholders of the corporation [Smith and Warner, 1979]. Examples of the types of opportunistic behavior which may arise include investing in riskier investment projects and diverting corporate assets to shareholders via dividends. As the term to maturity of debt increases, the risks associated with debt also increase. This increased risk results from the increase in uncertainty as to the future ability of the corporation to repay such debt.

Creditors require information to assess the ongoing viability of the corporation as well as the adherence of the corporation to the terms of the contract. While creditors can observe whether the corporation repays debt as required by the contract, creditors cannot directly observe adherence to all terms of the contract. Those terms which are not directly observable include provisions which require that the corporation maintain financial statement ratios at specified levels or prohibit sales of assets without creditor permission. This information is contained in the financial records. (In contrast, the information desired by customers is not contained in the financial records.) The ratio requirements were or were not met. The assets were or were not sold. Therefore, this information is certain. However, the corporation may be able to "mask" the failure to meet such requirements by the selection of opportunistic financial accounting information rules. Given the probability of harm arising from these actions, under inherence theory creditors are designated FAIR players.

Employees. For what is the corporation (managers directly and shareholders indirectly) accountable to employees, its nonexecutive union or nonunion workers? For union employees, the union contract specifies the terms of employment including work hours, overtime policies, and wage and benefit compensation. The corporation is accountable for adhering to the terms of this agreement. Similarly, the corporation has a contractual relationship with nonunion employees. This contract requires the corporation to compensate such employees for labor provided to the corporation. Employees are not bound to the corporation: they can terminate their

employment contracts. If a corporation is an association of individuals, then the ability to terminate the employment contract should also be extended to the corporation. Under the inherence theory unless the contract specifies otherwise, the corporation is not accountable to employees for guaranteeing employment opportunities. The corporation is accountable to employees only for maintaining the terms of the employment contract.

Given this analysis, should employees be FAIR players? The employee receives a periodic paycheck which allows the employee to determine if the wages paid are as specified in the employment contract. The employee also directly observes whether work hours differ from those agreed. Thus, the employee can directly observe whether the corporation has breached the contract terms. If the corporation were accountable for guaranteeing employment opportunities, then the employee would require additional information to assess the ability of the corporation to fulfill this obligation. However, the corporation has no general, a priori obligation of this nature.

Potential employees require information on job availability and wages. When the corporation requires additional employees, such information will be communicated. No harms are imposed by the corporation if potential employees are formally excluded as position players.

The union contract with the corporation may include information rules. These rules might include notice of anticipated plant closings or financial reports on corporate performance. The union can observe whether notice is given, and has recourse in the courts for breach of contract. Unless the corporation guarantees employment, no harm is imposed by the corporation if the union is formally excluded from developing FAIR. Under inherence theory, unions and employees (current and potential) are not FAIR players.

Customers. For what is the corporation (managers directly and shareholders indirectly) accountable to customers? The corporation enters into a contract with customers to supply goods or services. This contract may be an explicit contract which specifies the type, quality, price and delivery date of the goods or an implicit contract with final consumers which specifies a warranty of merchantability and the purchase price of the goods. The corporation, as an association of individuals, is subject to the same rules of contract law as are individuals (e.g., fraud, product liability, etc.). Therefore, the corporation is only accountable to customers for fulfilling the terms of the contract. The customer can observe whether these terms are met and has recourse to the courts to enforce the contract.[5]

Based on these observations, should customers participate in establishing FAIR? *Potential* customers require information on the availability, price and quality of products as well as the reputation of the corporation. In order to negotiate a contract, the corporation must communicate this information. In instances where transaction costs are prohibitive in directly conveying this information to each customer, the use of advertising and middlemen may mitigate the transaction cost problem. No clear harms are imposed by the corporation if financial accounting information is not communicated to potential customers.

If the *current* customer has a purchase commitment with the corporation, then he is concerned with the viability of the corporation over the time of the contract, determining whether the corporation will be able to fulfill the terms of the contract. In this case, the customer requires information beyond that which is currently observable. For example, the customer cannot directly observe today whether the corporation will deliver 100 widgets tomorrow as promised. The corporation may be able to assess the probability of timely delivery. However, this probability assessment is not related to the market-based transactions for which financial accounting rules are "better" used [Benston, 1982a]. The customer may require the corporation to reveal such information via the current terms underlying the purchase commitment. However, financial accounting rules are inadequate for guiding the corporation in preparing the information desired by customers. Therefore, under the inherence theory neither potential nor current customers are classified as FAIR players.

Community. For what are corporations accountable to the community? The previous analyses were based on examining the contractual relationships between the corporation and specific others. In assessing the accountability of the corporation to the community, the focus of analysis must shift to consider the relation between the corporation and the community at large, the State.

A basic behavioral assumption underlying this analysis is the self-seeking behavior of individuals. In the pursuit of self-interest, individuals (acting alone, in association, or as agents of the State) may impose externalities upon others. The corporate pursuit of self-interest (i.e., profit-maximization) may result in production methods which pollute the air or water. This same pursuit of self-interest may result in waste disposal methods which have long-run adverse effects (i.e., toxic waste problems).

The community cannot use financial accounting information rules to assess the responsible exercise of decision control by managers with

respect to "social responsibilities" if FAIR is based on market transactions. In addition, not all externalities such as pollution are social externalities. A negative social externality exists only when the reduced value of the polluted air and water exceeds the cost of eliminating the wastes. Given that air and water are not normally traded in commodities markets, financial accounting information rules which record the results of market transactions cannot measure the reduced value of such negative externalities. Opportunity costs are, by definition, excluded from financial accounting *transactions*.

The purpose of the State is to form legal and political arrangements to resolve conflicts arising from the self-interested behavior of individuals [V. Ostrom, 1987]. These constraints arise from a deliberative process in which public policy is established. This process results in rules to govern the behavior of individuals. Such rules should be equally enforceable for individuals alone or individuals in associations. The corporation, as an association of individuals, is accountable to the community for adhering to rules which restrain socially undesirable behavior. However, such rules may not infringe upon the inalienable rights of the individuals who comprise the association, whether it is a business corporation or a government agency.

Given this analysis, under inherence theory, should the community be designated as a FAIR player? Compliance with rules is monitored by the State. As citizens of the United States, neither you nor I are required to periodically communicate compliance with our national rules. Therefore, under inherence theory, the corporation is also not required to communicate such compliance. The community, the State, is not a FAIR player.

IV. CONCLUDING QUESTION

Our path in this discourse began by describing seven types of rules governing human associations (position, boundary, scope, authority, aggregation, payoff, and information rules). It continued through alternative views of the business corporation as a social artifact (concession theory versus inherence theory). We then discussed the contextual consideration of the normative relations between different definitions of "corporation" and the types of operating rules (especially position rules as logically prior to financial accounting information rules).

The definition of the corporation deduced from inherence theory provides the basis for our conclusions regarding FAIR players. If the corpo-

ration is an association of *individuals*, then the accountability of the corporation is limited to adhering to its voluntary contracts and constraints [e.g., laws] socially imposed on individuals. The designation of various individuals as FAIR players derives from the accountability of the association to such individuals. Further, this designation depends on the usefulness of financial accounting information in monitoring association accountability. We consider whether inequitable harms are imposed on individuals excluded as FAIR players.

Our analysis indicates existing managers and existing shareholders should be FAIR players. Existing managers require information to exercise decision control. Existing shareholders require information to assess manager accountability. Creditors are also designated as FAIR players given the use of financial accounting information to monitor compliance with contractual terms.

Employees, customers and the community [i.e., State] are excluded as FAIR players. In each instance, we note that financial accounting information cannot assist these "constituents" in monitoring the accountability of the association. Employees can determine adherence to the contractual relation by direct observation of wages paid and hours worked. Similarly, customers can observe the quality and timing of delivered products. We note the inability of financial accounting information to communicate the probability of future performance required under long-term purchase contracts. Finally, we indicate that financial accounting information does not communicate adherence with societal constraints [i.e., rules governing the behavior of individuals or the behavior of individuals acting within associations]. Therefore, the community or State is not a FAIR player.

Our immediate goal was to develop concern for the question, "What makes FAIR fair?" Our answer implied a structural definition: FAIR is *fair* when the configural rule gestalt is logically coherent. Conversely, FAIR is *foul* when the configural rule gestalt contains logical contradictions. Is the position, boundary, scope, authority, aggregation, payoff, and information rule gestalt of a specific entity logically coherent? What case by case variation among corporate rule *gestalts* is valid under our constitution and inherence theory? Logical coherence is a necessary (but not necessarily sufficient) foundation for fairness in developing the financial reporting systems of single entities [i.e., self-regulation]. Identifying sufficient conditions will require research regarding judgments among alternative theories of ontology, epistemology and ethics as foundation for constitutional rules. These conditions apply to all entities, including any corporation and the Financial Accounting Standards Board.

Thus we conclude with the question: "How *fair* is FAIR when produced by FASB?"

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NOTES

1. Our use of the term "State" throughout the following sections is simply a shorthand device to represent the actions of individuals who comprise a government. This device implicitly recognizes the inherent decomposability of the State into separate interest groups which can cooperate for mutual benefit, or aggressively fight for exclusive advantages through suppression of others.
2. Barzel [1977, p. 293] notes that the conflicting results in the theory of information "often simply reflect different assumptions and the failure to spell these out fully."
3. Hessen [1979] traces the origin of the concession theory to medieval times. In this period, the term "corporation" did not refer to for-profit business enterprises. Rather, the term referred to trusts such as universities and hospitals as well as guilds and burroughs. In each case, the "corporation" was granted a special concession from the Crown or State. Guilds were granted a monopoly over a particular trade. Burroughs were granted the privilege to assess their own taxes to remit to the Crown, thus avoiding the middleman tax farmer. Trusts were granted exemption from inheritance taxes upon the death of the trust creator. In all cases, these rights or privileges were granted in perpetuity. In the United States, the process of incorporation required an act of the state legislature. However, the nineteenth-century advent of general incorporation laws eliminated the requirements to obtain specific legislative permission. As Hessen [1979, pp. 3-4] notes:

> Today a group of individuals can create a corporation by drawing up a contract known as the articles of incorporation. The articles need contain only certain basic information about the intended activity and initial financing of a new firm . . . [In] the eyes of the law . . . the creation of a corporation [is] a standardized formality.

4. Watts and Zimmerman [1983] provide historical evidence that the possibility of misreporting gave rise to a demand for audits prior to the imposition of legal requirements to obtain such audits.
5. Customers have recourse against the corporation for contract breach. In addition, consumers have evinced considerable eagerness in filing class action suits against corporations for product liability [Cooter and Ulen, 1988].

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INCOME DISCLOSURE, DESCRIPTIVE POWER AND CASH FLOWS

Jenice P. Stewart

ABSTRACT

The objective of this study is to test the usefulness of "regular income" in forecasting market cash flows in the spirit of the *Discussion Memorandum* on "Reporting Earnings" [1979] and *Statement of Financial Accounting Concepts No. 5* [1985]. More specifically, gross profit, as suggested by the Financial Accounting Standards Board [FASB, 1979], is used as a surrogate for "regular income." This study derives a relationship between "regular" and net earnings by expanding the information upon which market cash flow (MCF) expectations are conditioned to include data other than prior net income. This approach differs from previous studies which have examined the time-series behavior of earnings based solely on pre-

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vious net income. This approach can result in earnings forecasting models that are more accurate than the random walk with a drift model which has been robust against mechanical model challengers. The research design incorporates a cross-sectional multiple regression approach. The results provide a plausible reason for the FASB [1985] not requiring additional earnings classifications. That is, "regular income" was approximated from gross profit (an item already disclosed in earnings reports) which provided significant descriptive power above net income in assessing future market cash flows.

I. INTRODUCTION

In 1979, the Financial Accounting Standards Board (FASB) issued a *Discussion Memorandum* (DM) on "Reporting Earnings," which inaugurated a controversial five-year project. This *Discussion Memorandum* presented nine issues, seven concerning the classification or form of earnings reports.[1] After much deliberation (five years), the Board issued *SFAC No. 5*, "Recognition and Measurement in Financial Statements of Business Enterprises" [1985].

Prior to *SFAC No. 5*, the FASB required disclosure of six major components of income which included revenues/sales, gross profit, expenses, discontinued operations, extraordinary items, and cumulative effects of changes in accounting principles. After some deliberation by the Board on the classification of earnings, *SFAC No. 5* was issued and the Board did not suggest any additional earnings disclosures or classifications. This action may imply that a proxy for "regular income" is already disclosed in income reporting. The purpose of this study is to assess the usefulness (descriptive power) of "regular income" in the spirit of the *DM* on "Reporting Earnings" and *SFAC No. 5*. "Regular income" is defined by the Board as those components of earnings [that] have a reasonably stable pattern over time. For example . . . gross margin." [FASB, 1979, p.ii].

II. BACKGROUND

The importance of the earnings report and the usefulness of "regular income" is not only evidenced by pronouncements of the accounting regulatory body, but is evidenced in the accounting literature as well. In

the past two decades, an extensive literature on the underlying process of income and its usefulness in forecasting stock or market returns [Beaver and Dukes, 1972], dividends [Staubus, 1965], cash flows [Rayburn, 1986; Bowen Burgstahler and Daley, (BBD) 1987], and earnings [Ball and Watts, 1972] has developed. The predictive ability of income research has entered the accounting literature mainly because of the emphasis by the FASB [1978; 1985] and The American Institute of Certified Public Accountants (AICPA) (Study Group on the Objectives of Financial Statements, 1973) on the usefulness of accounting income numbers in predicting market cash flows.[2] Research on the usefulness of income measures has focused on the underlying process of historical cost income in explaining and predicting future market cash flows [Ball and Watts, 1972; Ball and Brown, 1969; Albrecht et al., 1977; Brooks and Buckmaster, 1976; Lipe, 1986; Rayburn, 1986; BBD, 1987]. This prior research provided strong support for the usefulness of net income in assessing future market cash flows (MCF). However, financial analysts [Mortimer, 1979; Francis, 1980], accountants [Strauss and Arcady, 1981; Paton, 1922, 1940; Beaver, Lambert and Morse, 1980; Lipe, 1986], and users of financial reports [Mims, 1979; SEC, 1980] contend that an income classification which includes "regular income" may be more useful in assessing future MCFs than historical cost income alone. Beaver [1981] also argues that "permanent" or "regular earnings" is a good explanatory measure of stock price, a MCF measure. Furthermore, the FASB, as part of its conceptual framework [FASB, 1979] and as justification for disclosing holding gains and losses separate from continuing operations [FASB, 1979a], recognized the need for disclosure of and research on the descriptive power of "regular income" based on its decision-usefulness potential.

The FASB [1979] defines "regular earnings" as those components of income that have a reasonably stable pattern over time. Examples of "irregular earnings," that is, items that have a high degree of volatility, include foreign exchange gains and losses, unusually large one time expenses, results of activities undertaken infrequently, and items that vary in dollar amount as a result of chance factors [see FASB, 1979, p. iii]. The Board [1979] also defines "regular income" as sustainable or maintainable earnings, or income from continuing activities. Thus, "regular income" is defined in this study as the sustainable revenues, expenses, gains, and losses associated with long-term earnings projects.

The notion that "regular income" conveys information about expectations is pervasive. One of the earlier arguments for the richness of "reg-

ular income'' in this respect is advanced by Paton [1922]. Empirical research on this theory includes Lipe [1986] who investigates disclosed components of earnings, ''persistent income,'' and Beaver, Lambert, and Morse [1980] who investigate a priced based ''permanent'' component of earnings. However, this study differs from the prior empirical research. Unlike ''persistent income'', ''regular income'' is defined in the spirit of the *Discussion Memorandum:* ''Reporting Earnings'' [1979], and unlike Beaver et al.'s [1980] study, ''regular earnings'' is not market-based but accrual-based.

In general, this study hypothesizes that the expected value of future MCF is conditional upon past net earnings and ''regular earnings'' or that MCF is the result of a compound process involving more than one earnings variable. MCF can be characterized as a mixture of two processes, wherein one process reflects the effect of events with no ''regular income'' implications and the other reflects the effect of events that imply ''regular income'' patterns. The compound process can produce a MCF series that behaves as if it were a random walk with a drift [Beaver, 1980; BBD, 1986]. Yet ''regular earnings'' can be used to extract information about the process that implies expected MCF different from a random walk with a drift. Moreover, the information upon which MCF expectations are conditioned include information other than prior net income alone. This paper investigates the hypothesis that ''regular income'' provides useful information above net income to market participants about future MCF.

Usefulness is defined here as the relative ability of ''regular earnings'' to explain the behavior of those MCF measures used to predict the present market value of an enterprise's securities. Specifically, a regression design is used whereby net and ''regular income'' are regressed on selected MCF measures. The findings indicate that ''regular earnings'' enhance significantly the descriptive power of net income in explaining future MCF.

III. THEORY AND HYPOTHESIS

Assuming uncertainty, ''capital market equilibrium'' can be designated as a mapping from states, endowments, and preferences into ''regular income.'' ''Earnings can be characterized as a signal from an information system, which is mapping from states into signals'' [Beaver et al., 1980, p. 5]. ''Regular income'' and net income can be viewed as ''joint realiza-

tions'' from this ''state-generating process.'' The relationship between ''regular'' and net earnings will depend on both the nature of the two mappings and other data available to market participants.

If the two earnings variables reflect similar characteristics of the state, a contemporaneous relationship between ''regular income'' and net income would be forecasted. This study hypothesizes that future expected MCFs are characterized as if they are a function of net income and ''regular income.'' Forecast adjustments will depend upon net earnings and other information. In essence, ''regular income'' (EPSr) can be said to reflect additional information that is not reflected in current earnings alone.

''Regular earnings'' may reflect information about future MCF for several reasons: (1) ''Annual earnings can be viewed as an aggregation of earnings for shorter time intervals (e.g., quarterly, monthly, daily)'' [Beaver et al., 1980 p. 5]. ''Regular income'' can be used to extract information about the preaggregated cash flow series that has been lost through aggregation. (2) Events which affect future cash flows may not be conveyed in current net income. That is, ''regular income'' may capture events conveying information regarding the nontransitory component of future MCF. (3) In essence, ''regular income'' can convey information when MCFs are a compound process composed of more than one earnings variable.

In testing the mapping of useful capital market information into ''regular income,'' a linkage will first be derived between earnings and expected values of market cash flows. The first linkage is one of two required to describe observed contemporaneous relationships between net and ''regular earnings'' and future MCF. The first linkage involves two steps. The first step presented will be the case where future MCFs are a simple process. The second step presented is the link between ''regular income'' and expected future MCF. The second linkage will then be developed for the ''a priori'' case where cash flows are a compound process. However, before these linkages[3] are presented, a definition and justification of the MCF variables, based on user models, is provided.

IV. MARKET CASH FLOWS (MCF) DEFINED (DEPENDENT VARIABLES)

Financial analysts assume that the market value of an entity or its common stock is the present value of all future MCFs which the owner of the

share will receive [Francis, 1980]. That is, the value of an enterprise's security is [Francis, 1980, p. 265]:

$$\text{Value} = \sum_{t=1}^{\infty} \frac{\text{market cash flow for period t}}{(1.0 + \text{appropriate discount rate})^t} \quad (1)$$

where
t = time period

In the finance and economic literature one can find at least three approaches to the general model that an economic investor (i.e., one who prefers more wealth to less) uses in determining the value of a firm's common stock. The three approaches of translating the numerator of the above valuation model are: (1) the discounted cash flow approach, (2) the dividends approach, and (3) the stream of earnings approach [Miller and Modigliani, 1961].[4] The discounted cash flow approach defines cash flow in the general model as the difference between cash receipts and disbursements or funds flow from operations [Bodenhorn, 1959]. The stream of dividends method defines income as the value of the stream of dividends to be paid to infinity on a share of stock [Gordon, 1959; Williams, 1938; Miller and Rock, 1985]. Miller and Modigliani [1961] also advocate the dividend approach; however, they define the general model within a single or one time period using dividends and stock price. The stream of earnings approach, whereby cash flow is defined as earnings, is yet another means of defining the income stream in the general valuation model.

The numerator of the general valuation model has thus embodied funds flow from operations, dividends, stock price, and income as MCF variables. The denominator of the general model is defined by Miller and Modigliani [1961] as a function of the rate of return on a firm's net assets. Hence, return on net assets is also incorporated as a MCF variable.

V. MCF DEFINED AS A SIMPLE PROCESS

The time series of MCF are perceived by some market participants as a simple random walk process as follows [Watts and Leftwich, 1977, p. 258; BBD, 1986]:

$$Z_t = \alpha + Z_{t-1} + \epsilon_t \quad (2)$$

where

Z = time series of income or cash flow
α = a constant estimated by minimizing the sum of squared residuals
ϵ = an independent, identically distributed error term with zero mean and constant variance.

BBD (1986, 1987) have extensively studied the behavior of various measures of MCF including funds flow from operations. They found that the funds flow series are independent over time and yield a random walk stochastic process.

VI. MCF AS A COMPOUND PROCESS

MCF can analytically be shown to entail more than a simple process (e.g., random walk). If MCFs were a simple process, "regular income" would not convey any information not already contained in past earnings series. Hence, MCF may be a mixture of two processes. The first process, EPSp, is the earnings series that reflects events that are transitory or behave in a random manner.

$$MCF_t = \alpha_t + \beta_{1t}\, EPSp_{t-j} + \delta_t \quad (3)$$

where

MCF = market cash flow
β = regression coefficient or parameter
EPSp = primary earnings per share (transitory earnings)
j = number of historical observations in the time series
δ = error term

The second process, EPSr, is the earnings series that reflects events that are "regular" and/or of an enduring nature.

$$MCF_t = \alpha_t + \beta_{1t}EPSp_{t-j} + \beta_{2t}EPSr_{t-j} + \delta_t \quad (4)$$

where

EPS_r = "regular earnings" per share

The FASB [1979 and 1979a] has addressed this compound process of MCF. They state that users need more information about "regular income" (1) so they do not confuse the effect of an "irregular" item with

that of a more enduring nature, and (2) because "regular earnings" have a different pattern over time than does net income. Paton [1940] contends that the underlying behavior of "regular income" has descriptive power beyond that of net income. Users of financial reports state that "regular income" is more useful in detecting the permanency in MCF than is net income [Mims, 1979].

Dividends are another MCF variable that are said to include a "regular" and an irregular process. Brickley [1983] contends that management conveys information to market participants by labeling its dividends. If management labels its dividend increase as "extra," "special," or "year-end," then this is only a temporary dividend. This type of dividend is usually infrequent (for example, only once in fifteen years).[5] Thus, a dividend classified as a "specially designated dividend" is an "irregular" dividend. Possibly net income, a randomly fluctuating variable, may provide information as to when a "specially designated dividend" is likely to occur. On the other hand, management may classify the dividend as "regular," indicating that the new dividend may be maintained over time. In this case, management is signaling a repetitive dividend payout. Since the new dividend is to be maintained, then "regular income" may be a good predictor of permanent or "regular" dividends. Therefore, a model composed of both net and "regular earnings" may be a better predictor of MCF than a transitory model alone.

Early empirical findings suggest a very weak and temporally unstable association between earnings and returns (Benston, 1967; Keenan, 1970). If "regular income" follows a non-transitory pattern, then "regular income" may provide more information on the underlying process of return on net assets than a random walk model alone. Thus, the research hypothesis of this study is:

H_1: *"Regular income" has incremental descriptive power beyond that contained in net income when assessing future MCF.*

VII. RELATIONSHIP BETWEEN "REGULAR" AND NET INCOME

Including "regular income" in a prediction model is also an attempt to reduce the variance of an enterprise's market value around its expectation. MCF variables are assumed to be generated by a process that includes some randomization as well as a mean reverting deterministic

function. For example, Beaver [1970] concludes that rates of return follow a mean reverting process. Brooks and Buckmaster [1976] contend that earnings tend to revert to prior levels in the period after a material deviation from an operationally developed norm. This suggests that an earnings report that included mean reversion as well as random walk patterns may result in smaller prediction error and more useful information to market participants in assessing a firm's value. If ''regular earnings'' are not transitory, then it may provide information on the compound process of MCF, above that provided by net income. Thus, ''regular income'' may provide useful information to investors in determining the intrinsic value of a security.

VIII. METHODOLOGY

The methodology employed to test the usefulness of ''regular income'' is composed of two sets of tests. First, ''regular'' and net income (the independent variables) were computed using Brooks and Buckmaster's [1976] stratification rules and exponential smoothing. Second, cross-sectional multiple regression was used to test the usefulness (descriptive power) of ''regular income.''

IX. INDEPENDENT VARIABLES

Because exponential smoothing can be used to track a transitory and stable time series, it is used to compute both earnings measures. The two earnings variables advocated as providing information about future MCF are net income [Watts and Leftwich, 1977; Albrecht et al., 1977; Ball and Brown, 1969] and ''regular income'' [Paton, 1940; Hendriksen and Budge, 1974; Mortimer, 1979; Strauss and Arcady, 1981; Lipe, 1986]. Exponential smoothing was used to detect the underlying behavior of gross profit and to convert gross profit to ''regular income.'' That is, gross profit is used as a proxy for the nontransitory component of MCF. Gross income is used to proxy ''regular earnings'' because the Board [1979, pii] states that gross income exhibits a reasonably stable pattern over time. Additionally, table one shows that the annual changes in mean gross income are considerably less erratic than the changes in mean net income. That is, gross profit continually increases each year; whereas, net income increases in some years and decreases in other years.

Exponential smoothing was also the analytical technique used to detect the underlying behavior of net income. For example, if net incomes are a simple process, then they will be characterized by $\alpha = 0.99$. This means that the earnings process is a random walk and that last year's income is the best predictor of next year's MCF.

Exponential smoothing, rather than some other time-series forecasting technique, was used in converting gross profit to "regular earnings" for three reasons. First, Groff [1973, p. 30] found that Box-Jenkins models were "either approximately equal to or greater than the errors of the corresponding exponentially-smoothed models (supported as a special case of Box-Jenkins time-series models [Makridakis and Wheelwright, 1985]) for most series." Granger and Newbold [1977] and Brandon, Jarrett and Khumawala [1986, p. 191] conclude, after conducting income time-series forecasts, that exponential smoothing models were the best predictors of income for short-time-series "(series with less than 30 observations)" over Box-Jenkins Methodology. However, there still remains some lack of consensus regarding exponential smoothing's advantages over the Box Jenkins methodology. For example, some contend that if the best smoothing model exhibits an $\alpha \geq .333$, then the Box-Jenkins methodology may be more appropriate [Bowerman and O'Connell, 1979].

Second, exponential smoothing is preferred over moving-average models because moving-average requires more data points and calculations, and is less accurate than exponential smoothing techniques [Makridakis and Wheelwright, 1985]. Third, the optimal exponential smoothing model used indicates whether the income-generating process is a random walk model (that is, alpha is greater than .9) or mean reverting (that is, the alpha level is less than 0.7) [Bowerman and O'Connell, 1979]. Last, the optimal exponential smoothing model used implies no trend (single), a linear trend (double), or a quadratic trend (triple) [Bowerman and O'Connell, 1979; and Brown, 1963].

The results of the exponential smoothing models were used to specify the estimated values of "regular" and net income. The methodology used to determine the specific structural form of these independent variables is provided below.

"Regular" and net income were computed using the time-series forecasting technique, exponential smoothing, after applying a stratification rule advanced by Brooks and Buckmaster [1976]. Stratification of net income or gross earnings was used to determine the characteristics of different subsets of income time-series. Brooks and Buckmaster [1976, p.

1362] ''suggested that the identification of companies with shifts in relative performance levels might provide productive stratification rules for examining the properties of income.'' They found that the stratification of income was useful in classifying observations into subsets having different best smoothing or predictor models. The stratification methodology used here, which replicates Brooks and Buckmaster's [1976], is separated into three phases: (1) sample selection, (2) sample stratification, and (3) tests for the best smoothing model.

1. Sample Selection. An annual window was used in this study for three reasons: (1) cash flows usually become available to market participants throughout the year [Bowen, Burgstahler, and Daley, 1987], (2) conversion to a shorter window to measure cash flows is not practical for shorter than annual periods [Rayburn 1986; Bowen, Burgstahler, and Daley, 1987], and (3) using annual data reduces data gathering costs [Hoskin, Hughes and Ricks, 1986]. The annual income observations used in the study were from the 1985 edition of the COMPUSTAT industrial tape containing financial data for companies. Net income is derived from the COMPUSTAT tape (Item No. 18 + Item No. 48). To compute ''regular income'', gross profit was used primarily because gross profit exhibits considerably less erratic behavior than net income. For example, mean gross profits exhibit a steadily increasing trend whereas mean net incomes exhibit an erratic or random behavior (see Table 1). Additionally, the FASB (1979) asserts that future gross profit exhibits a reasonably stable or regular pattern over time. Hence, the gross profit time-series (Item No. 12 - Item No. 41) was used in estimating ''regular income''.

All sampled firms having net income and gross profit data reported for a sequential period of twelve or more years over the period 1966 to 1985 were included in the sample. A minimum of twelve historical years of sequential income data are required to satisfy the requirements of exponential smoothing, the time-series technique used to estimate ''regular'' and net income.[6] Thus, 977 companies, each with eight sets (1978-85) of historical twelve-year income sequences, were obtained from the COMPUSTAT tapes.

2. Stratification of the Sample. Each income time-series (net income and gross income) was stratified on the percentage change in income. Beaver et al. [1979, 1980], found a significant relationship between security returns and percentage changes in historical cost earnings. Brooks and Buckmaster [1976] found that stratifying on percentage

change in income was successful in classifying observations into subsets having different ''best predictor models.'' Thus, the percentage change in income was used to stratify the sample. Bowerman and O'Connell [1979, p. 195] have shown that a minimum of twelve years of historical data is necessary to generate a minimum forecast error when triple exponential smoothing is used. Because this study includes triple exponential smoothing, twelve years of historical earnings were used to predict MCFs the thirteenth year. As did Brooks and Buckmaster [1976], the two years prior to the prediction year are used to calculate the percentage change in income when stratifying the sample. Hence, the 11th and 12th year of each twelve-year income series were used to calculate the modified percentage change, p, in income (''regular'' and net income, Y) (Brooks and Buckmaster, 1976).

$$p = \frac{Y_{12} - Y_{11}}{|Y_{11}|} \quad (5)$$

''An absolute value was used in the denominator to enable the specification of a measure of a change for firms having negative income in the eleventh year of an income time-series'' [Brooks and Buckmaster 1976, p. 1365]. The cut-off p-values used to form the strata are those used by Brooks and Buckmaster (1976) and are illustrated in tables three and four.

3. *Test for Best Smoothing Model.* Estimates of the thirteenth-year income of each of the 12-year series provided the basis for selecting the optimal or best smoothing model parameters (order and constant) for each stratum of net income or ''regular income.'' (See the appendix for a description of the exponential smoothing models used.) Sixteen different smoothing constants at each model-order (single, double, and triple) were used within each stratum.[7] That is, 48 iterative parameter procedures were applied to each 12-year time-series within a stratum in estimating the 13th-year ''regular'' or net income. The actual and estimated 13th-year incomes were used in calculating a mean absolute error (MAE)[8] for each model within each stratum.

The error measures were used to define the best smoothing model parameters for each stratum. Thus, the model parameters with the lowest MAE in predicting the thirteenth-year earnings were used to estimate ''regular'' or net income, one year ahead. This iterative parameter procedure was applied to years one through twelve of each stratum of each income series (net or ''regular'') to derive the thirteenth-period estimate

of income. In addition to specifying the optimal smoothing model, the smoothing model parameters also provided a means by which the underlying pattern of the historical income series was judged.

X. REGRESSION ANALYSIS

Regression was used to assess the usefulness of "regular income" in addition to net income in explaining future MCF. The basic research design consisted of conducting cross-sectional multiple regressions one year ahead for each dependent variable; stock price, dividends, net income, funds flow from operations, and return on net assets, with both of the earnings measures as independent variables. Each cross-sectional multiple regression model was used to test the descriptive power of "regular income." The cross-sectional multiple regressions took the following form:

$$MCF_{it} = \alpha_t + \beta_{1t}\,\widehat{EPSp}_{it} + \beta_{2t}\,\widehat{EPSr}_{it} + \delta_{it} \qquad (6)$$

where

MCF = dependent variable or market cash flow variable, all are stated on a per share basis except return on net assets

$\widehat{EPSr}$ = estimated (via exponential smoothing) "regular earnings"/shares used to calculate primary earnings per share

$\widehat{EPSp}$ = estimated (via exponential smoothing) net earnings/shares used to calculate primary earnings per share.

Regression has been advanced as the best means for determining the relationship between independent and dependent variables when the following assumptions are met [Johnston, 1960]; (1) homoscedasticity, (2) that there is a linear relationship between the independent and dependent variables, and (3) that the independent variables are independent of each other. However, a test for heteroscedastic disturbance in the residuals is not included in this study. Schipper and Thompson [1983] state that this test requires using two estimates: (1) the full covariance matrix of the residuals from the regression model, and (2) the diagonal covariance matrix composed of only the diagonal elements in the matrix. The covariance matrix is inverted to calculate the quadratic form used in testing the null hypothesis. However, this inversion is impossible if the number of time series observations (12 in this study) is less than the number of firms (977 in this study).

One accepted method of minimizing heteroscedastic disturbance in the residuals is to "pull in" or "truncate" outliers [Foster, 1977; Bowen, Burgstahler and Daley, 1987; Brown, Hagerman, Griffin and Zmijewski, 1987]. Thus, a truncation rule of setting all errors greater than 300% equal to 300 percent was used in this study. (The 300 percent truncation rule did not result in eliminating more than 5 percent of the total sample.)

The third assumption of regression infers there is no statistically significant correlation among the residuals or error terms. Correlation among the error terms can cause the parameters of the regression model to be inaccurately estimated. A test of serial correlation was conducted using the Durbin-Watson test statistic. The Durbin-Watson statistic is also a good indicator of and test for the second assumption, that the regression model is a good linear fit of the relationship between the independent and dependent variables.

XI. EMPIRICAL RESULTS

This section describes the exponential smoothing results using the percentage change stratification rule. Exponential smoothing was used to provide evidence about the underlying behavior of "regular" and net income. Next, multiple regression models are presented for 977 companies over 8, 12 year periods, 1978-85. Regression was used to test the hypothesis that "regular income" provides descriptive power in forecasting MCFs one year ahead. Lastly, forecast measures of cash flows using the multiple regression models were computed.

XII. EXPONENTIAL SMOOTHING RESULTS

Table 1 illustrates the mean and standard deviation of gross profit and net income from 1966-1985. Notice that the means of gross profit exhibit a steadily upward or increasing trend, whereas the means of net income tends to move randomly around a less pronounced upward sloping level of earnings. As hypothesized by the FASB [1979], gross profit, a proxy for "regular income," exhibits a constant or stable upward sloping trend. The findings of Table 1 substantiate that gross profit reflects a "regular" process whereas net income reflects a transitory process.

The multiple regression model used to test the predictive power of net and "regular" earnings assumes that there is independence between the

Table 1. Summary Statistics of Independent Variables

Year	*Variable*	*Mean*	*Standard Deviation*
1966	Net Income	24.979	106.058
1967	Net Income	24.665	105.650
1968	Net Income	28.172	113.735
1969	Net Income	28.890	113.771
1970	Net Income	26.241	106.088
1971	Net Income	29.541	127.339
1972	Net Income	34.551	142.119
1973	Net Income	46.414	180.747
1974	Net Income	51.708	196.180
1975	Net Income	46.715	174.719
1976	Net Income	59.727	220.011
1977	Net Income	66.238	249.698
1978	Net Income	76.995	279.312
1979	Net Income	99.582	360.911
1980	Net Income	99.907	399.514
1981	Net Income	103.862	389.052
1982	Net Income	77.732	372.993
1983	Net Income	84.011	351.431
1984	Net Income	107.999	400.961
1985	Net Income	85.298	372.072
1966	Gross Profit	106.403	376.672
1967	Gross Profit	114.436	400.435
1968	Gross Profit	133.320	454.320
1969	Gross Profit	149.526	496.162
1970	Gross Profit	153.945	492.464
1971	Gross Profit	170.710	567.063
1972	Gross Profit	193.425	647.205
1973	Gross Profit	228.840	761.817
1974	Gross Profit	270.996	936.430
1975	Gross Profit	276.835	951.726
1976	Gross Profit	311.584	1050.428
1977	Gross Profit	350.831	1181.605
1978	Gross Profit	404.516	1334.251
1979	Gross Profit	465.517	1401.615
1980	Gross Profit	503.092	1476.183
1981	Gross Profit	544.069	1546.699
1982	Gross Profit	551.005	1637.859
1983	Gross Profit	591.380	1762.891
1984	Gross Profit	650.184	1932.200
1985	Gross Profit	682.680	1966.152

two variables. One means of observing the degree of correlation among variables is by computing the Pearson Correlation Coefficients. Table two shows the Pearson Correlation Coefficients between each of the variables included in this study.

Table 2 illustrates moderate correlation between the independent variables. That is, estimated "regular earnings" is moderately (r = 0.45) correlated with estimated net earnings. Because there was moderate correlation between the independent variables, a Durbin-Watson statistic was computed for each of the multiple regression models. There was no significant ($p \leq .01$) correlation found among any of the residuals in the multiple regression models. Hence, the cross-sectional multiple regression models were assumed to be a good measure of the relationship between the independent and dependent variables.

There was moderate to high correlation between the independent and dependent variables. For example, price is highly correlated with forecasted net earnings (r = 0.62), funds flow (r = 0.60), and dividends (r = 0.61). There is moderate correlation between funds flow and estimated regular earnings (r = 0.48), and estimated net earnings (r = 0.55); between dividends and estimated "regular" earnings (r = 0.47), estimated net earnings (r = 0.57), and funds flow (r = 0.59); and between historical net earnings and estimated net earnings (r - 0.55), funds flow (r = 0.62), and dividends (4 = 0.43). These findings add validity to the research hypothesis. That is, there is a strong relationship and thus descriptive power between the independent variables (estimated "regular" and net income) and many of the MCF variables (funds flow, dividends, net income, and price). Moreover, the patterns of correlation presented

Table 2. Pearson Correlation Coefficients for All Dependent and Independent Variables

Variables		*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*
Independent								
Estimated Regular Earnings	(1)	1.0000						
Estimated Net Earnings	(2)	0.4577	1.000					
Dependent								
ROI	(3)	0.0044	0.0719	1.0000				
Funds Flow	(4)	0.4866	0.5521	0.0542	1.0000			
Dividends	(5)	0.4754	0.5707	0.0230	0.5936	1.0000		
Historical Net Earnings	(6)	0.2718	0.5502	0.1116	0.6288	0.4343	1.0000	
Price	(7)	0.4762	0.6240	0.0280	0.6019	0.6181	0.5197	1.0000

ROI = return on net assets

here represent no major problems regarding the hypothesis testing procedures. This is because the high correlation is between the independent and dependent variables as expected, not between the independent variables. In addition, the variance inflation factors for both of the independent variables in each of the multiple regressions are very low (less than 1.3), which precludes significant multicollinearity between the independent variables.

The results of the test for the exponential smoothing parameters with the lowest prediction error (MAE) when the percentage change stratification rule was applied to net income are presented in Table 3. Table 3 column 1 explains the strata from extremely high to extremely low. Column 2 describes the percentage of the total sample in each stratum and

Table 3. Percentage Change Stratification Rule Parameters of the Best Prediction Model for Each Stratum of Net Income

*Strata**	*Percent of Sample*	*Sample Size*	*Order*	*Alpha or Constant*
1	.46	36	3	.05
2	.56	44	1	.60
3	.88	69	1	.70
4	2.32	181	1	.90
5	4.25	332	1	.55
6	52.28	4086	2	.40
7	27.79	2172	1	.90
8	5.56	435	1	.95
9	2.84	222	1	.80
10	.86	67	2	.05
11	.63	49	2	.10
12	.51	40	2	.05
No Strata	1.06	83		
	100.00	7816		

*Strata	Percentage Change in Net Income
1	$900 < \text{Change} \leq 1600$
2	$600 < \text{Change} \leq 900$
3	$400 < \text{Change} \leq 600$
4	$200 < \text{Change} \leq 400$
5	$100 < \text{Change} \leq 200$
6	$0 \leq \text{Change} \leq 100$
7	$-100 < \text{Change} < 0$
8	$-200 \leq \text{Change} < -100$
9	$-400 \leq \text{Change} < -200$
10	$-600 \leq \text{Change} < -400$
11	$-900 \leq \text{Change} < -600$
12	$-1600 \leq \text{Change} < -900$
No strata	$1600 < \text{Change or} < -1600$

Column 3 the number of observations within each stratum. Columns 4 and 5 present the model order and alpha combination that resulted in the lowest mean absolute error (MAE).

The exponential smoothing findings of net income are in some instances similar to those findings of previous studies. For example 52% of the net income observations were trendy data. Brandon, Jarrett and Khumawala (1986) contend that earnings tends to be trended data. Approximately 33 percent of the net income data exhibited a random walk behavior (i.e., $\alpha \geq 0.90$ and single order). These findings corroborate those of Brooks and Buckmaster (1976) that net income in the middle strata (4-9) tends to follow a random walk pattern. The outer strata (1-2 and 10-12) exhibit a mean reverting pattern (i.e., $\alpha \leq 0.70$). Again these findings are similar to Brooks and Buckmaster's [1976] in that observations in the outer strata usually revert to the income levels immediately preceeding the classificatory observation.

The above analysis suggests that earnings are perceived to be a more complex process than has been previously modeled. In particular, many net income observations are not perceived to be well approximated as a random walk. This apparent disparity between the findings of earnings behavior (random walk versus mean reverting) can be resolved by viewing earnings and other dependent or MCF variables as a compound earnings process.

These results also differ from many previous studies in that the predominant order or change in income is with a trend (i.e., order is 2 or double) rather than no trend. A possible reason for net income tending to behave differently in this study as compared to previous market-based research may be found in the data base period. This study includes prediction models for the years 1978-1985, whereas Brooks and Buckmaster [1976] included years 1954-1973, Watts and Leftwich [1977] up to year 1974 and Beaver [1970] 1926-1968. Between 1978-1985, economic events such as radically changing GNPs, oil prices increasing phenomenally, and double digit inflation, possibly affected net income, causing it to behave erratically. In summary, net income in this study from 1978-85 generally tends to be either mean reverting (i.e., alpha $\leq$ .4 for 55 percent of the population) with a trend (i.e., order of 2 for 54 percent of the population) or random walk (i.e., alpha $\geq$ .90, order = 1 for 33 percent of the population).

The results of the test for the best smoothing model when the percentage change rule is applied to gross profit in estimating "regular earnings" are presented in Table 4. Like net income, most "regular earn-

Table 4. Percentage Change Stratification Rule Parameters of the Best Prediction Model for Each Stratum of Gross Profit

*Strata**	*Percent of Sample*	*Sample Size*	*Order*	*Alpha or Constant*
1	.03	2	1	.05
2	.03	2	3	.40
3	.08	6	3	.60
4	.43	34	2	.55
5	1.30	102	2	.65
6	72.91	5699	2	.80
7	24.69	1930	1	.80
8	.20	16	1	.80
9	.09	7	2	.05
10	.08	6	3	.55
11	.04	3	3	.20
12	.03	2	1	.45
No Strata	.09	7		
	100.00	7816		

*Strata	Percentage Change in Gross Profit
1	$900 < \text{Change} \leq 1600$
2	$600 < \text{Change} \leq 900$
3	$400 < \text{Change} \leq 600$
4	$200 < \text{Change} \leq 400$
5	$100 < \text{Change} \leq 200$
6	$0 \leq \text{Change} \leq 100$
7	$-100 < \text{Change} < 0$
8	$-200 \leq \text{Change} < -100$
9	$-400 \leq \text{Change} < -200$
10	$-600 \leq \text{Change} < -400$
11	$-900 \leq \text{Change} < -600$
12	$-1600 \leq \text{Change} < -900$
No strata	$1600 < \text{Change}$ or < -1600

ings'' exhibited small percentage changes (strata 6). As previously espoused, ''regular income'' never exhibits a random walk pattern (i.e., $\alpha \geq 0.9$ with single order). Additionally, ''regular income'' tends to exhibit a mean reverting trendy behavior (i.e., $\alpha < 0.8$ and second order) for 74 percent of the observations. This analysis indicates that if MCF are a compound process, then ''regular'' earnings can be used to detect the ''regular'' earnings process and net income can be used to detect the irregular earnings process. In summary, the process generating ''regular income'' is not similar to that of net income. Additionally, these findings imply that ''regular income'' reflects a component of other information that is not reflected in earnings. As a result, ''regular income'' may contain useful information about future MCF not reflected in current earnings.

XIII. REGRESSION RESULTS

The results of the multiple regression models that were used to test the hypothesis that "regular earnings" has incremental descriptive power beyond that contained in net income when assessing future MCF are illustrated in table five. In all cases, EPSr provided significant, $p \leq .01$, descriptive power in predicting each MCF one year ahead. Most importantly, this finding implies that "regular income" is useful information, in addition to net income, to market participants who compute an enterprise's value in developing their return-maximizing strategy. Moreover, because the variance inflation factors for the independent variables are all less than 1.3 (indicating no multicollinearity among the dependent variables) then it is concluded with confidence that EPSr is useful to market participants who wish to reduce the variance in their MCF expectations. Further, these findings support that a proxy of "regular" income is already disclosed in the earnings report. "Regular income," approximated from gross profit, has been shown to provide significant relative descriptive power in forecasting MCF one year ahead.

Table 5. Regressions Based on Recurring and Historical Cost Earnings (computed from exponential smoothing) 1978–85

Regression Model	*Dependent Variables (MCF)*				
	Dividends	*Earnings*	*ROI*	*Price*	*Fund Flow*
$MCF_{it} = \alpha_t + \beta_{1t}\widehat{EPSp}_{it} + \beta_{2t}\widehat{EPSr}_{it} + \delta_{it}$					
β1t	0.1491	0.7195	7.6584	3.5758	0.8125
t-value	44.462***	50.416***	6.925***	53.383***	41.046***
β2t	0.0170	0.0064	−0.5585	0.3163	0.1083
t-value	26.973***	2.369*	−2.826*	25.070***	29.117***
R^2	0.3838	0.3032	0.0062	0.4352	0.3737
F-value	2404.489***	1680.410***	24.052***	2974.805***	2298.213***

Legend
MCF = market cash flow
β_{1t} = regression coefficient of EPSp
EPSp = primary earnings per share
β_{2t} = regression coefficient of EPSr
ESPr = recurring earnings per share
# = $p \leq .05$
* = $p \leq .01$
** = $p \leq .001$
*** = $p \leq .0001$

XIV. USING EPSp AND EPSr TO FORECAST CASH FLOWS

Viewing dependent variables as a compound process not only implies a strong association between "regular" and net income and each MCF variable, but also provides a basis for forecasting each MCF variable. That is, usefulness as defined by the FASB includes not only descriptive power, but predictive ability too. This section will present the results of a preliminary excursion into the accuracy of "regular"-based forecasting models.

Table 6 illustrates the forecasting errors generated from using "regular" and net income or permanent and transitory earnings in predicting MCF. The forecasting error was defined as mean absolute percentage error (MAPE). MAPE is computed as follows:

$$\text{MAPE} = \frac{1}{N}\sum_{i}^{N}\left|\frac{A_{it} - P_{it}}{A_{it}}\right| \tag{7}$$

where

A = actual MCF value
P = predicted MCF value
i = observation index

Table 6. Analyses of Forecast Errors

MCF Variable	*Mean Absolute Percentage Error (MAPE) Across 5-Years (1978–82)*	*Size (N)**
Stock Price	.589	7297
Return on Investment	.759	7158
Funds flow from operations	.570	7154
Dividends	.580	6003
Net Earnings	.496	7250

$$\text{MAPE} = \frac{1}{N}\Sigma\left|\frac{A_{it} - P_{it}}{A_{it}}\right|$$

A = actual value of MCF one year ahead
P = predicted value of MCF one year ahead
i = observation index

*The sample size was not consistent across dependent variables because when the divisor was zero, or a missing value was generated, the observation was deleted from the analysis. Additionally every MAPE > 300 percent was deleted. The 300 percent truncation rule never resulted in eliminating more than 3 percent of the total sample.

The compound earnings process was most accurate in predicting the MCF variable, net earnings, one-year-ahead. This represents a substantial improvement in forecast accuracy over the ''simple exponential smoothing'' model used by Brandon, Jarrett and Khumawala (BJK) [1986] in predicting earnings using past earnings alone. For example, BJK [1986] report a 0.728 MAPE using past earnings only; whereas, my results reflect a .496 MAPE when using the compound process, ''regular'' and net earnings. This finding corroborates prior findings that MCFs exhibit a compound earnings process. That is, MCFs are composed of a transitory and regular component that when combined in one model result in more accurate forecasts than the transitory component alone. This finding also provides evidence that gross profit is a good proxy for the nontransitory or permament component of MCF. Thus, the current form of the earnings report discloses useful information for estimating ''regular earnings.''

Table 6 also reveals that with the exception of return on investment, the compound earnings process is a reasonable predictor of dividends, funds flow from operations, and stock price as well as net income. However, the EPSp and EPSr earnings process is a poor predictor of ROI. Benston [1967] and Keenan [1970] state that there is a weak or unstable relationship between ROI and earnings. Thus, this instability carries over into the compound earnings process as well.

The above prediction errors reported in Table 6 correspond to the R^2s reported in Table 5. For example, R^2s are somewhat consistent ($.3 < R^2 \leq .4$) across all the cross-sectional multiple regression models except return on investment (ROI) just as are the MAPEs consistent ($.49 < \text{MAPE} < .58$) across all the cross-sectional multiple regression models except ROI. The compound earnings process exhibited weak descriptive power ($R^2 = .006$) and prediction accuracy ($\text{MAPE} = .759$) with respect to ROI. This instability may possibly be a result of the compound process's inability to capture the influence of the net asset base.

CONCLUSIONS

This study addresses the question of the usefulness or descriptive power of ''regular earnings.'' Current FASB disclosure guidelines include a proxy for ''regular income,'' gross profit. Evidence presented here indicates that ''regular earnings'' provide significant incremental descriptive

power over net income in explaining cross-sectional differences in MCF (i.e., dividends, earnings, stock price, and funds flow from operations per share, and return on net assets). To the extent that investors and creditors are interested in assessing the value of an enterprise, this study implies that gross profit is a good proxy in estimating the permanent behavior of MCFs as suggested by the *Discussion Memorandum* on "Reporting Earnings" [1979].

The process of net and "regular income" was specified by a percentage change stratification procedure and exponential smoothing. The percentage change rule, as specified by Brooks and Buckmaster [1976], was applied to net income and to "regular income." The best exponential smoothing model was defined within each stratum as the model parameters that minimized the mean absolute error in predicting "regular" or net income one year ahead. After specifying the forecasted income variables one year ahead, they were converted to a per share basis ($\widehat{EPSp}$, $\widehat{EPSr}$) by using "shares used to calculate primary earnings per share" from the COMPUSTAT files.

The stratification of income implied that net income in many instances (33 percent) followed a random walk pattern. However, in 52 percent of the instances net income tended to be trendy. That is, unlike previous time-series studies [Brooks and Buckmaster, 1976; Watts and Leftwich, 1977] net income in many instances exhibited a trend as is supported by BJK (1986). This dissimilarity in net earnings behavior may be due in part to the difference in the data base period. Perhaps a broader investigation of net earnings during alternative time periods (e.g., prior to 1978 versus after 1978) is warranted. Additionally, future studies might include alternative forecasting models and/or stratification rules. For example, stratification could be based on the earnings time-series subsequent to the prediction year.

The exponential smoothing model specifications also indicate that "regular earnings" tended to exhibit a mean-reverting trendy behavior for 74 percent of the observations. In summary, although net income tended to be trendy, net income tended to exhibit a transitory or random walk behavior, whereas "regular income" tended to exhibit a nontransitory or mean reverting behavior.

The cross-sectional multiple regression procedures, confirm that "regular income" provides significant descriptive power above net income in explaining each MCF variable one year ahead. This finding suggests that EPSr and EPSp explain more about the future behavior of MCF than is

contained in net income alone. The results also suggest that users' expectations of future cash flow are dependent upon past net and "regular" income. That is, the present value of a firm is the result of a compound process involving more than one earnings variable.

An examination of the forecast errors indicates, that with the exception of ROI, MCF time-series are composed of two processes; one permanent ("regular income") and another transitory (net income). However, the forecast errors were larger when using this compound process to predict ROI. This implies that forecasting models for ROI should be examined in much greater depth than has been done here. In particular, a researcher might introduce a more elaborate valuation model that incorporates risk, growth, and other factors. Another extension might include stratification of deflated and undeflated measures of ROI. These limitations notwithstanding, the results of this study indicate that rational investors can benefit from including "regular income" in their valuation model, a variable that can be approximated from current earnings disclosures. Additionally these findings support the FASB's (1984) actions to not initiate additional earnings disclosure requirements for "regular income" because a good proxy of "regular earnings" is already disclosed: gross profit.

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NOTES

1. The seven classification issues were (1) whether earnings should be presented using a single- or multiple-step format, (2) what criteria should be adopted for choices between alternative earnings classifications, (3) how earnings should be classified so as to improve the assessment of regular expenses, (4) whether regular earnings should be classified separately from irregular earnings, (5) what criteria should be used in developing a regular-irregular income reporting taxonomy, (6) whether irregular components of earnings should be excluded from the income statement, and (7) which components of earnings should be distinguished in a five-year summary of income.

2. The concept "market cash flow" as used in this study includes those variables used by financial analysts in assessing the present value of a security. Market cash flow

includes return on investment, funds flow from operations, stock price, dividends and net income [Williams, 1938; Gordon, 1959; Graham and Dodd, 1951; Clendenin and Van Cleave, 1954; Miller and Modigliani, 1961; Miller and Rock, 1985].

3. The analytical linkages in this paper are those proposed by Beaver et al. [1980] for market based accounting research. Beaver uses this linkage to derive the descriptive power of prices and earnings in predicting income whereas in this study the linkage is used to explain the descriptive power of net and "regular earnings" in predicting cash flow variables.

4. All three of the interpretations of the general model have been shown to be mathematically equivalent. See Miller and Modigliani [1961].

5. For example, American Can declared only one special dividend in fifteen years from 1966 through 1980.

6. Bowerman and O'Connell [1979, pp. 186–195] have shown that when using triple exponential smoothing, a minimum of 12 historical years is necessary for a satisfactory or minimum forecast error.

7. Iterations were made for each of the smoothing models (single, double, and triple), using the following α - levels: ".05, .10, .20, .30, .333, .40, .45, .50, .55, .60, .65, .70, .80, .90, .95 and .999 where .999 will be considered approximately equal to 1.0" [Brooks and Buckmaster 1976, p. 1364]. The smoothing models were specified as illustrated by Bowerman and O'Connell [1979, pp. 122-123, 146-147, and 173-177]. See the appendix.

8. Iterative procedures were used to determine the optimal smoothing model order and constant for each stratum. The error measure used to select the optimal smoothing model order and constant was the mean absolute error (MAE) of the thirteenth-year income (Y) (net or "regular") for the I time-series of each stratum.

$$MAE = \frac{1}{I} \sum_{i=1}^{I} |Y_{i13} - \hat{Y}_{i13}|$$

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APPENDIX

The purpose of this appendix is to provide the specifications of the exponential smoothing models used in this study. First, the first order model will be explained followed by second order and then third order exponential smoothing. These exponential smoothing model specifications are those presented by Bowerman and O'Connell [1979].

To predict future periods in a time series using first order or single exponential smoothing, first S_t, the smoothed estimate or statistic is computed [Bowerman and O'Connell, 1979, p. 122]:

$$S_t = \alpha Y_t + (1 - \alpha)\, S_{t-1} \tag{A1}$$

where

α = alpha, the smoothing constant
Y_t = income of time period t
S_t = smoothed estimate or statistic

Once S_t has been computed, then the one-period-ahead forecast is computed [Bowerman and O'Connell, 1979]:

$$\hat{Y}_{t+1} = S_t \tag{A2}$$

where

$\hat{}$=estimated or forecasted data

Alpha, referred to as the smoothing constant, measures the contribution that the observations Y_t, Y_{t-1}, Y_{t-2} . . ., Y_1 make to the most recent estimate, S_{t+1}. For example, the forecast using single order exponential smoothing can be written [Bowerman and O'Connell, 1979, p. 123]:

$$S_t = \alpha Y_t + \alpha(1 - \alpha)\, Y_{t-1} + \alpha\,(1 - \alpha)^2\, Y_{t-2} + \ldots + \alpha\,(1-\alpha)^{t-1}\, Y_1 + (1 - \alpha)\, {}^{t}S_o \tag{5}$$

The coefficients of the observations, α, $\alpha(1 - \alpha)$, $(1 - \alpha)^2$, . . ., $\alpha(1 - \alpha)^{t-1}$ decrease geometrically with the age of the observations and mea-

sure the contributions that the observations Y_t, Y_{t-1}, Y_{t-2}, . . . Y_1 make to the most recent estimate of S_t. That is, if alpha equals 0.1, then the coefficients are 0.1, 0.09, 0.081, 0.0081; and if alpha equals .9, we obtian the coefficients 0.9, 0.09, 0.081, 0.0081; and if alpha equals .9, we obtian the coefficients 0.9, 0.09, 0.009, 0.0009. Thus remote observations are dampened out of the current estimate of S_{t-1} as time advances [Bowerman and O'Connell, 1979]. This is where this time series technique, exponential smoothing, gets its name. Note also that as the alpha level increases and gets close to one, the remote observations are dampened out more quickly than when alpha is very small or approaches zero.

Second order exponential smoothing introduces additional formulas that estimate the linear trend. The second-order exponential smoothing statistic is computed as follows [Bowerman and O'Connell, 1979, p. 146]:

$$S_t^{[2]} = \alpha S_t + (1 - \alpha)S_{t-1}^{[2]} \tag{A3}$$

where

$S_t^{[2]}$ = double smoothed statistic
$S_{t-1}^{[2]}$ = trend, the initial trend is computed using a least squares procedure

In the above equation, the double smoothed statistic $S_t^{[2]}$ is found by applying the smoothing operation to the output of the single smoothing equation. The first S_t and second $S_t^{[2]}$ smoothed statistics are then used to compute the forecast for second-order exponential smoothing as follows [Bowerman and O'Connell, 1979, p. 147]:

$$\hat{Y}_{t+1} = 2 + \left(\frac{\alpha}{1 - \alpha}\right) S_t - 1 + \left(\frac{\alpha}{1 - \alpha}\right) S_t^{[2]} \tag{A4}$$

where

Y_{t+1} = forecasted earnings one period ahead

Triple exponential smoothing would be useful in forecasting data with a quadratic or curvilinear trend. Triple exponential smoothing involves the use of the smoothed statistics S_t, $S_t^{[2]}$, and $S_t^{[3]}$. S_t and $S_t^{[2]}$ computations were illustrated in equations A1 and A3. The initial value of $S_t^{[3]}$ is computed using twelve years of historical data, after which the third smoothed statistic $S_t^{[3]}$ is computed as follows [Bowerman and O'Connell, 1979, p. 173].

$$S_t^{[3]} = \alpha S_t^{[2]} + (1 - \alpha)\, S_{t-1}^{[3]} \tag{A5}$$

$S_t^{[3]}$ is computed by applying the smoothing operation to the results of the double smoothing equation. The equation used to derive the one-period-ahead forecast of earnings using triple exponential smoothing is as follows [Bowerman and O'Connell, 1979, p. 177]:

$$\begin{aligned} Y_{t+1} = {} & [6\,(1-\alpha)^2 + (6-5\,\alpha)\,\alpha + \alpha^2] \frac{S_t}{2(1-\alpha)^2} \\ & - [6\,(1-\alpha)^2 + 2(5-4\,\alpha)\,\alpha + 2\alpha^2] \frac{S_t^{[2]}}{2(1-\alpha)^2} \\ & + [2\,(1-\alpha)^2 + (4-3\,\alpha)\,\alpha + \alpha^2] \frac{S_t^{[3]}}{2(1-\alpha)^2} \end{aligned} \tag{A6}$$

PERSPECTIVES

PERSPECTIVE AFTER ONE YEAR[1]

Edmund Coulson

The Securities and Exchange Commission is in the midst of a period where there is a unique opportunity for self-examination and change. Several personnel and organization changes occurred within the last year, including my appointment as the 7th Chief Accountant for the Commission and an expanded, reorganized accounting staff in the Division of Corporation Finance.

Changes in personnel and organization always raise questions concerning the SEC's focus on accounting issues. Briefly, I would like to comment on several important areas addressed this past year with some indication of their importance to additional future activities.

I. THE SEC'S CONTINUING ROLE AS A REGULATOR

Guiding principles or basic precepts underlie any self-examination and define the parameters within which change can occur. Two guiding prin-

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ciples of the SEC's focus on accounting issues will not change. First, the SEC is essentially a law enforcement agency devoted to the principle of full and fair disclosure. Second, the accuracy and credibility of a registrant's financial statements are at the heart of that full disclosure program. The focus of the SEC as a law enforcement agency is thus directed at the preparers and examiners of financial statements.

The review and comment process in the Division of Corporation Finance and the activity of the Division of Enforcement are designed to provide discipline to the full disclosure process and to bring proceedings against accountants who fail in their public responsibility. The Office of the Chief Accountant, together with the Divisions, will work toward continued strengthening of the review and comment process and enforcement activities in the future.

II. OVERSIGHT OF PRIVATE STANDARD SETTING

The SEC, since its inception as an agency, has deferred to the private sector accounting and auditing standards setting bodies for the development of standards and principles. Their professionalism and expertise have earned the SEC's respect. Because of the vital importance of these standards to the public, the SEC has maintained, and must continue to maintain, an active and visible oversight function.

Private sector standards setters have a large agenda that requires action. For example, the Financial Accounting Standards Board (FASB) is addressing accounting for financial instruments. Hardly a month goes by without the announcement of new, exotic financial instruments, the most recent being unbundled stock units. The measurement and disclosures of these instruments, including those carried "off-book," have broad implications across industry lines.

A flurry of standards setting activity dealing with complex issues like financial instruments,[2] other post-retirement benefits,[3] loan fees and costs,[4] consolidations,[5] statement of cash flows,[6] and accounting for income taxes,[7] have resulted in criticism of the FASB.[8] While the SEC's support for the FASB is as strong as ever, we and the FASB recognize the need to be responsive to the concerns of its constituents. We have encouraged a dialogue to improve the process. A Financial Accounting Foundation task force, whose meetings I attend as an observer, has been created to study and make recommendations on the constituent concerns.

III. INDEPENDENCE

The independence of auditors of registrants' financial statements has long been a concern of the SEC. The Commission has published an extensive series of interpretations in this area.[9] In addition, the Office of the Chief Accountant responds to requests for its views on whether particular relationships between a registrant and its affiliates may be considered independent for the purpose of auditing financial statements filed with the Commission. These letters are available to the public after issuance.[10]

The SEC staff may also raise questions based upon information obtained in the review of registrant filings, such as when the auditor performs certain valuation services. Recently, the SEC has adopted amendments to its rules to increase disclosures concerning changes in accountants and possible "opinion shopping" situations[11] and is considering improving the timeliness of these disclosures.[12]

Auditor independence is a primary factor in maintaining investor confidence in the full disclosure system. Significant issues have recently been raised concerning new relationships between public accounting firms, while engaged in consulting activities for third parties, and their registrant audit clients. Similar issues, and other independence issues, will continue to require significant consideration in the future.

IV. INTERNATIONALIZATION

The internationalization of the world economy requires recognition when accounting and auditing standards are being established. Many business enterprises operate in several different countries, each with its own accounting principles and auditing standards. Difficult issues are raised in considering internationalization of accounting and auditing standards.

This is especially significant for a regulatory agency charged with a domestic responsibility for audited full disclosure financial statements. As a member of a working group of the International Organization of Securities Commissions and Similar Agencies, I have been assisting the International Accounting Standards Committee (IASC) in considering changes in international accounting standards. This work has resulted in significant changes being proposed by the IASC, which will be exposed in early 1989. A similar initiative is underway with the International Federation of Accountants (IFAC) to pursue potential solutions in the

auditing area. The objective of the IASC and IFAC initiatives is to determine if international accounting and auditing standards can be sufficiently revised in order to consider their use in international securities filings. I consider these to be difficult, but important, initiatives and will be devoting increasing attention to this area in the next few years.

V. FRAUDULENT FINANCIAL REPORTING INITIATIVES

The National Commission on Fraudulent Financial Reporting (also known as the Treadway Commission) made suggestions for managements that prepare financial statements, auditors, internal auditors, audit committees, and others (including Congress and the SEC). The Auditing Standards Board (ASB) has finalized its so-called "expectations gap" statements on auditing standards, which address many of the areas covered in the Treadway Report.[13] These new audit standards, while not perfect, should promote better audits by further clarifying the auditor's responsibilities. For example, the new standards emphasize the need for professional skepticism and discuss the types of factors that must be considered in risk assessment. The SEC staff will continue to work with the ASB in implementing and fine-tuning the new standards, and in identifying and addressing additional areas where guidance is needed.

An auditor must pursue indications of fraudulent financial reporting and ensure that appropriate corrective action is taken. Absent such corrective action, the auditor should resign. After an auditor's resignation, the SEC's Form 8-K reporting requirements ensure appropriate public disclosures that will receive attention at the Commission.

The peer review process of the SEC Practice Section of the AICPA, I believe, has helped to improve a participating firm's quality controls, and the SEC staff has been further encouraged by the adoption of the new Quality Assurance Program. The SEC also is pursuing a mandatory peer review proposal,[14] which would require registrant's auditors to have an independent review of quality control every three years with SEC access to certain peer review workpapers.

The SEC anticipated two of the Treadway Commission recommendations—those relating to peer review and opinion shopping. In addition, the SEC has proposed that annual reports include a management report which contains an assessment of the effectiveness of internal controls[15] and has approved the issuance of a concept release on timely auditor

review of quarterly data. The Commission also has sent letters to the various exchanges asking that consideration be given to upgrading their requirements for audit committees and has requested legislation for increased enforcement remedies (such as civil money penalties).

CONCLUSION

The SEC is actively pursuing initiatives in the international and fraudulent financial reporting areas. There are obviously other areas in accounting, auditing and disclosure where change would be beneficial. I have an open mind for good, new ideas.

Changes will be undertaken, however, only if those changes are believed to improve the full disclosure system. Changes will not be undertaken merely to respond to critics. The full disclosure system must be relevant and informative in ever more international financial markets with increasingly complex financial transactions and innovative financial instruments. New ways to deter and detect fraudulent financial reporting, whenever and wherever it may occur, will be required due to this ever more complicated, global economy.

These are the challenges that lie ahead. Some have been or are being addressed already; new ones will appear in the future. I was honored to be chosen the 7th SEC Chief Accountant and look forward to working with the accounting profession and others to maintain excellence in the U.S. full disclosure system.

NOTES

1. The Securities and Exchange Commission as a matter of policy disclaims responsibility for any private speech or publication by any of its members or employees. The views expressed here are those of the author and do not necessarily reflect the views of the Commission or its staff.
2. Exposure Draft, Proposed Statement of Financial Standards (SFAS), *Accounting for Financial Instruments* (Issued November 30, 1987).
3. Exposure Draft, Proposed SFAS, *Employer's Accounting for Post-Retirement Benefits Other Than Pensions* (Expected issuance in early 1989).
4. SFAS No. 91 (Issued December, 1986; effective for fiscal years beginning after December 15, 1987).
5. SFAS No. 94 (Issued October, 1987; effective for fiscal years ending after December 15, 1988).

6. SFAS No. 95 (Issued November, 1987; effective for fiscal years ending after July 15, 1988).

7. SFAS No. 96 (Issued December, 1987; effective, after amendment by SFAS No. 100, for fiscal years beginning after December 15, 1989).

8. See "What is the FASB's role, and how well is it performing?" *Financial Executive* (September/October, 1988), pp. 20–26; Carol J. Loomis, "Will 'FASBEE' Pinch Your Bottom Line," *Fortune* (December 19, 1988), pp. 98–103; Arthur R. Wyatt, "Professionalism in Standard Setting," *The CPA Journal* (July, 2988), pp. 20–32; and Lee Burton and Thomas F. Ricks, "SEC, Reported Pressed by Business, Studies Need for Overhaul of FASB." *The Wall Street Journal* (August 3, 1988), p. 3.

9. See Codification of Financial reporting Releases, Sections 601 and 602. The long-term involvement can best be seen from the SEC releases in this area prior to 1988: Accounting Series Releases No. 2 (May 6, 1937), 47 (January 25, 1944), 79 (April 8, 1958), 81 (December 11, 1958), 112 (August 12, 1968), 126 (July 5, 1972), 165 (December 20, 1984), 234 (December 13, 1977), 250 (June 29, 1978), 251 (July 6, 1978), 264 (June 14, 1979), 291 (April 10, 1981), 296 (August 20, 1981), and 304 (January 28, 1982) and Financial Reporting Releases Nos. 4 (October 14, 1982), 10 (February 25, 1983).

10. Financial Reporting Release No. 33 (October 17, 1988).

11. Securities Act Release No. 6766 (April 12, 1988). The term "opinion shopping" is generally understood to involve the search for an auditor willing to support a proposed accounting treatment designed to help a company achieve its reporting objectives even though that treatment might frustrate accurate reporting.

12. Securities Act Release No. 6767 (April 12, 1988).

13. The nine statements on Auditing Standards No. 53 through 61.

14. Securities Act Release No. 6695 (April 1, 1987).

15. Securities Act Release No. 6879 (July 19, 1988).

THE AFTERMATH OF EXCELLENCE

Charles Kaiser Jr.

Ethics are not dead. They're alive and well in the accounting profession. As a matter of fact, ethics in the accounting profession are better than ever. The reason for my unbridled optimism is the *Plan to Restructure Professional Standards*. Very simply, the plan to restructure professional standards consists of six parts:

1. Transformation of our *Code of Professional Ethics* into the *Code of Professional Conduct*.
2. A membership requirement that all practice units performing attest services participate in approved triennial quality review programs. (About 2,000 practice units are already participating in the division for CPA firms' peer review programs).
3. Restructuring of the joint trial board.
4. and 5. Creation of new continuing professional education requirements for both members in public practice and those in industry, education, and government, and

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6. Establishment of an increased educational requirement for future AICPA membership.

Basically, this plan, with its six parts, forms a tripod to support the profession.

I. GOALS AND RESPONSIBILITIES

The first leg establishes the foundation of ethical goals and responsibilities. The second leg stands for greater education standards. The third leg sets the framework for monitoring adherence to ethical and technical standards.

The first leg is the new *Code of Professional Conduct.* We modified the previous code because it did not adequately deal with the pressures of the modern business world, nor did it apply to all members, *or state our obligation to serve in the public interest.* The new code does so by presenting positive, goal-oriented "principles," which prescribe the ethical responsibilities that all CPAs should strive to uphold.

Some people think ethics codes are mere window dressing—pro forma and meaningless responses to the criticism of outsiders. And in some cases, this is exactly what they are. Because without real support from the people for whom an ethics code is written, and without the commitment of leadership to see that a code is applicable to everyday life, a code is only empty words.

Partly in response to our new code, many firms are either writing their own codes for the first time—or are revising their existing codes to make them stronger. My firm, for example, has had a *Code of Conduct and Statement of Practice Philosophy* published since 1978, and our document unequivocally states; "Professionalism means integrity, objectivity, and independence." It also means adhering to professional standards and applicable laws and regulations, demonstrating the will to maintain and improve the quality of our professional services, and withstanding all pressures to compromise our principles, standards, and quality."

I know this is a concern to younger people. They need to know what to do when confronted by a situation in which a superior makes a decision they find ethically questionable. A written code makes it clear where the firm stands and what its goals are. One person's values are not confused with the values of the entire organization.

Many firms, mine included, are working to solve this quandary for younger professionals by establishing professional integrity programs. In my firm, we have a structured and internally publicized program in which staff members can confidentially call our senior advisor on professional integrity to discuss possible ethics breaches. The senior advisor can then investigate the situation while guaranteeing the caller anonymity.

II. EDUCATION

The second leg of the plan is a program of stronger education on ethical and technical standards. Education has always been an integral part of our profession. The plan continues this tradition and extends the emphasis. Now, all members in public practice must take 120 hours of continuing education over 3 years, and members in industry, education, and government must take 60 hours over 3 years until 1992, when the requirement rises to 90 hours over 3 years.

Unfortunately, we have always concentrated too much on our education in technical matters. In the future, we should have an increased emphasis on ethics education. But education in ethics and professionalism has got to start before the first day of work. This is why another part of the plan requires those seeking to join the AICPA after the year 2000 to have 150 semester hours of college-level education, including a Bachelor's degree or its equivalent. With this additional education, future members will not only enter the profession more technically proficient, but they should also have a better understanding of ethical responsibility.

The AICPA is working with various state authorities to see that this additional educational requirement becomes law, and many schools are now trying to devise curricula to meet this requirement. Some may wonder whether ethics can actually be taught in the classroom. I think it can, and so apparently, does former SEC Chairman John Shad, who donated $30 million to Harvard University to establish an ethics curriculum.

III. ADHERENCE TO STANDARDS

The tripod's last leg supports the framework for improving adherence to ethical standards. Moreover, it does so in a way that is rehabilitative and educational, not punitive or disciplinary.

Because of the plan, we will now have enforceable rules in our *Code of*

Professional Conduct for the first time. We will also have a restructured joint trial board that will allow us to deal with complaints and violations not only more effectively, but more fairly and consistently, as well. Finally, and also for the first time, we will have a mechanism to help ensure that all firms in public practice are performing ethically and professionally. This mechanism is the quality review program that requires members in public practice to undergo a triennial quality review of their practices.

Quality review is designed to improve the quality of a firm's practice. It will point out ways to improve techniques and procedures. In turn, this should help stem the widening exposure to third-party law suits, as well as add to a firm's bottom-line income. Ethics and profitability are not mutually exclusive. For the profession, it will provide an early-warning system for firms that don't know or disregard professional standards. At the same time, it will help ensure that every person within a firm is performing at an appropriate level, so that the firm's reputation, and revenues, are not inadvertently damaged. This is not a heavy-handed program. If problems are found, the AICPA cooperating with state societies and state accountancy boards will do everything possible to work with the firm to rectify the problem through positive, corrective actions. After all, the goal of quality review is to improve, not just to sanction.

The institute is developing two tools to help firms prepare for quality review. The first is a CPE course that will be offered in self-study and group-study formats and will help firms evaluate and strengthen operating procedures and quality control policies. The second tool will be a confidential consulting review program. This program will offer firms a no-report, risk-free opportunity to have a reviewer come in for a day to help pinpoint weaknesses and offer suggestions.

These, then, are the three legs of the *Plan to Restructure Professional Standards*.

Before closing, however, we need to address a subject stirring much controversy in the profession right now—and one that has serious ethical implications. It is the subject of commissions and contingent fees.

The Anderson committee report that served as the foundation of the plan originally recommended that the AICPA modify its bans against commissions and contingent fees. But the AICPA 250 person council, after nationwide member forums, voted to retain the ban. In the meantime, the Federal Trade Commission (FTC) had been conducting a two-year investigation of these AICPA rules because they may be in restraint of trade. Last month, the FTC offered to settle the dispute, and by vote of

191 to 5, the AICPA's council authorized settlement that would allow acceptance of commissions and contingent fees for nonattest clients only—attest in this scenario also includes compilation clients. From a purist's perspective, this settlement is the second best result. First, would be the total ban; worst would be no ban, next worst would be a ban on the engagement only, and second best is the client ban.

The operative factor, ladies and gentlemen, is that the AICPA will no longer be able to ban commissions and contingent fees. But lifting the ban does not require anyone to accept them. My firm, Pannell Kerr Forster, has adopted a policy that will not allow a commission for recommending an investment to a client. We conscientiously will not impair our objectivity, and over the long haul firms that maintain high ethical standards and values must surely prosper.

Ethics, in theory, is a set of moral principles in which a nation, or profession, or some other group shares a belief. But without an individual, personal commitment to uphold ethics, they remain just that—a theory.

Although optimistic about our plan, I don't think it is a panacea. It cannot and will not prevent every violation of professional ethics. To think that would put me in a league with some Utopians who will only be satisfied if ours is a perfect profession practiced only by perfect human beings. Thus, they will never be satisfied.

Ladies and gentlemen, I will be satisfied if we become the most ethical profession we can possibly be. We've come a long way toward the goal already, and we will keep trying to improve ourselves and to live up to our high ethical standards. To demonstrate our commitment to ethics, the AICPA undertook a $2.5 million national information campaign. I close with the text of the lead informational ad you may have seen in *The Wall Street Journal* and other national publications.

Headline: The New P/E Ratio [Profit/Ethics]
A strange way to measure a company? Not really.
These days the push to improve the bottom line has put new pressures on the way companies behave.

To the point where some have gotten the idea that higher profits and ethical behavior are mutually exclusive.

Of course, this isn't true. Nor has it ever been.

This "new" P/E ratio simply reaffirms the proven axiom that . . . good conduct is good business.

By voicing a clear code of conduct from the top, a company can eliminate misunderstanding and clarify the responsibilities of each employee.

Taking the lead in this way will raise morale and productivity, while reducing the potential for fraud and legal jeopardy.

CPAs who are AICPA members know the value of a rigorous ethical code.

They work for companies of all sizes, as managers, accountants, independent auditors and consultants. In fact, a Louis Harris poll named CPAs the most ethical of all professionals.

The leaders of the accounting profession—members of the AICPA—recently voted to strengthen their code of professional conduct even further. The new code defines proper conduct in terms of integrity, objectivity and independence—all to protect the public interest.

Members of the AICPA believe that every company should have an ethics code. Not to limit profits, but to enhance them.

RESEARCH CONTRIBUTIONS TO CANADIAN STANDARDS: A RETROSPECTIVE

Ross M. Skinner

I have always believed that one's environment has a very strong influence on one's beliefs and actions. As I near retirement from active participation in professional pursuits, I feel an urge to reflect on the way my own career was shaped by its environment. This somewhat extended account, in essence, stems from that urge. Its focus is on professional research since research constituted a significant part of my career.

I. INITIAL DEVELOPMENT

I joined Clarkson Gordon (then called Clarkson, Gordon, Dilworth and Nash) in October 1945, just after the conclusion of World War II. Unlike most of the other larger firms (small by today's standards) that operated on the "pool" system, Clarkson's followed the "staff" system whereby

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professional staff were assigned to individual staff reporting to an individual partner, and having a defined group of clients to look after. I was fortunate enough to be assigned to one of the staffs reporting to J. R. M. (Jack) Wilson, a young partner, aged about 36, who was even then developing recognition as the most competent technical partner in the firm.

At that time the Firm had 3 offices and some 20 partners in all, 12 of them in Toronto. It was not a highly structured organization. With its staff system of operation it was not unlike a set of small firms within a firm, and this was considered highly desirable in order to maintain the sense of personal and professional responsibility for the clients' interests. However, the strong leadership of Colonel Gordon, the founder of one of the principal components of the firm, made up for whatever it lacked in formal organization. In 1945 the Colonel was beginning to reduce his active participation and the mantle of leadership was passing to his older son, Walter Gordon, together with his close friend and associate, J. Grant Glassco.

The core activity of a public accounting firm in 1945 was auditing. Virtually all partners were generalists who were expected to look after all the needs of audit clients and to train staff reporting to them. It was an innovation in the profession when Grant Glassco undertook to acquire special expertise in taxation and built up a reputation preparing and presenting claims, for clients and nonclients alike, for special consideration under the wartime Excess Profits Act. (Under that Act, companies paid a tax on deemed excess profits which reached 100 percent, with 20 percent refundable after the war. Excess profits were defined as all profits in excess of a base consisting of average profits for the period 1936-1939. A company could, however, go before a board and argue that its base should be adjusted because its profits in that period were unduly depressed or for other reasons.)

The education of a CA in 1945 was the joint responsibility of the Institute, the employing firm, and, of course, the student himself. In Ontario, a registered student was required to take a 5 year correspondence course from a high school degree, which was reduced to 4 years for those holding a BA, and 3 for those holding a B.Comm. The course was administered by Queen's University. Much of the course material was drafted by Queen's faculty members, but it was carefully reviewed for accuracy by a committee of the Institute. (I served a term on that committee in the 1950s, and well remember Professor Leonard's surprise when I told him that, contrary to his draft lesson on financial institutions, Canadian chartered banks still had secret reserves.)

There were also 3 sets of examinations, with an exemption for B.Comm.'s from the primary set. The basic texts to be used with the course of study were Smail's *Auditing* and a book by Smails and Walker (I think) on accounting principles. These were supplemented by shorter publications on more specialized topics, and, in the more advanced years, by Montgomery's *Auditing*. The latter text by then was in its seventh edition, and was a most useful all-purpose text, in that it covered accounting principles as well as auditing techniques. In its choice of texts, the course neatly summarized the transition from British influence to American influence on the profession. Smail's works were in the British tradition, especially in their extensive reproduction of leading case law; Montgomery's text was wholly American. To a large extent the texts were descriptive and "how-to-do-it" in nature, without much emphasis on theory or policy. I well remember my sense of exhilaration in my final year upon reading George O. May's book *Financial Accounting: A Distillation of Experience*. Until that time I had not appreciated the historical development of accounting, or realized the importance of concepts to its application.

The accounting firms were responsible for giving their students exposure to an adequate variety of work experience and teaching how audit procedures were applied in practice. To this end, each firm of any size would have its own code of audit ticks and instructions for using audit stamps, its devices for formalizing audit procedures, such as "audit charts" and various forms of questionnaires, and its design of working papers, especially for the record of balance sheet work.

II. THE 1945 AUDIT ENVIRONMENT

The typical audit in Canada in the 1930s consisted of two main segments. The "current audit" consisted of detailed examination of the mainly documentary evidence for all transactions recorded in the books of account during the year. The "balance sheet" audit consisted of verification, using both internal and external evidence, of the balances of assets and liabilities that it was proposed to include in the financial statements and satisfying oneself that they were properly grouped and described so as to give a "true and correct view" in the words of the law. The current audit was directly intended to monitor the "stewardship" of management and, in particular, to uncover any traces of employee fraud. The balance sheet audit was directed more to the auditor's statutory duty to report on the financial statements of corporations. This Canadian approach to audit-

ing was derived from British precedent and contrasted with common practice in the United States which tended to be much more concentrated on verification of the balance sheet supplemented by analyses of individual profit and loss accounts, somewhat along the lines of what would be called "analytical review" today.

In the 1930s, or even before, it was apparent in Canada that the complete detailed audit was becoming impractical because of the volume of transactions. The answer, in large corporations at least, was to conduct a "test audit," rather than a detailed audit. Typically, the examination of a year's transactions was reduced to a test by reducing the number of months examined to four or fewer. The month(s) selected were theoretically to be chosen at random. My impression was that the justification for the reduction in audit effort was more a rationalization of expediency than a conclusion from any well-thought-out theory. True, there was a rudimentary idea of sampling embodied in the concept of the test audit. Also, the theory that larger companies would automatically be less subject to fraud and error, because the division of functions among employees could be designed to provide "internal check," carried some conviction. But neither of these ideas was well enough developed to indicate *to what extent* it was safe to reduce audit procedures.

III. THE SENSE OF PROFESSIONAL OBLIGATION

Colonel Gordon, as a matter of policy, felt that the Firm should play a leadership role in the affairs of the profession. That included the responsibility to be active in the development and propagation of good auditing standards. (Accounting, prior to World War II, was still regarded very much as a matter for professional judgment rather than standards.) No doubt there was an element of self-interest in the concern of the profession's leaders for good auditing standards. Public recognition of the profession's right to practice depended on its standards. Also, court cases had established that the question whether a professional was negligent would be judged, by and large, by the standards of his peers. It was therefore wise for any individual firm to make sure that its particular view of appropriate procedures should be widely adopted within the profession. Nevertheless, I am sure that the sense of obligation to the profession was an ethical imperative as well as practical.

World War II created a strain on accounting firms as it did on virtually every form of enterprise. The great majority of professional staff were of

an age to join the services. Thus, from 1940 on, a pattern developed whereby staff would be hired and, perhaps after only a few months, would resign to join up. The gap was filled in part by hiring of "audit clerks," a large number of them women, who did not register as students-in-accounts, but merely took the job as they would any other. (Some women, but not a large number relatively, did enroll and qualify as CAs.) Thus the staff mix of all C A firms was heavily weighted by students with little experience and by audit clerks who were hired to do a job but had little intention of making it their career.

Clarkson's answer to this problem was twofold. The Firm ran a series of Saturday morning lectures to train the junior staff. And it developed its first audit manual for staff in 1942—in effect, an audit text (although perhaps lacking in explanation of the "why" for procedures) especially written to incorporate firm policies and routines. The very specific aim of the manual was to give every staff member a guide they could take with them on the job, so that if a senior were temporarily unavailable and they were uncertain where to start or what to do next, they could turn to their manual and get on with it. In this way, the manual substituted, in part, for the training and lessons that junior students had not yet had and that audit clerks would never get. In line with the Firm's sense of professional responsibility, it had its lecture series edited and gave it to the Institute for publication. The title was something along the lines of "Duties of a Junior Accountant," but because of its yellow cover it was popularly known as "the Yellow Peril." Likewise, the Firm's audit manual formed the basis, somewhat later, of a small text under the authorship of H. C. Dell and J. R. M. Wilson that ran through several editions and was included in the Institute's educational program for many years.

IV. PERSONAL DEVELOPMENT

Just like any registered student, my principal aim beginning in October 1945 was to learn to perform an audit, to complete the course of study, and to pass the examinations. The work, initially, was somewhat boring except for its novelty to me. However, with each passing year it became more challenging and interesting as the scope for judgment increased and the variety of business situations encountered steadily broadened. Also, one was continually learning. It seemed to many of us that when we mastered some skill we rarely had much opportunity to apply it, but immediately moved on to some unfamiliar task. The common complaint

of clients that they were regularly sent junior staff who ''learned on them'' was very largely true. However, there was not much that CA firms could do about it. The CA training gave staff members highly saleable skills in a short period of time, so that many left for jobs in industry within a few years of qualification. Thus the firms were forced into a routine of continuously hiring new students right out of school and training them, only to see them take their skills elsewhere.

In my initial hiring interview, Jack Wilson told me that one of the principal sources of satisfaction in a CA career (as well as providing the icing on the cake in terms of income) was ''special work.'' To some extent special work meant what we would call management advisory services today, but the fit is not exact. In 1945 there were far fewer information specialities than there are today. CAs were seen as experts in the interpretation of numbers. In the absence of established expertise on a narrow subject area, CAs were likely to be called upon to study and advise in the establishment of financial policy, the implementation of a law or regulation, or other such matters. The development of the profession's expertise in income tax was the natural outcome of this. In effect, CAs became the specialists in this field. In other subject areas more narrowly focused specialists emerged and took over.

Special work was rewarding materially and intellectually, but it could be demanding. Since it could not be planned for in advance, the usual custom was to ask the apparently best qualified audit partner to take on each new special assignment as it came in and make ad hoc (and usually inadequate) arrangements for other partners to take on part of his normal audit load. Since it was important that partners build strong personal relationships with their clients, there were distinct limits to such load sharing. Nevertheless, successful completion of special assignments added to a partner's stature in the firm, so that, for the most part, the extra work was taken on gladly.

Almost by definition, special work required highly talented and widely experienced individuals. There was much less scope for the use of junior staff than on the normal audit engagement. Nevertheless, some research and number crunching could often be delegated. Owing to the recognized importance of special work, the partner responsible could legitimately ask for the assistance of the most able staff members no matter what partner that member reported to. Thus it was clear to all staff below the level of partner (as well as to partners themselves) that selection to work on a special assignment was an indication of the Firm's regard for one's talents.

I was probably lucky in receiving some special assignments early in my career. One of the first major audit clients I worked on was Union Gas, with headquarters in Chatham, Ontario. In 1947 the company, after many years of shrinking production from its own natural gas wells, signed a contract with an American pipeline company for the import of significant volumes of gas from Texas. Under these changed circumstances, it was appropriate to seek a new structure of rates for the company. George Richardson, a senior partner with a particularly powerful and enquiring mind, was asked to prepare testimony to be presented to the regulatory board in support of the company's application, on the subject of the fair rate of return to be allowed the company. At least partly because I had some familiarity with the company, and probably because it was thought my B.Comm. degree had taught me much more about economics and finance than it actually had, I was detailed to assist Mr. Richardson.

At that time public utility regulation was not highly developed in Canada, and there was no established pattern for setting rates. What form of testimony would be useful was, therefore, rather unclear. Mr. Richardson and I went to New York to see what American precedents there were. I did some digging in the library of the American Institute, while Mr. Richardson was interviewing Standard Statistics (now Standard and Poor's) to commission a special survey designed to show cost of capital. I was lucky enough to be able to turn up some worthwhile literature on the subject of rate setting. Mr. Richardson was highly delighted because it helped him shape his whole approach to the testimony.

That was the first of many assignments having to do with public utility regulation in which I participated over the next 25 years, first as an assistant and ultimately as the Firm's leading expert in public utility accounting and rates. These and a number of other financial and economic studies over the years brought me a reputation within the Firm as a researcher with skills going beyond accounting and auditing, and brought me into contact with all the senior partners, including Walter Gordon and Grant Glassco, with both of whom I worked on special assignments.

V. FORMALIZATION OF A RESEARCH RESPONSIBILITY

I was admitted to the partnership on April 1, 1954, at age 30. A typical audit partner oversaw 2 or occasionally 3 audit staffs, each having 7 or 8 staff members on average (although a staff responsible for the work of a

very large client could be quite a bit larger). Although a new partner might start out with only one staff for a year or so, I was able to start out with 2 since I had experience in a more junior capacity with many of the clients assigned to me.

At that time it was an understood policy of the Firm that every client partner had a personal responsibility to maintain his professional competence in accounting, auditing, and tax. At the same time, it was becoming increasingly evident that people needed help in keeping up with the accelerated pace of development of these areas. This had been recognized formally for more than ten years in the tax area through the assignment of some partners to specialize full-time on tax matters. These specialists were available to educate client partners on new developments and to assist in or even handle particularly complex tax problems of clients.

Things were different in the core areas of accounting and auditing. These were so central to the profession's mission that the idea of an accounting and auditing specialist seemed unnatural. Nevertheless, as the Firm grew, the need for policies in addressing contentious issues to ensure a consistent Firm response became apparent. There was also a need to help busy partners become aware of new developments. Finally, there was a need to make sure that the Firm's audit procedures remained appropriate and up-to-date as conditions changed. These needs were recognized informally at first rather than through any formal change in the Firm's organizational structure. However, a vehicle for disseminating Firm policies and creating awareness of new developments was provided in the form of accounting, auditing, and tax "notebooks," distributed to partners and managers, and containing memoranda on important policies and current matters of interest. Jack Wilson was responsible for keeping the accounting and auditing sections of the notebooks up-to-date.

By 1954 Jack was taking on more responsibilities, along with some other of the younger partners, for the operating direction of the Firm, as both Walter Gordon and Grant Glassco were becoming more involved in interests outside the Firm. He therefore coopted me as soon as I was admitted to the partnership to help him keep the notebooks in shape. More important than that, he instructed me to consider whether the Firm's organization of audit engagements and its procedures were satisfactory in all respects.

As I recall, the first formal announcement to the partners at large that I was to take on this responsibility was made at the 1956 annual partners' meeting. (There was no specific title that went with the job—it was a few years later that a more formal organizational structure for the Firm pro-

vided the title of "National Director of Accounting and Auditing Standards" as one member of the newly formed National Office.) I was asked to report to the partners at the 1956 meeting my ideas on the direction of Firm research in auditing. The program I sketched at that time was the basis for such research effort as I was able to make for the next several years, and to some extent shaped the work done by Rod Anderson and Don Leslie after me.

VI. INITIAL IDEAS

My initial concern was with the planning and organization of the audit. By the 1950s, most of the work done in both the "current" and the "balance sheet" segments of the audit was on a test basis. Auditing literature had formalized two ideas—namely, that a test was justified on the general principle of a sample being representative of the whole, and also that the extent of test should relate to the strength of the client's internal controls. My concern was with the practical implementation of these propositions. Specifically, I could not see that our work demonstrated a logical link between internal controls and extent of testing. There were two problems—we did not review internal controls well, and, even if we did, it was difficult to demonstrate a direct connection between the findings of that review and our decisions on extent of testing.

When I joined the firm in 1945, the review of internal control was supposed to be conducted early in the current audit segment of the audit. As a junior auditor, I had only the vaguest idea of how to set about a review. I cannot recall ever receiving any worthwhile instruction on the subject, and my Institute lessons, although explaining the concepts of internal check and internal control, were not very helpful in explaining how one actually made a review in practice. Naturally, too, this was an area in which one could not expect much help from client's staff. Not infrequently, the reaction of client staff to any questioning on the subject of internal controls was anger that their integrity was being questioned. Early on in my training the Firm introduced internal control questionnaires, patterned, I think, after those in Montgomery's Auditing. But these also seemed unsatisfactory in practice. How could one evaluate five "Yes" answers and two "No" answers?

My observation, therefore, throughout my first ten years of practice, was that the review of internal control was a mere warm-up exercise, after which we got down to the real audit-that is, following the standard pro-

cedures laid down in the audit manual, usually to the same extent as in the previous year. As far as I could tell from contacts with staff or other firms, this situation was general. This false position the profession was in bothered me.

The problem was how to improve it in a practical way. My reasoning was that internal controls had to be built in to a client's systems and routines for carrying on its activities and recording their results. We needed an accurate understanding of the systems to evaluate the controls. Therefore, our emphasis should shift from review of controls directly to review of the systems, from which we could deduce the apparent controls. Such an approach might also be more workable in practice, since clients' staff were less likely to become uncooperative if asked questions about the functioning of the systems than if asked directly about controls, implicitly questioning their honesty.

Following this line of thinking, I told the partners in 1956 that I hoped to work along the lines set out below:

1. Devise a scheme for describing a client's systems in a standard format that could be readily understood by someone other than the describer.
2. Devise a procedure for linking that description with an evaluation of internal control.
3. Build in to the program automatic drafting of letters to management with respect to weaknesses in controls.
4. Consider whether some more formal way could be found to relate weaknesses uncovered in internal controls to the extent of audit procedures. In this connection, explore the possible application of scientific sampling techniques to guide the extent of audit tests.
5. Finally, consider whether a direct spin-off benefit to the client could be obtained by adapting our record of review of the client's system so that it could also provide valuable suggestions to the client from the standpoint of efficiency, or, at least, pinpoint areas where a more detailed study might be beneficial.

VII. EARLY RESEARCH EFFORTS

This statement of objectives was well received by the partners. Implementing the program was another matter. Even though I had been assigned responsibility for professional research within the Firm, I still had

responsibility for two audit staffs, a workload at least equal to that of other young partners, especially if fairly frequent special assignments were counted in. The theory (not without merit) was that the person responsible for research should also be responsible for making sure its results could be applied in practice. Unfortunately, it is also true that, in life, tasks of long-range importance tend to be pushed aside by the merely urgent. Especially in a service profession, no one can control the timing of client's needs for service, or ignore them when they arise. These sorts of demands made it very difficult to perform any concentrated thinking and research. I did have an assistant assigned to me to work in this area, but his time was fully taken up by the task of keeping our accounting and auditing policy notebook memos up-to-date, and generally keeping up with and creating awareness within the Firm of current professional developments.

Accordingly, the sum total of progress on my program in the period 1956-1960 was very small. I started out with three ideas. The first was that the systems description should be in narrative form, so that it could be read and understood. The second was that the description should be structured in some logical flow so that staff members would find it easy to proceed step by step, and any gaps in the description would be more readily apparent. To this end, I directed that the narrative should be organized in natural cycles, corresponding to the business activity and recordkeeping of the client, with each cycle to be described "from cradle to grave," beginning with the initial activity in the cycle and carrying on to the final record in the accounts. Thus, in an ordinary manufacturing company the cycles were:

- Purchasing—covering order initiation and authorization; receipt and approval of quality of goods and services; receipt and checking of invoices; recording of amounts payable and issuance of payment; and any collateral checks and recording.
- Selling—covering order receipt and approval; requisition of goods and shipping; preparation of invoices; recording of sales and receivables; recording of payments; and any collateral checks and recording.
- Payrolls—covering hiring and termination procedures; production of records on which pay is based; preparation and distribution of pay; and collateral records of deductions and earnings.
- Costing—covering inventory costing and generally any use of accounting data for management purposes.

- Books of Account—covering entries in the general ledger and interim financial statements.

My third idea was that the system description should be set down on the left side of a wide sheet of paper, and in columns beside it should be placed comments on internal control strengths and weaknesses and suggested modifications of our standard audit procedures or specifications of extent of tests to adapt the audit to the particular situation of the client.

I had my staffs experiment with this approach in a number of small to medium sized client engagements in the late 1950s, leaving the more challenging question of larger audit engagements till we had some experience in simpler situations. The experiment was only partially successful. It did seem to produce results in terms of a better understanding of the internal controls and how the audit should be adapted to them. But it also had some significant problems. The approach depended upon the ability of the staff member performing the review to express himself clearly in writing, and not all were up to this task. Moreover, it is far too easy to leave lacunae in a systems description when it is in a narrative form. Also, the task of systems description was quite time-consuming, and it was evident that the difficulty would multiply in larger and more complex engagements.

VIII. DEVELOPMENT OF ANALYTICAL AUDITING

About 1960 our program accelerated. There were several contributing factors. We realized that we would have to devote more effort if we were to make real progress with our R. and D. To facilitate this, my two existing staffs were transferred to a new partner (although I retained what we called "A" partner responsibility for the larger clients), and to replace them a new "experimental" staff was formed and given responsibility for a collection of clients with whom I had had no previous acquaintance. It was hoped that, with the reduction in the amount of my overall direct responsibility for clients, more time would be available for audit development work, as well as the increasing responsibilities of the now officially recognized position of National Director of Accounting and Auditing Standards.

The members assigned to my new experimental staff were deliberately selected to be typical of the calibre of our staff members generally. The intent was to make our experiments honest—but we cheated in one

important particular. Rod Anderson, who at that time had been with the Firm for two or three years and had already made his mark as one of our most brilliant students in a generation, was assigned to the staff. (I should also concede that subsequently, as individual staff members were promoted or rotated to other positions, new students assigned to the staff tended to be selected from our most promising recruits.)

About this time, also, we committed ourselves to write a textbook on auditing. Our client, Copp Clark Publishing, had recently been acquired by the English publisher Pitman's, who specialized in the publication of business-oriented books. Pitman's were of the opinion that a Canadian auditing text would strengthen their presence in Canada and might well be adaptable to the U.S. and English markets as well. Jack Wilson, for his part, felt that authorship of such a text would be good for the Firm and would also provide a forum by which we could expose to the profession at large the fruits of our audit experiments. I was rather reluctant to take on this new task, particularly since I had just become a member of the CICA Accounting and Auditing Research Committee which would add to the demands on my time. However, I eventually agreed to make the effort, provided Rod would be free to work with me on it.

Rod's addition to our development efforts paid off in short order. It was he who conceived the idea of recording our systems descriptions in flow charts, using a set of symbols specially adapted to accounting processes. And it was he (with the assistance of other staff members, notably Steve Lowden) who worked out details whereby we made a record of our compliance tests in a compact form at the foot of the flow charts. With this addition, we had what we thought was a practical way to implement my basic ideas—the basic features of the approach being the cycle flow basis of describing the client's systems and the flow charting techniques.

Having developed and tested our ideas within our experimental staff in 1960-1961 we were ready to phase in implementation. We first introduced the ideas to a sample of other staffs in Toronto and some other offices in order to gain broader experience. Then, either in the Spring of 1962 or 1963 (my memory is not perfectly certain), we put on training sessions for all staff in all offices, so that our new techniques would be adopted in all but smaller audit engagements as soon as it was practical to phase them in. (It was recognized that creation of flow charts initially would be more time-consuming than keeping them up-to-date.) This marked the end of the major development work on this project although, of course, refinements continued to be made as we gained experience.

Our commitment to write an auditing text now began to weigh upon us.

As Rod attained increased seniority, the demands on his time naturally multiplied. Now there were two of us for whom the immediate crisis was continually crowding out matters of long-term importance. In essence, we accomplished nothing worthwhile, and even the most indulgent of publishers might be excused for feeling impatient. About this time, as I will recount shortly, I committed myself to what was for me a far more interesting task. We arrived, therefore, at a compromise solution. We offered Pitman's an immediate book on our flow-charting system, with the promise that Rod would in due course produce the full-scale auditing text that was originally intended. The result was *Analytical Auditing,* published in 1966, the bulk of which was written by Rod over a very short period of time. As co-author, I had the rare experience of having little difficulty accepting the drafting of my colleague, and most of the credit for the book belongs to Rod. The book was reasonably successful without ever receiving much promotion from Pitman's. It was translated into four foreign languages, usually as a result of some foreign accountant approaching us so that the book could receive wider distribution in his country, (Oddly, there are two versions in Spanish, since the Argentine accounting community was not happy with the original translation done in Mexico.)

This, in effect, marked the end of my involvement in auditing research. Rod was admitted to the partnership some time before the book was published, and shortly thereafter my job was split, with Rod becoming National Director of Auditing Standards and I retaining responsibility in the accounting area. In his new position Rod had no shortage of work to do. There was, in particular, the continuing challenge of keeping up with the auditing implications of computers. Rod was the prime mover in developing a videotaped course in computer concepts to improve the computer literacy of partners and staff. This course was given to the Institute for wider distribution in the profession, and licensed by it for use by the AICPA and, I believe, one or more of the British institutes. Rod also spent an enormous amount of time in researching and trying to work out the application of statistical sampling techniques to auditing. As a result he continued to find it difficult to devote time to writing a full-scale auditing text. It was not until 1977 that *The External Audit* was finally published. Two years later, his studies on statistical sampling, in conjunction with partner Don Leslie and Albert Teitlebaum of McGill University, bore fruit in the form of *Dollar-Unit Sampling: A Practical Guide for Auditors.* This work, was awarded the Wildman Gold Medal by the American Accounting Association.

One footnote to this history may be of interest. At the CICA annual conference in Winnipeg in the Fall of 1963, two partners of McDonald Currie made a presentation on their newly developed method for evaluation of internal control. I was pleased to find that, working entirely independently, they had come up with ideas very similar to our own. In particular, there was a striking similarity in the way they and we broke down our systems analysis into cycles, although their manner of recording and evaluating internal controls was far different from our flow charts. Evidently, the breaking down of systems description into naturally connected segments has intuitive appeal. Similar ideas played a prominent part in an Arthur Andersen (U.S.) publication on evaluation of internal control published in 1978, some fifteen years later.

IX. MY TRANSITION TO ACCOUNTING RESEARCH

The shift to accounting principles and standards as my major interest began with my appointment as a member of the CICA Accounting and Auditing Research Committee in September, 1959. The Committee was then putting the final touches on Bulletin 17, dealing with the wording of the auditor's standard report. The principal change recommended in the Bulletin was the addition of the words "in conformity with generally accepted accounting principles applied on a basis consistent with the preceding year" to the auditor's opinion. The Bulletin stated that this change in wording did not represent a change of substance from previous practice. It was merely intended to emphasize the auditor's obligation to respect accepted opinion when forming his own professional opinion.

At the end of the meeting at which final approval was given to the Bulletin (my first meeting, I think) one of the members said to me in jest: "One of these days we'll have to get around to saying what generally accepted accounting principles actually are." Even though the remark was intended as a joke, it stuck in my mind as having serious merit. Experience had led me to believe that the idea of "general acceptance" was not very helpful in resolving differences of opinion. In the first place, it seemed to me there were a lot of issues on which we did not have general agreement and were unlikely to get it if we waited for opinion to coalesce. Second, I did not believe that simple acceptance necessarily should be the last word. I thought there ought to be some theory, or conceptual framework if you will, from which the best solutions to particular accounting issues ought to be deducible. Only if such a framework

existed were we likely to obtain internal consistency in financial reporting. Of course, it did seem possible to me, perhaps even probable, that some implicit framework reflecting collective experience underlay most accepted accounting principles. But, if so, wouldn't it be better to try to state that framework explicitly, rather than to try to solve each issue that arose on its own, by deciding what was "accepted" by what could only logically be a nose-counting process?

This underlying point of view influenced all my actions as a Committee member. It was during my term of membership that the CICA commenced its policy of commissioning research studies, at least partly with the idea that such studies would form a point of departure for future Committee recommendations. I don't remember now who first suggested this new policy—it may even have been myself. Certainly, I was strongly in favor. Another project which I know I initiated was one to produce a book on accounting by nonprofit organizations. I was bothered at the time by the observable absence of generally accepted principles common to different types of nonprofit organizations and the marked diversity of practice even within a single type. My proposal was to put together a book in which each chapter would describe the accounting practices found within a particular type of nonprofit organization, using a standard format for each chapter. Individual authors familiar with the particular type of organization covered would be recruited to draft each chapter. By this means, I hoped we would provide evidence of the lack of uniformity in practice. Also, I hoped that by asking ourselves why the accounting differed from one type to another we would be helped to make rational recommendations of general application that could fit the different circumstances found in the real world. This proposal for a book was approved by the Committee, and I undertook to line up authors for individual chapters on churches, hospitals, universities, school boards, charitable and welfare societies, social clubs and so on. This I did, taking on the responsibility for the chapter on university accounting myself.

In due course, I became chairman of the Committee. My next object of attack was business accounting principles. Just about this time, the first research studies were appearing in the new series sponsored by the AICPA in conjunction with the inception of the APB. Research studies Nos. 1 and 3 on the basic postulates and broad principles of accounting received a strongly unfavorable reaction. In my judgment this was partly because they dared to be different in some of the ideas they expressed, and partly because their high level of abstraction made it difficult for people accustomed to thinking in terms of narrow individual problems to see what

the studies would do for them. In other words, whatever the merit of the ideas in the studies, they were not a tactical success. I thought we could do better. I thought a more hopeful approach would be to produce a description of current practice, try to identify the implicit principles on which it was based, point out any internal conflicts so that they could be attacked individually, and finally, stand back from the structure and examine its basic premises to see whether some fundamental rethinking was called for. I persuaded the Committee we should try to do a research study along these lines, and drafted terms of reference embodying the thinking just described.

The approval for this project predated by at least a year the AICPA's approval of a research study by Paul Grady to produce an "inventory" of GAAP. Our project, although similar in some respects, was much broader in conception. It was not only to list GAAP, it was also to codify the principles in a rational, articulated manner, and it was to evaluate them critically. However, the other side of the coin was that Grady completed his study within a year or two. It took us far longer.

My first task was to find someone to write the study. I approached a number of academics and thoughtful practitioners to undertake it. Being sensible men, they all realized the terms of reference were very demanding and begged to be excused. After a number of such rejections, I concluded that if it was to be done, I would have to do it myself. By this time I was positive the job needed to be done, and frankly, I wanted to be the one to do it. Accordingly, I got the Firm to agree that this dedication of my time was worthwhile and, as already mentioned, managed to shift the prime responsibility for our auditing text to Rod Anderson. To reduce the time commitment, which I originally estimated at 1200 hours, I resigned from the chairmanship of the CICA Research Committee after completion of only one year out of the standard two-year term.

My first obligation, however, was to finish my chapter for the book on non-profit accounting. This I did over the course of a busy year. Unfortunately, in spite of our best efforts, only one other volunteer fulfilled his commitment. Finally, it was decided that the project would have to be abandoned. I was asked to revise the chapter I had drafted on university accounting so that it could be published on a stand-alone basis as one of the Institute's research study series. This I did, and the result was the study *Canadian University Accounting*, completed in late 1964 and published in 1965.

I then set out in earnest to write my study on accounting principles. By mid-1965 I had what I reckoned to be half the study in draft form. Then

the special work impediment struck again. Our Regina partners obtained an assignment to make a special study of the accounting and financial reporting procedures of Saskatchewan Power Corporation and insisted that I was essential to head it up. This study took upwards of three months. I came back to a considerable backlog of client and other work in Toronto, and was shortly involved in another special study—fortunately considerably shorter—for the Saskatchewan Government Insurance Office. It was near Christmas before there was any opportunity to get back to my study. By this time my momentum was lost. My vision of where I was to go from where I had left off in the study had become fuzzy. In the course of clarifying it in my mind, I changed direction sufficiently that much of the first part of the study had to be rewritten.

This was pretty much the pattern of the next several years. Almost every time I cleared the decks for an extended period of concentrated work on the study, I would find my flow of thinking and effort interrupted in short order by some new assignment that demanded attention. The difficulty was intensified when one of our ablest partners suffered an untimely death from a heart attack. I had to step in and take the lead responsibility for perhaps our most important client. In addition to generating a steady stream of accounting issues in its far flung operations, that client often asked for assistance on special projects, such as investigations connected with possible mergers and acquisitions, which always had to be completed at high speed and on short notice. It was the sort of client relationship that any professional auditor would find stimulating and challenging—but it did make sustained progress on my study almost impossible.

Ultimately, after many interruptions and much rewriting, the study was completed in the Fall of 1971, some 7 years and 1800+ man-hours of work after it was begun. I had asked a number of people to review my drafts, but only two or three provided comments and criticisms in any depth. However, before publication the study was apportioned out among members of the CICA Research Committee of the time for review. As a result of this review, the study almost had more influence before publication than after. It was observable for some time that my ideas played a considerable part in the Committee's deliberations. That does not mean, of course, that the study's ideas were always accepted—but at least they were considered. Conversely, it must be acknowledged that the comments of the Committee members before publication helped improve the study.

Because it was so lengthy, the study was published by the CICA as a

hard cover book rather than in the standard research study format, under the title *Accounting Principles: A Canadian Viewpoint*. It is fair to say the book was well received, and it continued to be read and consulted for far longer than usual in these fast-moving days.

After publication of the book in 1972, my energies were fully occupied for some time by the ever increasing demands of the National Accounting Standards Department (which by now had grown to a complement of several partners and managers), continuing client responsibilities, and continuing special work. By the mid-1970s, certain health problems were making it difficult to sustain the stress of all these activities, and a change in career emphasis seemed indicated. I resigned from the partnership in 1976, since I did not think it right to continue as partner if I was not prepared to devote my energies to the Firm to the fullest possible extent. The Firm's Executive, however, made a very generous arrangement with me, in effect giving me carte blanche to work on whatever I wanted, but continuing in an advisory and consulting relationship with the Firm. Some years later it was decided that my continuing close relationship with the Firm would be more publicly evident if I rejoined as a partner, but no change in our working relationship was intended. So it continued until I reached the normal retirement age for partners, and even after, since I retained my office and secretarial support until completion of my latest book in 1987.

In the period from 1976 to 1987 my concentration was on accounting research issues and consulting.

- J. J. Macdonnell, the Auditor-General of Canada invited me to chair an advisory committee on government accounting and auditing in 1975. This position gave me an insight I had previously lacked into issues of governmental financial reporting. It subsequently led to my participation in the CICA research study on that subject and more recently to an advisory role in the Federal Government Reporting Study sponsored jointly by the offices of the Comptroller-General of the United States and the Auditor-General of Canada.
- In the mid-1970s, of course, much attention was paid to the issues of Current Value Accounting. I directed the production of a videotaped presentation for clients and other interested parties outlining the basic concepts and issues. In 1977, I wrote one of the supplementary papers for the Ontario government-sponsored Committee on Inflation Accounting. The paper was entitled *The Significance of*

Debt Financing to an Enterpriseduring an Inflationary Period and the Implications thereof to a System of "Inflation Accounting."

- One practical accounting problem that has interested me very much is that of accounting for a firm's obligations under its pension plans. In my 1972 book I made the observation that the accounting standards put in place around 1965, although an improvement on previous practice, did not provide fully satisfactory answers. It became increasingly evident to auditors in the inflationary 1970s that the standards gave incomplete guidance, were capable of abuse, and often were abused. To help in the rethinking that clearly was going to be necessary, I produced a monograph, published by the Firm in 1980, under the title *Pension Accounting, the Problem of Equating Payments Tomorrow with Expenses Today*. Subsequently, I served on the FASB task force on the subject. As a member of the task force, I was dismayed to observe the very wide range of opinion and the inbuilt prejudices on the subject. Unfortunately, I fear the standards issued by the FASB and CICA in 1985/86 fall far short of a solution to the problems in this area, undoubtedly because of the wide divisions of opinion. It may be that government-mandated changes in pension plans will by themselves narrow the range of accounting possibilities. If not, I predict the problems will fester and require reconsideration in the 1990s.
- As the FASB Conceptual Framework studies emerged and it became evident that the Board was struggling in its efforts to make some sense out of the concepts of recognition and measurement, the thinking that led me to undertake the study on accounting principles in the 1960s re-emerged. My 1972 book was becoming quite dated by 1983 owing to changes in standards since 1972, and perhaps even more because of entirely new issues that had arisen since the book was written. I felt it would be useful to bring the book up to date. I wanted to do more than that, however. I wanted to promote understanding by placing present accounting standards firmly within their historical setting and within a solid framework of theory. I wanted, also, to reflect further upon that theory in view of developments since 1972. Hence I set about writing a new book. At the beginning, I thought of a two volume work—one being a critical survey of accounting theory, and one a critical survey of accounting standards. I concluded, however, that accounting theory today (in particular, what the academic world is interested in) is so fragmented, and contains so many conflicts, that to survey and make

> sense of both theory and standards would be a task beyond my energy and competence. Even as it is, the book I eventually produced in 1987, under the title *Accounting Standards in Evolution,* was a substantial compression of my original drafting.

This concludes the story of my research interests. I know that many others can claim equal or greater achievement. This personal memoir may be justified, however, as a reminder of the satisfaction attainable from a balance between service to clients and broader service to one's profession.

THE REEMERGENCE OF THE COST ACCOUNTING STANDARDS BOARD

Larry M. Parker

The Cost Accounting Standards Board (CASB) was reestablished in October 1988 by the Office of Federal Procurement Policy Act Ammendment of 1988 (U. S. Senate Bill S. 2215). The authority of the new CASB is even greater than the old because now the CASB has exclusive authority over all cost accounting standards for all contracts with the United States (in excess of $500,000), not just defense contracts. Furthermore, direct input into the standard setting process by the accounting profession will be more difficult because, whereas two of the five members of the old CASB were required to be from the accounting profession, none of the members of the new CASB need be from the profession, and a maximum of one of the five CASB positions could be held by a member of the accounting profession. The first CASB affected the profession, and the composition, mandate and legislative environment of the new CASB suggests that it may have an even more influential role.

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I. BRIEF BACKGROUND

In 1968, the Government Accounting Office was directed by Congress to study problems related to military and civilian agency defense contracts. In 1970, Congress established the first CASB as a legislative agency which would address the deficiencies presented in the GAO report [Beddington, 1982]

The CASB consisted of five members who met monthly, assisted by a full time staff. The composition of the CASB was:

1. Two members from the accounting profession (one very knowledgable in cost accounting).
2. One member from industry.
3. One member from a government agency or department.
4. The Comptroller General, who was the Chairman of the CASB.

CASB members held membership for four year terms.

The first CASB was charged with developing cost standards that would provide uniformity and consistency for all defense contracts greater than $100,000. The standards had the effect of law, and the CASB could require contractors to reduce charges to the government and pay 7 percent interest on any excess charges paid by the government to the contractors. The cost accounting standards would not apply to (or could be modified for) certain contractors, such as those meeting the definition of a small business, foreign governments and companies, educational institutions, those working on certain NATO contracts, and others as determined by the CASB.

To establish a standard, the CASB published a draft of the standard in the *Federal Register* with an invitation to comment. After the final draft was promulgated in the *Federal Register* and in print for 60 days, it became a standard. The standards were published in Title 4 of the Code of Federal Regulations, Parts 401 through 420 (4 CFR 401 through 420), and simply became known as Cost Accounting Standards (CAS) 401 through 420. These 20 standards dealt with the topics of consistency, allocating costs to cost objectives, employee compensation, fixed assets, and specific measurement and allocation problems such as the cost of money, insurance, research and development, etc. In addition, the CASB required contractors to complete a document in excess of forty pages which provided detailed disclosure of each contractor's cost accounting

policies. The guiding conceptual framework of the CASB was explained in its 1977 document, "Restatement of Objectives, Policies and Concepts."

Congress ended the CASB when it decided not to fund the CASB in 1980. However, the Cost Accounting Standards remained in effect, and the process of maintaining and revising the standards eventually came under the Defense Acquisition Regulatory Council. The standards became a part of the Federal Acquisitions Regulation (FAR, Part 30) in 1987 (Coopers & Lybrand, 1988).

By 1987 many problems in federal procurement policy began to receive attention. Various government agencies often had very different procurement policies, procurement officials often did not have enough authority to shape and enforce procurement policy, procurement personnel were often poorly prepared to do their jobs, and there was strong suspicion of illegal or unethical conduct in the federal procurement process, particularly in the Department of Defense. A 1988 study of the Department of Defense funded by the Ford Foundation reinforced these concerns (*Wall Street Journal,* December 20, 1988). Congress decided to strengthen the Office of Federal Procurement Policy (OFPP) and reestablish the CASB as an independent board within the OFPP.

II. THE NEW CASB

The Office of Federal Procurement Policy Act Amendment of 1988 addresses the problems mentioned in the previous paragraph by:

1. Establishing the OFPP as the single government agency with the authority to set all government procurement policies, and to ensure that all government agencies abide by its policies. The Federal Acquisition Regulation (FAR), administered by the OFPP, is now the single government-wide procurement regulation. The CASB, as an independent board within the OFPP, will establish all cost standards for government contracts. These standards will become part of FAR, and hence will be the standards for all contracts with all U.S. Government agencies.
2. Establishing funding for professional training programs for government procurement personnel.
3. Establishing much more stringent rules of ethical conduct in the procurement process, and providing funding for training in these ethics. The ethical rules are aimed at all personnel involved in the procurement

process, and complement the *Major Fraud Act of 1988* [*DH+S Review*, 1989, p.4], which is the first law to specifically address procurement fraud. The *Major Fraud Act* covers all Federal procurement, and includes provisions for fines for up to $10 million and imprisonment for up to 10 years. The combination of these two new laws means that Congress is very serious about proper conduct in the Federal procurement process.

4. Developing a consistent methodology for measuring the profits earned by contractors, including adequate procedures for verifying contractors' financial data.

To get support from the various government agencies and the executive branch for a unified procurement agency, government agencies are heavily represented on the CASB and the Federal Acquisition Regulatory Council, which oversees the direction and coordination of government-wide procurement policy and regulatory activities. The Council consists of:

1. The Administrator of Federal Procurement Policy, who is the chief administrator of the OFPP.
2. The Secretary of Defense.
3. The Administrator of the National Aeronautics and Space Administration.
4. The Administrator of General Services.

The CASB consists of five members:

1. The Administrator of Federal Procurement Policy, who will act as Chairman.
2. A representative of the Department of Defense, to be appointed by the Secretary of Defense. Except for unusual circumstances, this representative should be the Undersecretary of Defense for Acquisition, according to Representative Brooks [*The Congressional Record - House*, October 20, 1988, H10611].
3. A representative of the General Services Administration, to be appointed by the Administrator of General Services.
4. An industry representative, to be appointed by the Administrator of Federal Procurement Policy.
5. Someone from the private sector particularly knowledgable about cost accounting problems and systems, to be appointed by the Administrator of Federal Procurement Policy.

The CASB is considered independent because once the majority of the board votes for a standard, neither the OFPP nor the Federal Acquisition Regulatory Council can change the standard. As with the prior CASB, the members are appointed for four year terms. There will be a full-time staff, and board members from the private sector will be reimbursed for any time spent working on CASB matters.

In general, the purpose and procedures of the new CASB are very similar to those of the prior board. The contract price has increased from $100,000 to $500,000 before contractors are subject to the CASB standards, the final standard must appear in the Federal Register for 120 days instead of 60 days before it has the full effect of law, and the interest rate charged contractors for overpayments by government agencies will be the same as the interest rate established by the IRS, rather than 7 percent. Fundamentally, all other procedures and standards of the prior CASB will remain in effect until superceded by the new CASB.

III. POTENTIAL ISSUES FOR THE ACCOUNTING PROFESSION

Most issues related to the reestablishment of the CASB and the strengthening of OFPP are broad public policy issues that may have a subtle and difficult to detect effect on the accounting profession. For example, foreign governments, foreign companies and educational institutions are exempt from or can modify the Cost Accounting Standards. In the long term, if the cost of compliance with the standards begins to put private U.S. companies at a disadvantage, U.S. companies may lose contracts to foreign competitors, and face greater uncertainties about obtaining future government contracts. This may also cause a loss of U.S. revenues of accounting firms because possible reduced revenues and greater uncertainty for U.S. government contractors may make the contractors less able or willing to hire accounting firms to do more audit, tax, and consulting work. In the short term, compliance with more cost standards may increase fees paid to accounting firms, particularly if the accounting firms need to help or monitor client compliance with government cost standards. Since the CASB has been specifically directed to examine the cost-benefit implications of any standards, the profession may see fit to remind the CASB of these possible costs in responses to potential standards.

There are questions about the long range role of auditors. Auditors currently need to ensure that their clients are in compliance with contrac-

tual requirements, so auditors will need to be familiar with the cost standards and related disclosure requirements. However, the contracting government agency now has authority to examine and copy any and all "documents, papers, or records . . . relating to compliance with . . . cost accounting standards." This could ultimately include audit work papers. Furthermore, the Act reestablishing the CASB places a heavy emphasis on ethical conduct in the procurement process. Eventually, auditors might find that it will become necessary to directly examine client conduct in the procuring of government contracts, particularly if the CASB includes procurement ethics in its standards. Experience with the Foreign Corrupt Practices Act suggests that auditor requirements concerning the ethical conduct of clients is not entirely unlikely. In addition, government contractors have been becoming more successful at getting contracts classified (i.e. covert contracts), so only those with a "need to know" and a security clearance can routinely have access to documents related to the contract. More stringent cost standards might increase contractor efforts to have more contracts classified (sometimes called the "black holes" of government contracts because nobody can see what is going on in them), and hence make auditor efforts to insure compliance with the standards more difficult.

It is difficult to determine what, if any, impact the CASB will have on the self-regulation of the profession. Congress has become more concerned with accounting and accountability in the federal government, as exemplified by the greater assertiveness and influence of the GAO in recent years, and the main purpose of this legislation is certainly to address these concerns. But, to some extent, the legislation implies that the private sector, including the accounting profession, has not adequately provided accountability concerning government contractors. And Congress has recently questioned the accounting profession's ability to regulate itself while still serving the public interest. The fact that Congress does not require a member of the accounting profession to sit on the new CASB, whereas the old CASB was required to have two members from the profession, does not suggest that Congress has a strong interest in getting input from the accounting profession on cost standards. Perhaps all of this means little as long as the Cost Accounting Standards do not conflict with FASB standards (which is currently true), and the accounting profession maintains an effective liaison with the CASB. However, there has been a great deal of study of cost accounting methods and systems since 1980, and the old costing methods have often been criticized, so there is some potential for conflict over costing standards in the

future. Since three of the five members of the CASB are representatives of government agencies, and a simple majority of the board is sufficient to approve a cost standard, it is conceivable that in some situations where more than one option is available for a cost standard, that the board may choose the standard which is favorable for government agencies or which promotes certain government policies not directly related to the question of proper costing in government contracts. At that point the FASB and GASB private sector constituency may have to consider what it can do to keep the CASB from, de facto, setting standards for measurements which affect financial reports now deemed to be FASB/GASB responsibility.

On the optimistic side, the establishment of the new CASB also provides the accounting profession with some very positive opportunities. The CASB provides a practical forum in which the profession can provide positive input for accounting and accountability in the federal government. A positive relationship between the CASB and the accounting profession can promote a better assessment of costing methods and systems. This would require little direct expenditure of the profession's resources, and would certainly benefit the public interest.

CONCLUDING COMMENT

The new CASB has greater authority since it now will set costing standards for all U. S. government agency contracts, and the board is now part of a stronger Office of Federal Procurement Policy. There is a possibility that the CASB could have a negative impact on the FASB/GASB self-regulatory process of the accounting profession. However, there is a greater possibility of positive effects for the federal government, the profession and the public interest *if* the profession establishes a strong working relationship with the CASB in the examination of costing methods and systems. Finally, if a member of the profession is not appointed to sit on the board, the profession should be prepared to act in a strong supporting and advising role.

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SEC CASE LAW:

A SUMMARY FOR ACCOUNTANTS

J. W. Martin

The need for greater emphasis on SEC-related topics in both graduate and undergraduate curricula is well recognized by both educators and practitioners; however, one stumbling block is the lack of familiarity with many SEC issues. Teaching aids that give the instructor a "leg up" in the SEC area are scarce, although a few texts and teaching aids have been published in recent years. This article purports to help fill the resource gap by summarizing several important legal cases that have made their mark on securities law.

While this selection does not include all important cases, an effort has been made to focus on certain key areas of securities law and to present the leading cases in those areas. The topics chosen represent areas in which educators should have, at a minimum, a general background understanding in order to provide guidance to students on regulatory matters. The article also may serve as a stepping stone to those who wish to

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perform research on a particular regulatory issue by guiding them to critical court cases relating to their research topic. In some instances, a case is included because of its historical significance, even though it may no longer reflect current legal trends.

Liability Under Section 11 of the Securities Act of 1933

Escott *v.* BarChris Construction Corp., 283 F.Supp. 643 (S.D.N.Y. 1968). In an S-1 "stub-period" review, the expert (auditor) must gather some evidence that provides assurance as to the reasonableness of the "stub-period" information. Procedures by which one asks questions and accepts "glib answers" does not satisfy this requirement. On the other hand, an auditor should not be held to a higher level of responsibility than that recognized by professional standards.

Stewart *v.* Bennett, 359 F.Supp. 878,884 n.16 (D.Mass.1973). Scienter is not a prerequisite for liability under Section 11 of the Securities Act of 1933.

Kramer *v.* Scientific Control Corp., 365 F.Supp. 780, 789–790 (E.D.Pa.1973). Under Section 11, the plaintiff need not prove that he or she relied on the auditor's opinion.

McFarland *v.* Memorex Corp., CCH Fed. Sec. L.Rep. 97,368 at pp. 97,457–97, 458 (N.D.CAL.1980). Under Section 11, an auditor's liability for negligence is restricted to the audit opinion on financial statements, but it does not extend to unaudited information.

Liability Under Section 12(2) of the 1933 Act.

Fershtman *v.* Schectman, CCH Fed. Sec. L.Rep. 92,996 at p. 90,678 (S.D.N.Y. 1971). A charge that a defendant aided and abetted the seller of securities without charging that he or she participated in the actual sale is not sufficient to charge liability under Section 12(2).

Sanders *v.* John Nuveen & Co., Inc., 619 F.2d 1222, 1228 (7th Cir. 1980). The 7th Circuit Court held that "it is not at all clear" that the Section 11 requirement of a "reasonable investigation" imposes a higher standard than the "reasonable care" wording of Section 12(2). Note: See Justice Powell's criticism of this view in John Nuveen & Co., Inc. *v.* Sanders, 450 U.S. 1005, 1009 (1981).

Davis *v.* Avco Financial Services, Inc., 739 F.2d 1057, 1066–68 (6th Cir. 1984). Although liability under Section 12(2) appears to require privity, the key issue may be whether a defendant's action was a substantial factor in bringing about the sale of securities to the plaintiff.

Liability Under Section 10(b) of the Securities and Exchange Act of 1934.

List *v.* Fashion Park, Inc., 340 F.2d 462, 463 (2d Cir. 1965). In determining whether a plaintiff relied on a false or misleading statement, the key factor is whether the misrepresentation substantially influenced the course of action.

SEC *v.* Texas Gulf Sulphur Co., 401 F.2d 833 (2d Cir. 1968) A party may violate rule 10b-5 even though not engaged in buying or selling securities. In reference to Section 10(b) wording, "in connection with the purchase or sale of any security," the court held that misrepresentations that would likely cause reasonable investors to purchase or sell securities in reliance on the misleading or false information would constitute a violation of rule 10b-5.

Affiliated Ute Citizens *v.* United States, 406 U.S. 128, 153–54 (1972). Where material facts have been omitted from disclosure, the plaintiff need not prove reliance under rule 10b-5; "positive proof of reliance is not a prerequisite to recovery. All that is necessary is that the facts withheld be material in the sense that a reasonable investor might have considered them important in the making of this decision."

Ernst & Ernst *v.* Hochfelder, 425 U.S. 201, 214 (1976). Under rule 10b-5, scienter is a necessary element before liability can be assessed; ordinary negligence is not a violation of the rule.

Moody *v.* Bache & Co., 570 F.2d 523,528 (5th Cir. 1978). Reliance on false or misleading information does not necessarily prove causation of one's loss due to the possibility of an inconsequential relationship. "The jury may well have concluded that while . . . misrepresentations . . . swayed the plaintiff to open the commodities account in the first place, by the time of the wheat futures purchase and subsequent loss, these misrepresentations were no longer matters of any consequence to either party."

Ross *v*. A. H. Robbins Co., 607 F.2d 545, 555–556 (2d Cir. 1979). Remedies under Section 18(a) and rule 10b-5 are not necessarily exclusive. The plaintiff was allowed to allege a loss under rule 10b-5, although reliance on the filed statement could not be proven as is required by Section 18(a). "We believe that holding that plaintiffs must proceed under the terms of Sec. 18 because the statements are filed with the SEC would encourage corporate managers to include their misrepresentations in material filed with the SEC for the sole purpose of insulating themselves from liability under Sec. 10(b) and restricting the class of potential plaintiffs to the unlikely few who actually viewed and relied on the misleading information."

McLean *v*. Alexander, 599 F.2d 1190, 1197 (3d Cir. 1979). "Reckless conduct may be defined as a highly unreasonable omission or misrepresentation, involving not merely simple, or even inexcusable negligence, but an extreme departure from the standards of ordinary care, and which presents a danger of misleading buyer or sellers that is either known to the defendant or is so obvious that the actor may have been aware of it."

ITT *v*. Cornfeld, 619 F.2d 909 (2d Cir. 1980). Reckless behavior is a critical determinant of liability under rule 10b-5.

Seiffer *v*. Topsy's Int'l, Inc., 487 F.Supp. 653, 665–66 (D.Kan. 1980). Under rule 10b-5, reliance may be inferred if the plaintiff can prove the misleading or false information was material. "When it is, as a practical matter, impossible to demonstrate reliance, resort must be had to materiality."

Liability Under Section 18 of the Securities and Exchange Act of 1934

Fischer *v*. Kletz, 266 F.Supp. 180, 189 (S.D.N.Y. 1967). To be liable under Section 18(a), privity with plaintiff is not a requirement; in addition, the court held that 18(a) does apply to allegations of auditor knowledge of misstatements at the time the registration statement was filed.

Adams *v*. Standard Knitting Mills, Inc., CCH Fed. Sec. L. Rep. 95,683 at p. 90,370 (E.D.Tenn. 1976). In a class action suit under Section 18(a), the plaintiffs must show evidence of "individual class member reliance upon defendant's representations and omissions contained in the financial statements."

Rich *v.* Touche Ross & Co., 415 F.Supp. 95, 102 (S.D.N.Y. 1976). Under Section 18(a), the plaintiff must prove that damages were caused by relying on a false or misleading statement and that the transaction price was affected by the false or misleading statement.

Jacobson *v.* Peat, Marwick, Mitchell & Co., 445 F.Supp. 518, 525 (S.D.N.Y. 1977). Section 18(a) requires that plaintiff prove reliance on a false or misleading financial statement and show that he or she had no knowledge of the false or misleading information.

Pearlstein *v.* Justice Mortgage Investors, CCH Fed. Sec. L.Rep., 96,760 at p. 94,976 (N.D.Tex. 1978). Under Section 18(a), plaintiffs cannot show reliance on a financial statement filed with the SEC simply because they have read the same statement contained in an annual report.

Ross *v.* A. H. Robbins Co., 607 F.2d 545, 555–556 (2d Cir. 1979). The burden of proof is placed on the defendant in Section 18(a). If the plaintiff can demonstrate reliance on a false or misleading statement, "liability is established, unless by the very terms of Section 18, the person sued shall prove that he acted in good faith and had no knowledge that such statement was false or misleading."

Enforcement Issues—Injunctive Actions

U.S. *v.* W. T. Grant Co. (1953). The SEC should not seek an injunction without "positive proof of a reasonable likelihood that past wrongdoing will occur."

SEC *v.* National Student Marketing Corp., 457 F.Supp. 682 (D.D.C. 1978). In seeking an injunction, the SEC must go beyond establishing that a past violation has occurred. The SEC must "demonstrate a realistic likelihood of recurrence." In assessing whether a wrong is likely to be repeated, a court would consider factors, among others, such as the character of past violations, the time elapsed since the last violation, the novelty of the violation, and the harmful impact of the injunction on the defendant.

Aaron *v.* SEC, 100 S.Ct. 1945, 1958 (1980). A court "may consider scienter or lack of it as one of the aggravating or mitigating factors to be taken into account in exercising its equitable discretion in deciding whether or not to grant injunctive relief."

Enforcement Issues—Formal Investigations

SEC *v.* Isbrandtsen, 245 F.Supp. 518, 521 (S.D.N.Y. 1965). There is no accountant-client privilege under federal law.

SEC *v.* Republic National Life Ins. Co., 383 F. Supp. 436 (S.D.N.Y. 1974). The SEC may withhold information obtained in an investigation from a firm's auditors even though such information may be relevant to the audit.

Utah-Ohio Gas & Oil, Inc. *v.* SEC, CCH Fed. Sec. L. Rep. 97,239 (D.Utah 1980). Proof of wrongdoing is not required to initiate an investigation by the SEC; "The Commission can investigate merely on suspicion that the law is being violated, or even just because it wants assurance that it is not."

Jerry T. O'Brien, Inc. *v.* SEC, 704 F.2d 1065, 1067 (9th Cir. 1983). The SEC's subpoena power in formal investigations will be upheld upon showing: (1) legitimate purpose of the investigation; (2) the inquiry is relevant to that purpose; (3) the SEC does not possess the information sought; (4) adherence to administrative steps required by law.

Enforcement Issues—Administrative Proceedings

Touche Ross & Co. *v.* SEC, 609 F.2d 570 (2d Cir. 1979). The SEC's rule 2(e) is a valid exercise of its power to protect its own processes by assuring the professional qualifications of those professionals that practice before the Commission.

Steadman *v.* SEC, 603 F.2d 1126 (5th Cir. 1979). "The greater the sanction the SEC decides to impose, the greater is its burden of justification."

Definition of Security

SEC *v.* W. J. Howey Co., 328 U.S. 293, 66 S.Ct. 1100, 90 L.Ed. 1244 (1946). The case established four criteria for an instrument to meet in qualifying as a security. "An investment contract for purposes of the Securities Acts means a contract . . . whereby a person (1) invests his money (2) in a common enterprise and (3) is led to expect profits (4) solely from the efforts of the promoter or a third party.

United Housing Foundation, Inc. *v.* Foreman, 421 U.S. 837, 95 S.Ct. 2051, 44 L.Ed. 2d 621 (1975). Shares of stock in a co-operative housing corporation are not securities under federal law in situations where there is no expectation of profit.

Chemical Bank *v.* Arthur Andersen & Co., 726 F.2d 930 (2d Cir. 1984). Notes with a maturity date exceeding 9 months were held to be nonsecurities under federal law since they were commercial, as opposed to an investment nature.

Disclosure/Materiality Opinions

Kohler *v.* Kohler Co., 319 F.2d 634, 642 (7th Cir. 1963). The term material was described as those facts that "in reasonable and objective contemplation might affect the value of the corporation's stock or securities."

Escott *v.* BarChris Construction Corp., 283 F.Supp. 643 (S.D.N.Y. 1968). "A fact which . . . would have deterred or tended to deter the average prudent investor from purchasing the securities."

SEC *v.* Bangor Punta Corp., 331 F. Supp. 1154, 1160–1161, (S.D.N.Y. 1971). In resolving disclosure issues in which disclosure would differ from generally accepted accounting principles, "differences between accepted principles of accounting and fair disclosure . . . must be resolved in favor of the disclosure requirements of the securities laws."

Chelsea Assoc. *v.* Rapanos, 376 F.Supp. 929, 941 (E.D.Mich. 1974). Facts "to which a reasonable man would attach importance in determining his choice of action in the transaction in question."

TSC Indus., Inc. *v.* Northway, Inc., 426 U.S. 438, 449 (1976). "An omitted fact is material if there is a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote."

Proxy Solicitations

J. I. Case *v.* Borak, 377 U.S. 426 (1964). The U.S. Supreme Court ruled that a stockholder has an implied right of action under Section 14 of the Securities Exchange Act of 1934.

Mills *v*. Electric Auto-Lite Co., 396 U.S. 375 (1970). Where votes of outside shareholders are needed for approval of a merger, the plaintiff need only show that the defect in a proxy statement was material, instead of proving that the misstatement actually affected voting or merger approval.

Gerstle *v*. Gamble-Skogmo, 478 F.2d 1281 (2d Cir. 1973). Under rule 14a-9, liability will be found if the plaintiff can prove the defendant was negligent; scienter is not necessary.

Adams *v*. Standard Knitting Mills, Inc., 623 F.2d 422 (6th Cir. 1980). The court ruled that outsiders, such as accountants, must be guilty of scienter for liability to arise under rule 14a-9. This reasoning was based on the legislative history of Section 14(a) and the facts that accountants receive no benefit from the proxy vote and are not in privity with the stockholders.

Tender Offers

Electronic Speciality Co. *v*. International Controls Corp., 409 F.2d 937 (2d Cir. 1969). A target company may seek an injunction against an aggressor which had made misleading statements in the course of a tender offer.

Rondeau *v*. Mosinee Paper Corp., 422 U.S. 49 (1975). The court held that, under Section 13(d), an implied private right of action exists which enables an issuer to sue shareholders who have violated disclosure requirements of that section; however, the issuer is not entitled to an injunction preventing stockholders from voting or acquiring more shares without showing "irreparable harm and other usual prerequisites for injunctive relief." [But, see Liberty National Insurance Holding Co. *v*. Charter Co., 734 F. 2d 545 (11th Cir. 1984).]

Piper *v*. Chris-Craft Industries, Inc., 430 U.S. 1 (1977). The court held that a company, defeated in a tender offer struggle, had no right to sue an opponent for damages that allegedly resulted from misleading statements; a private right of action would be implied, under Section 14(e), only where the shareholders of the target corporation would be benefited. [But, see Mobil Corp. *v*. Marathon Oil Co., 669 F.2d 366 (6th Cir. 1981).]

Wellman *v*. Dickinson, 475 F.Supp. 783, 823–24 (S.D.N.Y. 1979).

The following eight characteristics were accepted as indicative of a tender offer: (1) active and widespread solicitation of public shareholders for the shares of an issuer; (2) solicitation made for a substantial percentage of the issuer's stock; (3) offer to purchase made at a premium over the prevailing market price; (4) terms of the offer are firm rather than negotiable; (5) offer contingent on the tender of a fixed number of shares, often subject to a fixed maximum number to be purchased; (6) offer open only a limited period of time; (7) offeree subjected to pressure to sell his stock; (8) public announcements of a purchasing program concerning the target company precede or accompany rapid accumulation of large amounts of the target company's securities.

Insider Trading

Cady, Roberts & Co., 40 SEC. 907, 913 (1961). An administrative decision of the SEC that disciplined a broker-dealer, who sold securities for clients upon acquiring advance knowledge of dividend cuts. Although the defendant argued that his duty to customers obligated him to act upon information coming into his possession, the SEC held that "clients may not expect of a broker the benefits of his inside information at the expense of the public generally." The SEC's analysis was based on two factors: "first, the existence of a relationship giving access, directly or indirectly, to information intended to be available only for a corporate purpose and not for the personal benefit of anyone, and second, the inherent unfairness involved where a party takes advantage of such information knowing it is unavailable to those with whom he is dealing."

SEC *v.* Texas Gulf Sulphur Co., 401 F.2d 833, 848 (2d Cir. 1968). Who is subject to rule 10b-5's constraints on trading? "Anyone in possession of material inside information must either disclose it to the investing public, or refrain from trading." In addition, the court held that an insider could not act at the moment a firm issues a public announcement of inside information, but instead must wait "until the news could reasonably have been expected to appear over the media of widest circulation."

Chiarella *v.* U.S., 445 U.S. 222 (1980). The U.S. Supreme Court appeared to weaken the Texas Gulf Sulphur (TGS) rule of 'disclose or abstain' by stating that "a duty to disclose under Section 10(b) does

not arise from the mere possession of nonpublic market information.'' The Court distinguished the TGS case on the grounds that the 'disclose or abstain' rule was limited to those parties who are subject to a duty to disclose apart from the mere possession of confidential inside information.

Elkind *v.* Liggett & Myers, 635 F.2d 156, 172 (2d Cir. 1980). The court established a disgorgement approach to damage recovery whereby an uninformed investor may recover the difference between the amount paid or received for the stock and the market value reached a reasonable time after public disclosure of the inside information; however, the recovery is limited ''to the amount gained by the tippee as a result of his selling at the earlier date rather than delaying his sale until the parties could trade on an equal information basis.''

Dirks *v.* SEC, 463 U.S. 646, 661–664 (1983). Reemphasizing its Chiarella decision, the U.S. Supreme Court stated that a duty to disclose arises from a fiduciary relationship. As to the violation of rule 10b-5, the Court cited as an objective criteria, ''whether the insider receives a direct or indirect personal benefit from the disclosure, such as a pecuniary gain or a reputational benefit that will translate into future earnings. . .''

United States *v.* Winans, CCH Fed. Sec. L.Rep., 92,742 (2d Cir. 1986). Can a person who is not directly associated with a company be guilty of insider trading? A financial reporter misused confidential information obtained in the course of employment with a financial publication. The information concerned the timing and content of future financial columns. The Second Circuit Court of Appeals upheld the SEC's ''misappropriation'' theory which holds that it is illegal to steal information from one's employer—even when the employer is not the company whose stock is being traded. The court ruled that the defendant had a duty of confidentiality to the employer and a corollary duty under rule 10b-5 to avoid trading on misappropriated information. The reporter's conviction and the SEC's misappropriation theory was upheld in 1987 by the U.S. Supreme Court. The Court concluded that the reporter had appropriated the employer's ''confidential business information for his own use, all the while pretending to perform his duty of safeguarding it.'' [See Carpenter *v.* United States, CCH Fed. Sec. L.Rep., 93,423.]

Short-swing Profits

Smolowe *v.* Delendo Corp., 136 F. 2d 231, 239 (2d Cir. 1943). The court concluded that Section 16(b) was intended to disgorge the maximum profit from stock transactions. Thus, a specific identification approach of matching a purchase and sale was discarded; instead, the court stated: "The only rule whereby all possible profits can be surely recovered is that of lowest price in, highest price out—within six months."

Adler *v.* Klawans, 267 F.2d 840 (2d Cir. 1959). Short-swing profits must be disgorged from directors or officers when either the purchase or sale occurred when that title was held.

Feder *v.* Martin Marietta Corp., 406 F.2d 260 (2d Cir. 1969). A firm that deputizes an officer or director to function as an officer or director of another company will be liable for short-swing profits.

Kern County Land Co. *v.* Occidental Petroleum Corp., 411 U.S. 582 (1973). An involuntary exchange of stock, "when coupled with the absence of the possibility of speculative abuse of inside information," should not be covered by Section 16(b).

Foremost-McKesson *v.* Provident Securities Co., 423 U.S. 232 (1976). A purchase that makes an investor a Section 16(b) '10% shareholder' cannot be matched against a subsequent sale in determining short-swing profits.

Merrill Lynch, Pierce, Fenner & Smith, Inc. *v.* Livingston 566 F. 2d 1119 (9th Cir. 1978). An officer, such as a vice-president, although purportedly covered by Section 16(b), may not be covered if the title is merely honorary. To be covered by 16(b), one must have access to insider information.

A GUIDE TO SEC REGULATIONS AND PUBLICATIONS:

MASTERING THE MAZE

Paul B. W. Miller and Jack Robertson

With the growing interest of academic and professional accountants in the activities and the influence of the Securities and Exchange Commission (SEC), there is a need for greater clarity about the nature of the Commission's authority, and a need for help in understanding and using its publications. These needs are turned into a problem for many because the structure of the authorities and publications is so complex that finding the way through them is like mastering a maze. That complexity comes from the fact that, unlike the Accounting Principles Board and the Financial Accounting Standards Board, the SEC is a direct product of legislation, and its literature has been shaped by legal traditions and procedures. The purpose of this paper is to describe a structure that will help those who want to understand more about the SEC, including those who want to

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teach others about it. Of necessity, this description is incomplete, but those who seek more in-depth knowledge will at least have a structure for their future efforts. We have also decided to focus mainly on accounting and auditing features of the SEC's literature.

I. THE FOUR LEVELS

The first point about our structure is that it has these four levels:

- Statutes
- Regulations and Forms
- Commission Releases
- Staff Advice

Each level is different, but depends in some way on the others. The remainder of the paper describes each level in more detail, and provides a list of their components. The diagram in Exhibit One shows the structure that we have found to be useful.

A. Statutes

All the SEC's authority flows from the enabling legislation passed by the Congress. Seven statutes actually give the SEC its powers, and they are listed in Table One. For the purposes of this explanation, the most important were passed in 1933 and 1934.[1]

The 1933 Securities Act. This statute basically was created to establish control over those who would offer securities for sale to the public. It requires that such securities be "registered" with the federal government before they are issued, and that potential investors be provided with a prospectus that contains information about the security and the issuer. The enforcement of this statute was delegated to the Federal Trade Commission (FTC).

The 1934 Securities Exchange Act. This second statute was considered necessary for two reasons. First, it was determined that initial registration was not sufficient to protect the market in general and individual investors in particular; thus, it requires an issuer of registered securities (called a "registrant") to report financial and other information subsequent to the issuance of its registered securities, both periodically and

when significant events occur. Second, it created the SEC and gave it the powers over registrants that had been given to the FTC. It also gave the SEC the power to regulate securities exchanges.

Other Statutes

Table 1 lists five other statutes that have expanded or otherwise significantly redefined the Commission's authority. The 1935 Act, for example, gave the SEC the power to regulate the financial activities of utility companies, and required them to simplify their capital structures. The Investment Company Act of 1940 regulates the activities of mutual funds and other types of investment companies, and the Investment Advisers Act of 1940 gave the SEC authority over those who provide investment counseling. A consistent theme for all the legislation is the objective of creating and maintaining public confidence in the capital markets by promoting the availability of "fair and full" information and by encouraging market participants to behave with appropriate integrity. This theme still applies, and thus explains, for example, the SEC's continuing pursuit of inside traders.

B. Regulations and Forms

The second level consists of rules created by the Commission to implement the authority created by statutes. The term "regulations" merely means collections of rules that must be complied with by those who fall under the Commission's authority. "Forms" specify the minimum level of information that is to be provided by registrants in various situations. They do *not* have rigidly defined formats like income tax forms; rather, they give the reporting company flexibility in how it exactly goes about disclosing the required information.

Table 1. Statutes

1. Securities Act of 1933
2. Securities Exchange Act of 1934
3. Public Utility Holding Company Act of 1935
4. Trust Indenture Act of 1939
5. Investment Company Act of 1940
6. Investment Adviser Act of 1940
7. Security Investor Protection Act of 1970

The regulations and forms developed to implement the 1933 and 1934 Acts are included in Title 17 of the *Code of Federal Regulations,* and are thus cited under the designation of "17 CFR."

As shown in Exhibit 1, the rules under the 1933 Act have been published as 17 CFR 230 and 17 CFR 239. The regulations in 17 CFR 230 are further broken down into general rules (including definitions and administrative matters) and into six major regulations. The regulations are listed in Table 2. The forms to be used by registrants complying with this Act are described in 17 CFR 239, and some of them are listed in Table 3.

The requirements under the 1934 Act have been published as 17 CFR

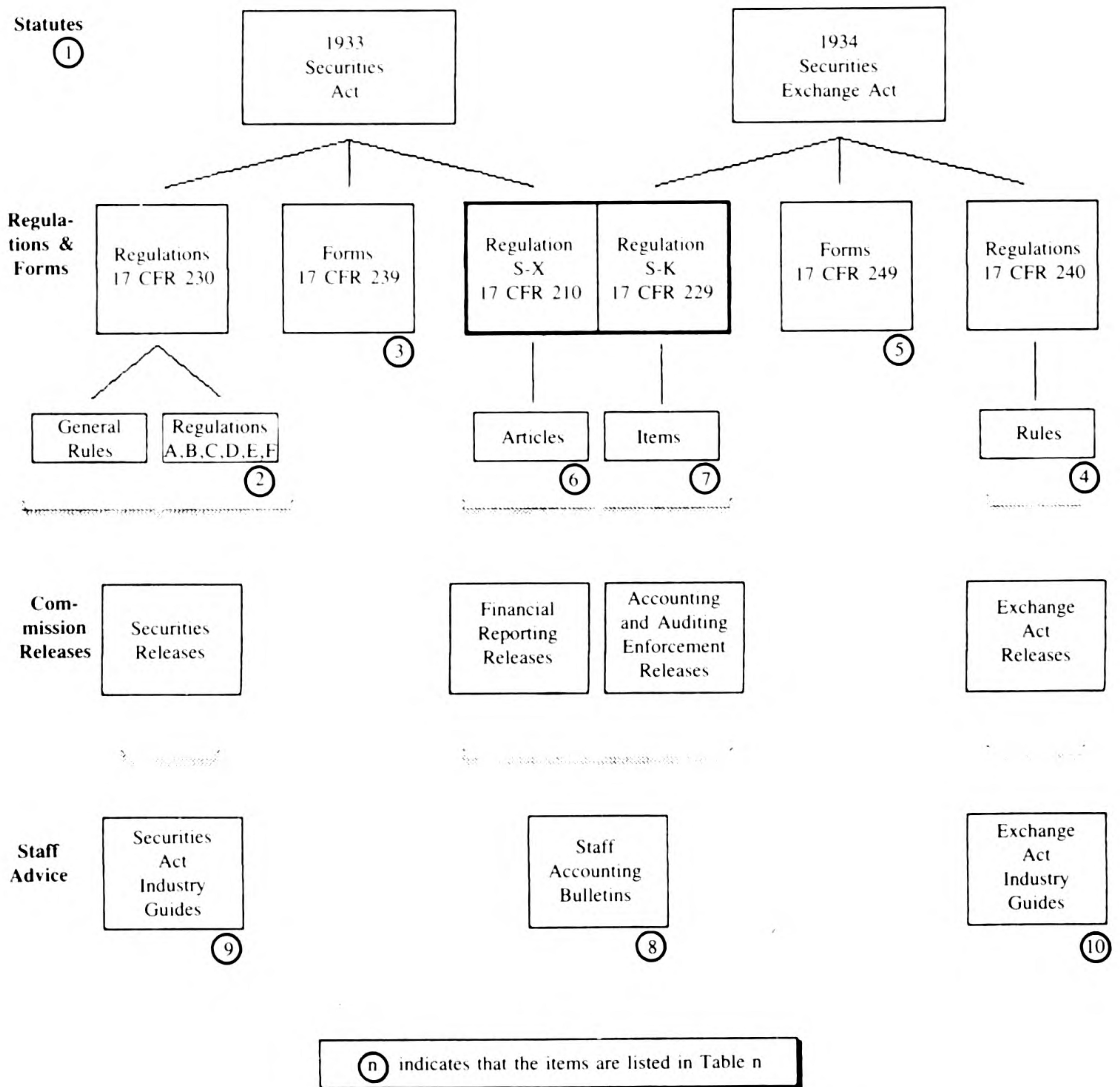

Exhibit 1. SEC Authorities and Publications

Table 2. Regulations under 17 CFR 230

A. General exemptions for small offerings
B. Fractional undivided oil and gas interest exemptions
C. Registration, detailed requirements
D. Registration exemption for offerings up to $5 million and unlimited private offers
E. Exemptions for Small Business Investment Corporations
F. Assessable stock exemptions

240 and 17 CFR 249. The former includes various rules, some of which are listed in Table 4, and the latter describes the forms to be used, some of which are listed in Table 5.

For accountants, the most familiar regulations under these two Acts are Regulation S-X and Regulation S-K. As indicated in Exhibit 1, they both implement the authority created under the 1933 and 1934 Acts.

Regulation S-X

This regulation basically describes the accounting and auditing requirements to be met by registrants, including not only the financial statements but also the qualifications (including independence) of and reports filed by accountants who practice before the Commission. It consists of 13 Articles, all of which are listed in Table 6.

Table 3. Examples of Forms under the 1933 Securities Act

1-A	Offering statement under Regulation A
D	Notification under Regulation D
1-E	Notification under Regulation E
F-1, F-2, F-3	Registration statements for foreign private issuers
S-1, S-2, S-3	Registration statements, general form
S-4	Registration of securities issued in business combination transactions
S-8	Securities offered to employees
S-11	Registration of securities of certain real estate companies
S-18	Optional registration form for $5 million or less

Table 4. Examples of Rules under 17 CFR 240

0-1 thru 0-10	Rules of general application
3a11-1 thru 3b-9	Exemptions and definitions
6a-1 thru 7c2-1	Registration, exemption of exchanges
9b-1	Standardized options
10a-1 thru 10a-2	Short sales
10b-1 thru 11AC1-2	Manipulative and deceptive devices and contrivances
12a-1 thru 12a-6	Exemptions from exchange registration
12b-1 thru 12b-37	Registration and reporting
12f-1 thru 12f-6	Unlisted trading
12g-1 thru 13a-17	Registration of over the counter securities
13b2-1 thru 13b2-2	Maintenance of records and preparation of reports
13d-1 thru 13d-101	Schedule 13D for acquisition of 5% interest
13e-1 thru 13e-100	Schedule 13E-3 for going private transactions
15Aa-1 thru 15Bc7-1	Registration of securities associations
16a-1 thru 16e-1	Reports of directors, officers and principal stockholders
17a-1 thru 17Ad-14	Recordkeeping for national securities exchanges, reports of stabilizing activities, etc.
24b-1 thru 31-1	Inspection and publication of filed information

Regulation S-K

This regulation includes a large number of ''items'' about which a registrant must provide information (in addition to the financial statements) in registration statements, annual reports, and proxy solicitations. They are listed in Table 7. As a matter of detail, some registrants are not required to comply with S-K; for example, small companies that fall under Regulation D of 17 CFR 230 are exempt, as are investment advisers.

Table 5. Examples of Forms under the 1934 Securities Act

8-K	Current reports
10-K	General form of annual report
10-Q	Quarterly report
10	General form for registration of securities on a national exchange or by issuers of a certain size
11-K	Annual report of employee stock purchase plan
13-F	Report of institutional investment managers
3	Initial statement of beneficial ownership of securities (insiders)
4	Statement of changes in beneficial ownership of securities (insiders)
20-F	Annual report and registration of securities of foreign private issuers
25	Notification of removal of securities from listing

Table 6. Articles of Regulation S-X

1.	Application of Regulation S-X
2.	Qualifications and reports of accountants
3.	General instructions for financial statements
3A.	Consolidated and combined financial statements
4.	Rules of general application
5.	Commercial and industrial companies
6.	Registered investment companies
6A.	Employee stock purchase, savings and similar plans
7.	Insurance companies
9.	Bank holding companies and banks
10.	Interim financial statements
11.	Pro forma financial information
12.	Form and content of schedules

Table 7. Items of Regulation S-K

10.	General
101.	Description of business
102.	Description of property
103.	Legal proceedings
201.	Market price and dividends on common equity
202.	Description of registrant's securities
301.	Selected financial data
302.	Supplementary financial information
303.	Management's discussion and analysis
304.	Changes in and disagreements with accountants
401.	Directors and executive officers
402.	Management remuneration
403.	Security ownership of certain beneficial owners and managers
404.	Certain relationships and related party transactions
501.	Information, index in forepart of registration statement
502.	Information on front and back cover pages of prospectus
503.	Summary information, risk factors, ratio of earnings to fixed charges
504.	Use of proceeds
505.	Determination of offering price
506.	Dilution of equity
507.	Selling security holders
508.	Plan of distribution
509.	Interests of named experts and counsel
510.	Disclosures related to indemnification
511.	Other expenses of issuance and distribution
512.	Undertakings
601.	Exhibits
701.	Recent sales of unregistered securities
702.	Indemnification of officers and directors

B. Commission Releases

At the next level below regulations and forms are Commission Releases, which are essentially official communications between the SEC and the public. They announce changes in the regulations and rules, interpret the regulations and rules, describe various resolutions reached by the Commission in fulfilling its enforcement authorities, or declare general statements of Commission policy. It is important to notice that these communications are issued only after a majority of the Commissioners has voted for their issuance.

As indicated by the diagram in Exhibit 1, there are several types of releases related to the statutes and regulations. Releases concerning matters under the 1933 Act are called ''Securities Releases.'' When they are published in the *Federal Register,* they are given a number that has a ''33-'' prefix. Releases concerning the 1934 Act are called ''Exchange Act Releases,'' and are given a ''34-'' prefix in the *Register.*

Releases concerned with Regulation S-X and S-K fall into two categories. As might be expected, Financial Reporting Releases announce changes and interpretations of the Regulations. They are published with a ''FR-'' prefix, although they are commonly identified in the accounting literature as ''FRR.'' It should be noted that it is possible for a single release to have more than one designation. In fact, it is not uncommon to find a release carrying all three.

Accounting and Auditing Enforcement Releases announce resolutions of enforcement or other disciplinary actions (occasionally by adjudication but more often by settlements) against individuals, firms, and registrants who have allegedly or been proven to have violated the federal securities laws or who have otherwise fallen under the SEC's disciplinary powers. They are published under the prefix of ''AAER.''

Until 1982, the Commission issued Accounting Series Releases (abbreviated ''ASR''), which concerned matters of both financial reporting and enforcement actions. In that year, the separate FR and AAER series were created to avoid the confusion created by dealing with the two different kinds of actions in one series.

C. Staff Advice

The fourth level of literature from the SEC comes from the approximately 2,000 member staff. Although Commissioners may be contacted and informed as to the contents, this type of communication is strictly from the staff to registrants and other interested parties with regard to the

staff's interpretation of the regulations. To help avoid arbitrary or otherwise inconsistent policies, these communications are generally subjected to substantial internal review involving two or more divisions or offices of the staff.

Despite the fact that these publications lack the official standing of Commission releases, a registrant faces substantial difficulty in successfully going against the staff advice in constructing a filing. As with every staff decision concerning a filing, the registrant can appeal to the Commissioners for an exception, but history has shown that few are willing to go to the expense and trouble, and fewer still succeed in overturning the staff's position.

The bottom section of Exhibit 1 shows three categories of staff advice that are of interest to accountants.

Staff Accounting Bulletins. These publications are probably the most familiar to accountants. They are issued by the SEC's Division of Corporation Finance (which has the responsibility for reviewing and otherwise screening filings) and the Office of the Chief Accountant (which has the responsibility for advising the Commission and staff on matters of accounting and auditing policy). A SAB is published in order to let registrants and the public know about an interpretation that the staff has made either for a series of filings with similar facts and situations or for one filing that dealt with an unusual situation or that took a novel approach to the authoritative literature. The basic objective is either to assist registrants through a troubled area or to let them know that a particular approach will not pass the staff's scrutiny. Over 75 SAB's had been issued when this paper was written. Table Eight lists a few of them.

Table 8. Examples of Staff Accounting Bulletins

42.	Application of existing accounting standards to business combinations accounted for by the purchase method involving financial institutions (1981)
42A.	Amortization of goodwill by financial institutions upon becoming SEC registrants (1985)
45.	Presentation of pro forma financial information (1982)
48.	Transfers of assets by promoters or shareholders (1982)
51.	Accounting for sales of stock by a subsidiary (1983)
54.	Push down basis of accounting required in certain limited circumstances (1983)
58.	Last-in, first-out (LIFO) inventory practices (1985)
67.	Income statement presentation of restructuring charges (1986)
68.	Increasing rate preferred stock (1987)
69.	Application of Article 9 and Guide 3; income statement presentation of casino-hotel activities (1987)
72.	Classification of charges for abandonments and disallowances (1987)

Table 9. Securities Act Industry Guides

1. Disclosure of principal sources of electric and gas revenues
2. Disclosure of oil and gas operations
3. Statistical disclosure by bank holding companies
4. Prospectuses relating to interests in oil and gas programs
5. Preparation of registration statements relating to interests in real estate limited partnerships
6. Disclosures concerning unpaid claims and claim adjustment expenses of property-casualty insurance underwriters

Securities Act Industry Guides. For certain filings under the 1933 Act, the staff has developed six guides to implementation of the regulations for registrants facing particular industry-related reporting and disclosure situations. Given that the guides were issued by the same staff that reviews filings, most registrants find that it makes sense to comply with the advice. The Securities Act Guides are listed in Table 9.

Exchange Act Industry Guides. For certain filings under the 1934 Act, the staff has developed four implementation guides. They are listed in Table 10.

SUMMARY

This paper attempts to bring a structure to the complexities of the authorities and publications of the SEC. The complexity is perhaps unavoidable in light of the environment in which the SEC has operated for more than fifty years, and in light of the constraints that exist for any government agency. Our own experience has shown that this structure is useful for developing our own understanding and for helping others to master the maze, and we think that readers will benefit from what it has to offer.

Table 10. Exchange Act Industry Guides

1. Disclosure of principal sources of electric and gas revenues
2. Disclosure of oil and gas operations
3. Statistical disclosure by bank holding companies
4. Disclosures concerning unpaid claims and claim adjustment expenses of property-casualty insurance underwriters.

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NOTES

1. Two other statutes are occasionally cited—the Banking Act of 1933 (also known as the Glass-Steagall Act) and the Foreign Corrupt Practices Act of 1977. We have not included them in our list because the former is primarily enforced by the Federal Reserve Board, and the latter was an amendment of the 1934 Act. Still other statutes have given the SEC certain authorities, such as the Insiders Trading Sanctions Act of 1984, but are too narrow to raise in this context.

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