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Towards a Positive Theory of the Determination of Accounting Standards

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ABSTRACT: This article provides the beginnings of a positive theory of accounting by exploring those factors influencing management's attitudes on accounting standards which are likely to affect corporate lobbying on accounting standards. Certain factors are expected to affect a firm's cashflows and in turn are affected by accounting standards. These factors are taxes, regulation, management compensation plans, bookkeeping costs, and political costs, and they are combined into a model which predicts that large firms which experience reduced earnings due to changed accounting standards favor the change. All other firms oppose the change if the additional bookkeeping costs justify the cost of lobbying. This prediction was tested using the corporate submissions to the FASB's Discussion Memorandum on General Price Level Adjustments. The empirical results are consistent with the theory.

ACCOUNTING standards in the United States have resulted from a complex interaction among numerous parties including agencies of the Federal government (notably the Securities and Exchange Commission and Treasury Department), state regulatory commissions, public accountants, quasi-public accounting standard-setting boards (the Committee on Accounting Procedures (CAP), the Accounting Principles Board (APB), and the Financial Accounting Standards Board (FASB)), and corporate managements. These parties have, in the past, and continue to expend resources to influence the setting of accounting standards. Moonitz [1974], Horngren [1973] and [1976], Armstrong [1976] and Zeff [1972] document the sometimes intense pressure exerted on the "private" accounting standard-setting bodies (i.e., CAP, APB, FASB). These pressures have led to several reorganizations of the standard-setting boards.

Ultimately, we seek to develop a positive theory of the determination of accounting standards.[1] Such a theory will help us to understand better the source of the pressures driving the accounting standard-setting process, the effects of various accounting standards on different groups of individuals and the allocation of resources, and why various groups are willing to expend resources trying to affect the standard-setting process. This understanding is necessary to determine if prescriptions from normative theories

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[1] See Jensen [1976] and Horngren [1976].

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(e.g., current cash equivalents) are feasible.

Watts [1974] and [1977] has started to develop such a theory. This paper expands on this initial work by focusing on the costs and benefits generated by accounting standards which accrue to managements, thereby contributing to our understanding of the incentives of management to oppose or support various standards. Management, we believe, plays a central role in the determination of standards. Moonitz supports this view:

> Management is central to any discussion of financial reporting, whether at the statutory or regulatory level, or at the level of official pronouncements of accounting bodies. [Moonitz, 1974, p. 64]

Hence, it seems appropriate that a precondition of a positive theory of standard-setting is understanding management's incentives.

The next section introduces those factors (e.g., tax, regulatory, political considerations) which economic theory leads us to believe are the underlying determinants affecting managements' welfare and, thereby, their decision to consume resources trying to affect the standard-setting process. Next, a model is presented incorporating these factors. The predictions of this model are then tested using the positions taken by corporations regarding the FASB's Discussion Memorandum on General Price Level Adjustments (GPLA). The last section contains the conclusions of the study.

Factors Influencing Management Attitudes Towards Financial Accounting Standards

In this paper, we assume that individuals act to maximize their own utility. In doing so, they are resourceful and innovative.[2] The obvious implication of this assumption is that management lobbies on accounting standards based on its own self-interest. For simplicity, (since this is an early attempt to provide a positive theory) it could be argued that we should assume that management's self-interest on accounting standards is congruent with that of the shareholders. After all, that assumption has provided hypotheses consistent with the evidence in finance (e.g., the risk/return relationship of the various capital asset pricing models). However, one function of financial reporting is to constrain management to act in the shareholders' interest. (For example, see Benston [1975], Watts [1974], and Jensen and Meckling [1976a].) Consequently, assuming congruence of management and shareholder interests without further investigation may cause us to omit from our lobbying model important predictive variables. To reduce this possibility, we will examine next the effects of accounting standards on management's self-interest without the congruence assumption. The purpose of the examination is to identify factors which are likely to be important predictors of lobbying behavior so that we can include them in our formal model.

The assumption that management selects accounting procedures to maximize its own utility is used by Gordon [1964, p. 261] in an early attempt to derive a positive theory of accounting. There have been several attempts to test empirically Gordon's model, or variants of it, which we call the "smoothing" literature.[3] Problems in the specification of the em-

[2] Many economic models assume a rather limited version of economic man. In particular, they assume that man maximizes his own welfare when he is constrained to play by certain rules and in certain institutional settings, ignoring his incentives to avoid or change the rules, setting, etc. Meckling [1976] analyzes this issue.

[3] Ball and Watts [1972]; Barefield and Comiskey [1972]; Barnea, Ronen and Sadan [1975]; Beidleman [1973]; Copeland [1968]; Cushing [1969]; Dasher and Malcom [1970]; Gordon [1964]; Gordon, Horwitz and Meyers [1966].

pirical tests in the smoothing literature leave the Gordon model essentially unconfirmed.[4] Also, certain aspects of the Gordon model contribute to the model's lack of confirmation. Essentially, Gordon [1964] assumed that shareholder satisfaction (and, presumably, wealth) is solely a positive function of accounting income. This assumption avoids the conflict between shareholders and management by implying that increases in stock prices always accompany increases in accounting income. However, recent research casts serious doubt on the ability of management to manipulate directly share prices via changes in accounting procedures.[5]

We assume that management's utility is a positive function of the expected compensation in future periods (or wealth) and a negative function of the dispersion of future compensation (or wealth). The question is how do accounting standards affect management's wealth?[6] Management's total compensation from the firm consists of wages, incentive compensation (cash bonuses and stock or stock options), and nonpecuniary income, including perquisites (discussed in Jensen-Meckling, 1976a). Since it is unclear what role accounting standards play in the level of nonpecuniary income, we exclude it and focus on the first two forms of compensation. To the extent that management can increase either the level of incentive compensation or the firm's share price via its choice of accounting standards, they are made better off.

This analysis distinguishes between mechanisms which increase management's wealth: 1) via increases in share price (i.e., stock and stock options are more valuable) and 2) via increases in incentive cash bonuses. The choice of accounting standards can affect both of these forms of compensation indirectly through i) taxes, ii) regulatory procedures if the firm is regulated, iii) political costs, iv) information production costs, and directly via v) management compensation plans. The first four factors increase managerial wealth by increasing the cashflows and, hence, share price. The last factor can increase managerial wealth by altering the terms of the incentive compensation. Each of these five factors are discussed in turn.

Factors Affecting Management Wealth[7]

Taxes. Tax laws are not directly tied to financial accounting standards except in a few cases (e.g., the last-in-first-out inventory valuation method). However, the indirect relationship is well documented Zeff [1972] and Moonitz [1974]. The adoption of a given procedure for financial accounting does not decrease the likelihood of that procedure's being

[4] For these defects see Ball and Watts [1972], Gonedes [1972] and Gonedes and Dopuch [1974].

[5] Fama [1970] and Goedes and Dopuch [1974]. Further, the results of studies by Kaplan and Roll [1972], Ball [1972] and Sunder [1975] which address the specific issue support the hypothesis that the stock market can discriminate between real events and changes in accounting procedures. Given that the market can on average discriminate, then it must be concluded that managers (on average) expect the market to discriminate. Obviously, managers do and will attempt to influence their share price by direct accounting manipulation, but if these attempts consume resources, then incentives exist to eliminate these inefficient allocations.

[6] For earlier discussions of this question see Watts [1974] and Gonedes [1976].

[7] We have purposefully excluded from the set of factors being examined the information content effect of an accounting standard on stock prices. We have done this because at present the economic theories of information and capital market equilibrium are not sufficiently developed to allow predictions to be made regarding the influence an accounting standard on the capital market's assessment of the distributions of returns (see Gonedes and Dopuch, 1974). We believe that a theory of the determination of account ng standards can be developed and tested ignoring the information content factor. If at some future date, the information content factor can be specified and included in the theory, then the predictions and our understanding of the process will be improved. But we see no reason to delay the development of a theory until information content is specified.

adopted in future Internal Revenue codes, and more likely, will increase the chance of adoption. To the extent that management expects a proposed financial accounting procedure to influence future tax laws, their lobbying behavior is affected by the future tax law effects.

Regulation.[8] Most public utility commissions base their rate-setting formulas on accounting determined costs. A new accounting standard which reduces a utility's reported income may provide its management with an "excuse" to argue for increased rates. Whether the utility commission grants the increase depends on whether groups opposed to the rate increase (e.g., consumer groups) are able to exert political pressure on the commission.[9] This depends on such factors as information costs (to be discussed later). However, to the extent that there is some probability of a rate (and hence cashflow) increase (either temporary or permanent) as the result of an accounting standards change, utilities have an incentive to favor that change. Similarly, they have an incentive to oppose changes in accounting standards which might lead to a rate decrease.

Political Costs. The political sector has the power to effect wealth transfers between various groups. The corporate sector is especially vulnerable to these wealth redistributions. Certain groups of voters have an incentive to lobby for the nationalization, expropriation, break-up or regulation of an industry or corporation.[10] This in turn provides an incentive for elected officials to propose such actions. To counter these potential government intrusions, corporations employ a number of devices, such as social responsibility campaigns in the media, government lobbying and selection of accounting procedures to minimize reported earnings.[11] By avoiding the attention that "high" profits draw because of the public's association of high reported profits and monopoly rents, management can reduce the likelihood of adverse political actions and, thereby, reduce its expected costs (including the legal costs the firm would incur opposing the political actions). Included in political costs are the costs labor unions impose through increased demands generated by large reported profits.

The magnitude of the political costs is highly dependent on firm size.[12] Even as a percentage of total assets or sales, we would not expect a firm with sales of $100 million to generate the same political costs (as a percentage of sales) as a firm with $10 billion of sales. Casual empiri-

[8] We deal in this paper with public utility regulation and the forms of rate regulation employed. Other industries (e.g., banking and insurance) are regulated differently and these industries are ignored in this paper to simplify the analysis.

[9] For the economic theory of regulation upon which this discussion is based see Stigler [1971], Posner [1974] and Peltzman [1975]. Also, Horngren [1976].

[10] Stigler [1971], Peltzman [1975], and Jensen and Meckling [1976b]. An example of an industry facing such action is the oil industry.

[11] For an alleged example of this, see Jack Anderson, Syndicated Column, United Features (New York, April 10, 1976).

[12] Several studies document the association between size and anti-trust [Siegfried 1975]. In proposed anti-trust legislation, size *per se* has been mentioned specifically as a criterion for action against corporations. See the "Curse of Bigness," *Barron's*, June 30, 1969, pp. 1 and 8. Also see a bill introdueed into the Senate by Senator Bayh (U.S. Congress, Senate, Subcommittee on Anti-trust and Monopoly (1975), pp. 5–13) would require divesture for oil firms with annual production and/or sales above certain absolute numbers. In the hearings on that bill, Professor Mencke of Tufts University argued that absolute and not relative accounting profits are the relevant variable for explaining political action against corporations.

Menke said, "Nevertheless, precisely because the aetions of large firms are so visible, the American public has always equated absolute size with monopoly power. The major oil companies are among the very largest and most visible companies doing business in the United States.

Huge accounting profits, but not high profit rates, are an inevitable eorollary of large absolute firm size. This makes these companies obvious targets for public critieism." (U.S. Congress, Senate, Subcommittee on Anti-trust and Monopoly (1976), p. 1893).

cism suggests that Superior Oil Company (1974 sales of $333 million) incurs considerably less costs from anti-trust, "corporate responsibility," affirmative action, etc., than Exxon with sales of $42 billion.

Information Production (i.e., bookkeeping) Costs. Changes in accounting procedures are not costless to firms. Accounting standard changes which either increase disclosure or require corporations to change accounting methods increase the firms' bookkeeping costs (including any necessary increases in accountants' salaries to compensate for additional training).[13]

Management Compensation Plans. A major component of management compensation is incentive (bonus) plan income (Conference Board [1974]), and these plans are based on accounting income. Our survey of 52 firms in our sample indicates that the majority of the companies formally incorporate accounting income into the compensation plan.[14] Hence, a change in accounting standards which increase the firm's reported earnings would, *ceteris paribus*, lead to greater incentive income. But this would reduce the firm's cashflows and share prices would fall. As long as the per manager present value of the after tax incentive income is greater than the decline in each manager's portfolio, we would expect management to favor such an accounting change.[15] But this assumes that the shareholders and nonmanager directors do not oppose such an accounting change or do not adjust the compensation plans for the change in earnings.[16] In fact, the increased cashflows resulting from the political costs, regulatory process and tax effects of an accounting change assumes that various politicians/bureaucrats (i.e., the electorate) do not fully adjust for the change. A crucial assumption of our analysis is that the shareholders and nonmanaging directors have more incentive to adjust for and control increases in reported earnings due to changes in accounting standards than do politicians and bureaucrats.

Incentives for Various Groups to Adjust for a Change in Accounting Standards

An individual (whether a shareholder, nonmanaging director, or politician) will adjust a firm's accounting numbers for a change in accounting standards up to the point that the marginal cost of making the adjustment equals the marginal benefits. Consider the incentives of the outside directors to adjust bonus compensation plans due to a change in accounting standards. If these directors do not adjust the plans, management compensation rises and share price falls by the full discounted present value of the additional compensation.[17] Each outside director's wealth declines to the extent of his ownership in the firm and there is a greater chance of his removal from the board.[18]

[13] We are assuming that any change in accounting standards does not reduce the firm's information production costs. Although there may be cases where a firm is using a costly procedure which is eliminated by a simpler, cheaper procedure, information production costs in this case may decline, but we expect these situations to be rare.

[14] The frequency is 69 percent.

[15] At this early stage in the development of the theory, we assume that management of the firm is composed of homogeneous (i.e., identical) individuals to simplify the problem.

[16] Our examination of the description of 16 management compensation plans indicated that all the plans were administered by the nonmanaging directors.

[17] Likewise, we would expect the outside directors to adjust the incentive compensation targets in those circumstances when it is in the shareholders' interest to report lower earnings (e.g., LIFO), thereby not reducing the managers' incentive via bonus earnings to adopt LIFO.

[18] Our analysis indicates that outside (nonmanaging) directors are "efficient" monitors of management. Watts [1977]. If this were not the case, the capital market would quickly discount the presence of outside directors. As far as we can determine, firms are not required by the New York Stock Exchange listing requirements or Federal regulations to have outside directors. Paragraph 2495G

If nonmanaging directors did not control management (including adjusting the compensation plans for changes in accounting standards), the decline in firm value offers incentives for an outsider or group to tender for control of the firm and install outside directors who will eliminate those managerial activities which are not in the best interest of the shareholders.[19] This group would then gain a proportionate share of the full capitalized value of the eliminated abuses (e.g., the present value of the incremental compensation resulting from the change in accounting standards). Therefore, the benefits for shareholders and nonmanaging directors to adjust compensation plans for changes in accounting standards are immediate and direct, if there is an efficient capital market for equity claims.

However, for the politicians and bureaucrats, our analysis suggests that the lack of a capital market which capitalizes the effects on the voters' future cashflows reduces the benefits accruing to the politicians of monitoring accounting standards, and the result is that they will perform less adjustments for changes in accounting standards.[20] For example, what are the benefits accruing to a utility regulator for adjusting a utility's accounting numbers for a change in standards? In the previous case of an outside director, the share price will fall by the discounted presented value of the increased compensation resulting for an incomplete (or inaccurate) adjustment of the compensation plan. But if the regulator does not completely adjust for a change in accounting standards and allows the utility's rates to increase (resulting in a wealth transfer from consumers to the utility's owners), then the only cost the regulator is likely to incur is removal from office due to his incomplete adjustment. He incurs no direct wealth change. For small rate increases, the *per capita* coalition costs each consumer (or some group of consumers) would bear lobbying for the regulator's removal would vastly outweigh the small *per capita* benefits they would receive via lower regulated rates. Hence, rational consumers would not incur large monitoring costs of their regulators and other politicians (Downs [1957]; Alchian [1969]; and Alchian and Demsetz [1972]). Knowing this, it is not in the regulators' and politicians' interests to adjust changes in accounting standards as fully as if they were confronted with the same change in accounting standards in the role of outside directors or shareholders in the firm. The benefits of adjusting for changes in accounting standards are lower in the political sector than in the private sector.[21] Hence, there is a greater likelihood that a given accounting standard change will result in increased tax, regulatory, and political benefits than will the same change result in increased management compensation. For a given accounting standard change, managers should expect their own shareholders and outside di-

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of Commerce Clearing House, Volume 2, New York Stock Exchange encourages listed firms to appoint outside directors. "Full disclosure of corporate affairs for the information of the investing public is, of course, normal and usual procedure for listed companies. Many companies have found this procedure has been greatly aided by having at least two outside directors whose functions on the board would include particular attention to such matters." This listing statement is consistent with our observation that outside directors provide monitoring benefits.

[19] This assumes, of course, that such takeovers earn a fair rate of return net of transactions costs.

[20] See Zimmerman [1977] and Watts [1977] for further discussion of this issue.

[21] It could also be argued that politicians and regulators have a higher marginal cost of adjusting than do shareholders, nonmanaging directors, and other capital market participants since the former group does not necessarily have a comparative advantage of adjusting financial statements, whereas, existing capital market participants probably have a comparative advantage at such activities.

rectors to make a more complete adjustment than politicians.

Given this analysis, we predict that managers have greater incentives to choose accounting standards which report lower earnings (thereby increasing cashflows, firm value, and their welfare) due to tax, political, and regulatory considerations than to choose accounting standards which report higher earnings and, thereby, increase their incentive compensation. However, this prediction is conditional upon the firm being regulated or subject to political pressure. In small, (i.e., low political costs) unregulated firms, we would expect that managers do have incentives to select accounting standards which report higher earnings, if the expected gain in incentive compensation is greater than the foregone expected tax consequences. Finally, we expect management also to consider the accounting standard's impact on the firm's bookkeeping costs (and hence their own welfare).

The next section combines these five factors into a model of corporate lobbying standards.

A Positive Theory of Management Lobbying on Accounting Standards

Given a proposed accounting standard, management's position depends on the size of the firm (which affects the magnitude of the political costs) and whether the proposed standard increases or decreases the firm's reported earnings.[22] Figure 1 separates the standard's impact on earnings into decreases (1A) and increases (1B). The curve GB in Figure 1A (earnings decrease) denotes the proposed accounting standard's present value to management including the tax, regulatory, political, and compensation effects as a function of firm size. For small firms (below size E), not subject to much political pressure, these managers have an incentive to oppose the standard since their bonus compensation plans will have to be adjusted (a costly process), if their incomes are to remain unchanged by the new standard. Above size E, the political, regulatory, and tax benefits of reporting lower earnings due to the new standard are assumed to dominate the incentive compensation factor.

The benefits (costs) of a proposed accounting standard are expected to vary with the firm's size. This relationship can exist for two reasons: (1) the magnitude of the reported income change may be larger for larger firms and (2) for an income change of a given magnitude, the benefits (costs) vary with firm size.[23] Hence, the present value of the stream of benefits (or costs) to the firm, GB, are an increasing function of firm size.[24]

Information production costs, curve IC, are also expected to vary to some extent with firm size due to the increased complexity and volume of the larger

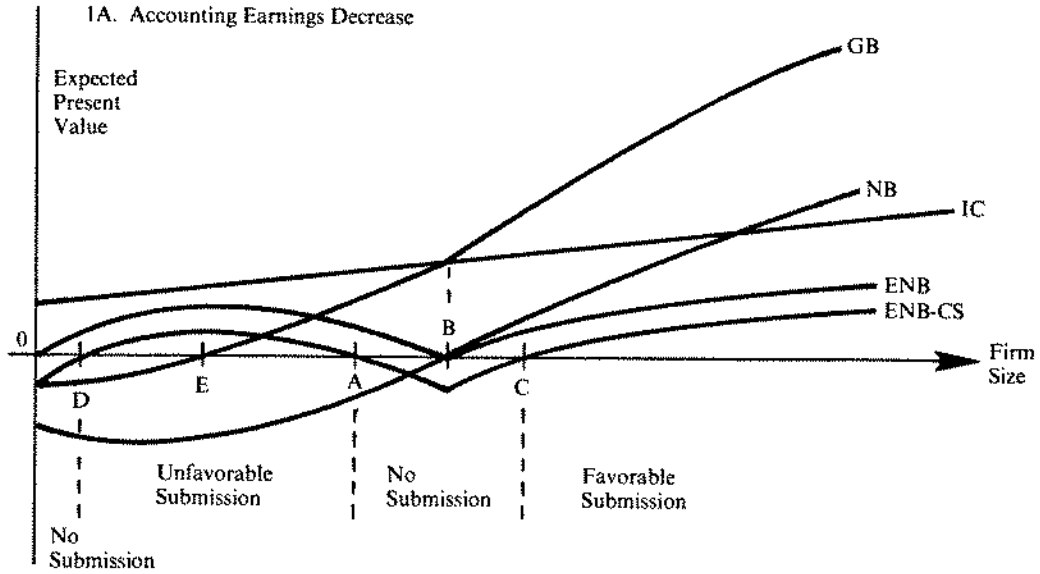
[22] The expected effect of an accounting standard could vary over time (i.e., it could increase current reported income and decrease some future reported income). In that case, the analysis is slightly more complex, but the criterion is still the same (i.e., the effect on the manager's wealth). However, for simplicity, the remainder of the paper refers to standards increasing or decreasing reported income as though the whole time series of future income shifts up or down.

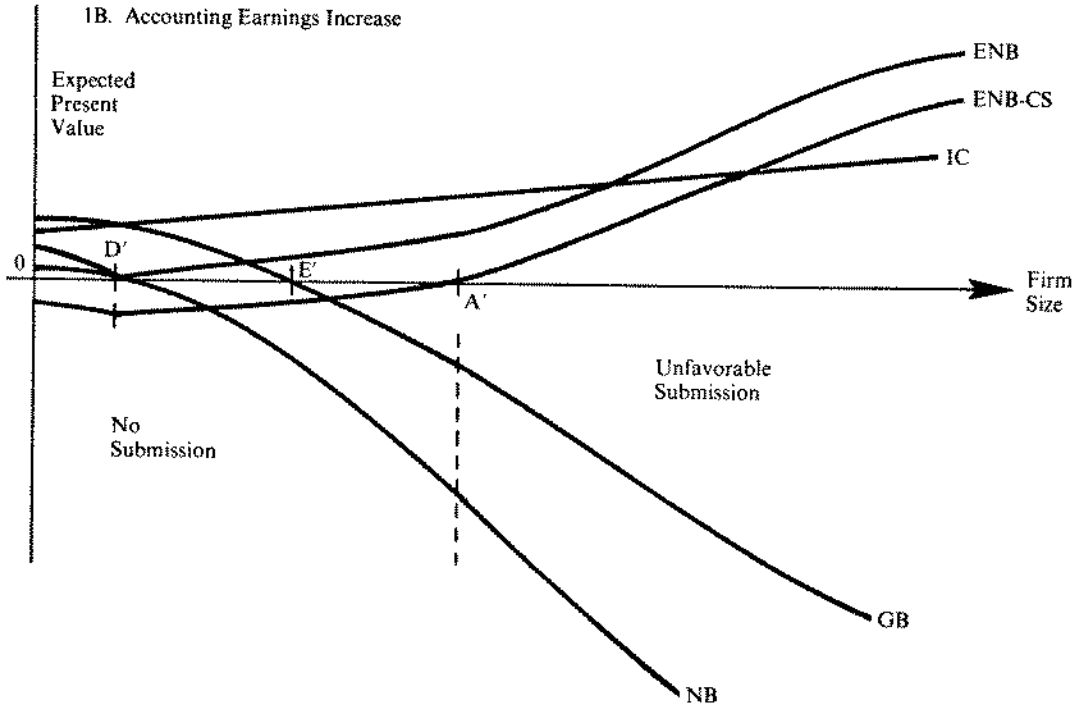
[23] Whether the magnitude of the income change does vary with firm size depends on the particular accounting standard in question. For certain accounting standards (e.g., requiring all firms to report depreciation based on current replacement costs) it is apparent *a priori* that there will be a correlation between the income change and firm size. For other standards (e.g., general price level accounting) *a priori*, it is not obvious that a relationship will exist (e.g., net monetary gains may offset depreciation in larger firms). However, since political costs depend on firm size then we expect the benefits (costs) of standard changes to vary with firm size. For example, if all firms' earnings decline by $1 million (due to a standards change) then we would expect larger firms to incur larger benefits since the likelihood of anti-trust actions are expected to be associated with firm size.

[24] We would expect firms in different industries to be subject to different political pressures, tax structures, and regulation. Hence, Figure 1 is developed for firms in the same industry that only differ by size.

FIGURE 1

A MODEL OF FIRMS' SUBMISSIONS TO THE FASB





firm's accounting system. The difference between the gross benefits, GB, and the additional information costs, IC, yields the net benefits curve, NB.

If the firm size is in the region OB, the net benefits curve, NB, is negative, and the firm will consider making an unfavorable submission to the FASB. Before the firm makes a submission, management holds beliefs regarding the likelihood the FASB will adopt the standard and the likelihood the FASB will adopt the standard if the firm makes an opposing submission.[25] The difference between these beliefs is the change in the adoption likelihood if management makes a negative submission. The product of this difference and the negative net benefits, NB, (i.e., the present value[26] of the cashflows arising from the five factors) is the expected present value of the net benefits curve, ENB. For example, a firm will incur negative net present value benefits of $100,000 if the standard is adopted. They believe the likelihood of adoption is .60. By making a negative submission to the FASB the likelihood falls to .59. The expected net present value of the benefits of the submission is then +$1000.

Firms larger than size B face positive net benefits if the standard is adopted. They will consider supporting the standard to the FASB, thereby increasing the standard's likelihood of adoption.[27] Hence, the expected net benefits curve is also positive beyond point B since it is the product of a positive net benefit and a positive change in the FASB's likelihood of adoption given a favorable submission.

If the cost of the submission is $CS, consisting primarily of the opportunity cost of the manager's time, then the total expected net benefits of a submission given the submission cost is a vertical downward shift in the ENB curve by the amount CS, ENB—CS. A firm will make a submission if ENB − CS is positive. This occurs in the regions DA, where opposing submissions occur, and beyond C, where favorable submissions are made. Between *O* and *D* and between *A* and *C* no submissions are made.

In Figure 1B, the proposed standard increases reported income. This case is similar to the previous one except the gross benefits are only positive for small firms where the management compensation plans are expected to dominate the tax, political, and regulatory factors. Beyond size *E'* gross benefits are negative since, for those firms, the income increases are expected to increase governmental interference (political costs), raise future tax payments, and lead the public utility commission to reduce the firm's revenues (if the firm is regulated). The net benefits curve is again the algebraic sum of GB (gross benefits) and IC (information costs) and the submission's expected net benefits less submission costs, ENB − CS, cuts the axis at *A'*. Accordingly, firms with asset sizes in the interval *OA'* make no submissions and firms of sizes beyond *A'* make unfavorable submissions.

[25] In this situation, it is possible that management will lobby on an accounting standard because of secondary (or gaming) effects (i.e., vote trading thereby influencing subsequent FASB pronouncements). We chose not to introduce gaming because it complicates the model and such complication is only justified if it improves or is likely to improve the empirical results. We are able to predict corporate behavior without considering gaming, and we do not consider it likely to improve these results.

[26] The firm is discounting the future cashflows with the appropriate, risk-adjusted discount rate. Furthermore, we are assuming that this discount rate is not increasing in firm size which is consistent with the available evidence.

[27] We are assuming that the likelihood of the FASB adopting the standard, if the firm makes a submission, is independent of firm size. This is unrealistic since large firms, we expect, would have more influence with the Board. However, inclusion of this additional dependency does not change the results; in fact, it strengthens the predictions.

When we consider the implications of both figures, we see that larger firms (firms larger than size C in Figure 1) will make favorable submissions if their incomes are decreased by the accounting standard, and unfavorable submissions if their incomes are increased. Smaller firms (firms smaller than size C in Figure 1) will either not submit or make unfavorable submissions.

While Figures 1A and 1B reflect the general tendency of costs and benefits of an accounting standard to vary with firm size, there will be exceptions to this relationship. We have omitted variables, some of which we recognize. In particular, regulation costs borne by utilities depend not only on net income but also on operating earnings.[28] The effect of an accounting standard on operating earnings may vary with firm size.

The increment to a regulated firm's value of an accounting change which reduces operating earnings is increasing in firm size. Most public utility commissions set revenues according to the following type of equation:

$$\text{Revenues} = \text{Operating Expenses} + \text{Depreciation} + \text{Taxes} + r \cdot \text{Base} \quad (1)$$

where r is the accepted rate of return allowance on the investment base (usually the historic cost of net plant and working capital) [Haskins and Sells 1974.] Interest is not directly included in the rate-setting formula. The approach is to work on a return to total assets. Since all the terms on the right-hand side of equation (1) are highly correlated with firm size, any accounting standard that increases reported operating expenses, depreciation, or the recorded value of the asset base proportionally will, in general, result in an increase in the utility's revenues. And these increments to the utility's cashflows will, in general, be increasing in firm size.

When an accounting standard increases net income and decreases operating earnings of utilities, as does price-level adjustments [See Davidson and Weil, 1975b], we would not necessarily expect the relationship between management's attitude to the standard and firm size to be as we specified above (i.e., larger firms favoring or opposing the standard depending upon the effect on net income and smaller firms opposing the standard). As a consequence, we concentrate on testing that relationship for unregulated firms.

Another omitted variable is the political sensitivity of the firm's industry which clearly affects the political cost of an accounting standard change. We do not have a political theory which predicts which industries Congress singles out for wealth transfers (For example, why was the oil industry subject to intensive Congressional pressure in early 1974 and not the steel industry?[29] Consequently, we do not consider it formally in our model. As we shall see, political sensitivity has an impact on our results (only one steel company submitted on price-level accounting compared to seven oil companies submitting), but it does not eliminate the general relationship between firm size and management's accounting lobbying behavior.

Empirical Tests

Data

On February 15, 1974, the FASB issued the discussion memorandum "Re-

[28] Operating earnings, although explicitly defined by each public utility commission, are generally, utility revenues less operating expenses, including depreciation but excluding interest and taxes. We assume that the adoption of GPLA would mean that price-adjusted depreciation would affect operating earnings while the gain or loss on monetary assets would be treated like interest and would only affect net income.

[29] This does not mean we do not have any ideas as to which variables are important. For example, in the case of consumer goods industries, we suspect that the relative price change of the product is important.

porting the Effects of General Price-Level Changes in Financial Statements" and scheduled a public hearing on the topic for April 25, 1974. Public comments and position papers were solicited. One hundred thirty-three accounting firms, public corporations, industry organizations, and government agencies filed written comments.

We assume the submission indicates the position of corporate management. Clearly, this assumption could introduce some error into our tests. For example, some controllers of corporations may submit not because of corporate effects, but because they receive nonpecuniary income from the submission (e.g., if they are officers in their local chapter of the National Association of Accountants). However, we expect the error to be random. Ignoring this error biases our tests of management's attitudes on accounting standards towards rejecting the theory.

Almost all the corporations making submissions (49 out of 53) were New York Stock Exchange firms. Of the remaining four firms, one was listed on the American Stock Exchange, one was traded over the counter, and the other two were not traded. Of the 53 firms, 18 submitted opinions expressing favorable views on general price level adjustments whereas 34 expressed opinions ranging from strong objection to discussions of the merits of current costing to skepticism and feelings that GPLA was premature. These 34 were classified as opposing GPLA. For one firm, Transunion, an opinion could not be ascertained, and this firm was subsequently dropped from the sample. The firms making submissions and their position on the issue are listed in Table 1.

Once the sample of firms was identified from their submissions to the FASB, 1972 and 1973 financial data was obtained from the COMPUSTAT tape and the 1974 Moody Manuals. In addition, data on the existence of management incentive compensation plans was obtained by a questionnaire mailed to the chief

TABLE 1

FIRMS MAKING SUBMISSIONS TO THE FASB ON GENERAL PRICE LEVEL ADJUSTMENTS*

Firms Advocating GPLA	*Firms Opposing GPLA*
Regulated Firms	
AT&T	Aetna Life & Casualty (M)
Commonwealth Edison	Commerce Bank of Kansas City
Consumer Power (M)	Liberty Corporation (M)
Detroit Edison	Northeast Utilities
Duke Power	Peoples Gas
Indiana Telephone	Southern Natural Resources (M)
Iowa Illinois Gas & Electric	Pennzoil
Northwestern Telephone	Texas Eastern Transmission (M)
Southern Company	Texas Gas Transmission
Unregulated Firms	
Exxon (M)	Continental Oil (M)
Gulf Oil (M)	Standard Oil of Indiana (M)
Shell Oil (M)	Texaco (M)
Standard Oil of California (M)	Rockwell International (M)
Caterpillar Tractor	United Aircraft (M)
Dupont E. I. DeNemours (M)	Automated Building Components
General Motors (M)	Copeland Corporation (M)
Ford Motor Company (M)	General Electric (M)
Marcor (M)	General Mills (M)
	Gillette
	W. R. Grace (M)
	Harsco (M)
	Inland Steel (M)
	International Harvester (M)
	American Cyanamid (M)
	IT&T (M)
	Eli Lilly & Co. (M)
	Masonite (M)
	Merck (M)
	Owens-Illinois, Inc. (M)
	Reliance Electric (M)
	Seagrams Sons, Inc. (M)
	Sears Roebuck (M)
	Texas Instruments (M)
	Union Carbide (M)

* Transunion Corporation made a submission, but they did not state a position on GPLA. It made two technical comments.

M denotes the firm has a management compensation plan.

financial officer of each firm. Missing data on the nonresponses (30 percent of the firms) was obtained from the firms' proxy statements and annual reports. If no mention of an incentive plan was found, we assumed the firm did not have one. Firms classified as having management incentive compensation plans based on accounting earnings[30] are denoted by an (M) in Table 1.

The precise impact of reported earnings on executive incentive compensation is difficult to estimate simply because the firm has such a plan. The most common procedure companies use is to take some fraction of reported earnings after deducting a return on invested capital as a pool out of which incentive compensation is paid. However, most companies do not pay out all of this pool each year. The important point, though, is that managers in firms with management compensation plans which report higher adjusted earnings will not suffer a decline in their incentive compensation and it may actually increase their compensation (depending on the monitoring by the outside directors).

Methodology

The FASB's General Price Level Adjustment (GPLA) standard would require supplementary price adjusted statements. Even though the supplementary statements will not replace conventional reports, users of the information will obviously make comparisons [See Ijiri, 1976] and if adjusted income is above (below) unadjusted income, we expect our previous reasoning to hold, and we assume the effect is the same as an increase (decrease) in reported income.

A price-level adjusted income figure does not exist for all firms in our sample. Since only a few firms voluntarily published GPLA statements, income proxies must be constructed. Fortunately, a previous series of studies by Davidson and Weil (1975a and 1975b) and Davidson, Stickney, and Weil (1976) developed an adjusting procedure which relies solely on published financial statements and GNP deflators. Using either their published figures for 1973 financial statements or using their procedures, we were able to obtain estimates of the direction of change in reported price-level income.[31]

In addition to using the Davidson and Weil results or procedures, we constructed proxy variables based on unadjusted depreciation and net monetary assets. Both of these variables have a direct negative impact on GPLA earnings (i.e., the larger depreciation or net monetary assets, the lower the adjusted income and the smaller or more negative the difference between GPLA adjusted income and unadjusted income). If we assume that our sample of firms has the same age distribution of depreciable property, then (cross-sectionally) depreciation and net monetary assets can serve as a surrogate for the effect of GPLA earnings.[32] Those numbers are readily

[30] If the firm had an incentive plan, but it was not tied to reported earnings then this firm was coded as not having an incentive plan (Gillette).

[31] 1973 was a period of high inflation. If firms based their FASB lobbying position on the price adjustments produced by high unexpected inflation without considering more "typical" years, then this would introduce errors into the data and finding a statistically significant result becomes more difficult. If these errors are systematic with respect to firm size, then our results could be biased. We do not expect this to be the case. To control partially for this, statistical tests are performed which are independent of the magnitude of the price change. Net monetary assets in 1973 may still be abnormally small (large) due to the high rate of inflation, but these preliminary tests suggest that our results are not dependent upon 1973 being atypical.

[32] The assumption that the age distribution of depreciable property is the same across our firms is reasonable. The firms who submitted to the FASB on the GPLA issue, generally, were large, capital-intensive and long-established firms. Moreover, the results using these surrogates are consistent with the results using Davidson and Weil's estimates.

available for our sample.

Davidson and Weil [1975c] also estimate the effect of GPLA on income for 1974 (which was in the future at the time of the submissions). Even though the adjustment procedure was slightly different, only two of our 19 firms in the combined samples reverse the direction of the income effect between 1973 and 1974. Similarly, all of the utilities, (24), and 35 of the 50 other companies in their sample have income effects of the same sign in both years. Since the effects of income changes in the immediate future are less heavily discounted, these results suggest that the error introduced by our assumption of stationary income changes is not likely to be severe.

Tests of the Theory

In the reported tests, we use asset size as the surrogate for firm size.[33] Based on our model, we can make predictions about the relationship between asset size and firm submissions. We predict that firms whose earnings are increased by GPLA will oppose GPLA regardless of their size (i.e., there will be no association between size and submission). However, for firms whose earnings are decreased by GPLA, we predict that they will either support GPLA or will not make a submission depending on where asset size C (Figure 1) occurs in their industry. Since we cannot determine the asset size corresponding to point C, we are in a position analogous to being able to predict the sign of a regression coefficient but not its magnitude. Consequently, our test of the model does not include asset size C (analogous to the magnitude of the coefficient). The test is only of the prediction that there is a positive relationship between asset size and submission for firms with income decreases.

Firms making submissions were classified according to the direction of change in their net income and ranked by their asset size (Table 2). Of the 26 firms with income decreases, eight voted yes and 18 no.[34] The eight yes votes came from the larger firms, thus supporting our prediction. To test the null hypothesis that the eight firms which voted yes are drawn from the same population of firms (with respect to size) as the 18 that voted no, we performed a Mann-Whitney U test. Our tables indicate that we can reject the null hypothesis at the .001 level.[35]

Of the eight firms with income increases or no changes in net income, seven voted no. Thus, the general ten-

[33] In this case, firm size is measured by the firm's *Fortune* 500 rank in assets. The results are identical when rank in sales is used. Furthermore, the intent of government intervention depends on the metric used by the courts, legislators, and regulators. Market share, concentration and size are among the commonly used indicators. Absolute size is important in explaining government regulation for both theoretical and empirical reasons. An implication of Peltzman's (1975, p. 30) theory of regulation is that the amount of wealth redistributed from firms by government intervention is a positive function of economies of scale. Since we expect large firm size to indicate the presence of economies of scale, implication of Peltzman's theory is that government intervention will be greater for larger firms. Empirically, we observe numerous cases of politicians and regulators echoing the conventional wisdom of certain segments in society, that big business is inherently bad. (See, "Curse of Big Business," *Barron's* June 16, 1969 and footnote 12).

[34] We use the term "vote" to mean responding to a discussion memorandum by issuing a corporate opinion.

[35] Siegel [1956], p. 274. Even after any reasonable adjustment for the degrees of freedom lost due to previous statistical analysis, this result is still significant.

An intuitive idea of the strength of the relationship between management's attitude and firm size can be obtained by considering an analogy. Suppose we put 26 balls in an urn representing the firms with earnings decreases; eight red balls representing the firms that voted yes; and 18 black balls, representing the firms that voted no. Now, we randomly draw 13 balls out of the urn without replacement representing the largest 13 firms (out of the 26). The probability that we draw eight red balls (analogous to the probability of the eight firms voting yes being the "large" firms if the null hypothesis of no association between votes and size is correct) is .001. If the votes of firms are not independent, as in the case of gaming, this analogy is inappropriate. But we do not have any evidence of vote dependence (via gaming or otherwise).

TABLE 2

ASSET SIZE, DIRECTION OF EARNINGS EFFECT AND CORPORATE POSITION ON GPLA

	Rank on Asset Size	Firm	Rank in Fortune 500 (1973)	Corporate Position, Classified by Earnings Change†	
				Increase or no change	Decrease
	1	Exxon	1		Yes
	2	General Motors	2		Yes
	3	Texaco	3	No	
	4	Ford	4		Yes
	5	Sears Roebuck (Rank 1 in retail sales)	7		No
	6	IT&T	8	No	
	7	Gulf Oil	9		Yes
	8	Standard Oil of California	10		Yes
	9	General Electric	11	No	
	10	Standard Oil of Indiana	12		No
	11	Shell Oil	16		Yes
	12	Dupont E.I. Nemours	18		Yes
Point C*					
	13	Union Carbide	22		No
	14	Continental Oil	26		No
	15	Marcor (Rank 2 in retail firms)	33	Yes	
	16	International Harvester	34		No
	17	Caterpillar Tractor	47		Yes
	18	Rockwell International	54	No	
	19	W. R. Grace	55	No	
	20	Owens-Illinois	80	No	
	21	Inland Steel	85		No
	22	American Cyanamid	92		No
	23	United Aircraft	107		No
	24	Seagrams Sons Inc.	108		No
	25	Eli Lilly & Co.	135		No
	26	Merck	143		No
	27	General Mills	156	No	
	28	Texas Instruments	164		No
	29	Gillette	167		No
	30	Reliance Electric	332		No
	31	Harsco	368		No
	32	Masonite	386		No
	33	Automated Building Components	Not Ranked		No
	34	Copeland Corporation	Not Ranked		No

* Point C in Figure 1 is determined by minimizing the number of misclassifications.
† Yes = Favored GPLA
No = Opposed GPLA

dency of these firms is to vote no as predicted by our model.

The results in Table 2 are consistent with the implications of our model including our assumption that the management compensation factor is dominated by political and tax considerations. Of the 31 unregulated firms with management compensation plans, eight had increases or no change in income and 23 had decreases in income as a result of price-level adjustments. If management compensation dominates tax and political factors, then firms with increases in income would be more likely to support price-level adjustments than firms with decreases. In fact, the reverse is true. The frequency of firms with income decreases which support price-level adjustment is seven out of 23 (30 percent) while the

frequency of firms with income increases that support price-level adjustments is one out of eight (12.5 percent).

The above results support the relationship between management's attitudes on GPLA and firm size for the 23 unregulated firms. However, if we assume that firm size and the direction of the income change are independent (Table 2 supports this assumption), then (if there is no size effect) the average size of firms supporting GPLA should be the same as the average size of firms opposing. Thus we can use the voting behavior of all 52 firms in our sample to test the size relationship.

Table 3 presents the median rank on asset size for both regulated and unregulated firms favoring and opposing GPLA. The median rank in the *Fortune* 500 of the nine unregulated firms supporting GPLA is 10. The median rank of the 25 unregulated firms opposing GPLA is 92.

TABLE 3

MEDIAN RANKS OF FIRM SIZE BY REGULATION AND POSITION ON GPLA*

	Regulated ($N=18$)		*Unregulated* ($N=34$)	
	In Favor (9)	*Against* (9)	*In Favor* (9)	*Against* (25)
Median Rank	13	38	10	92

* *Fortune* [May and July, 1974].

For regulated firms, there also appears to be a relationship between size and management attitudes. The net incomes for all the utilities investigated by Davidson and Weil [1975b] are increased by GPLA suggesting none of the utilities should favor GPLA. However, as noted in the preceding section, operating earnings are relevant to rate determination. Those earnings fall for all the utilities investigated by Davidson and Weil [1975b] and this could explain why relatively larger regulated firms favor GPLA.

If we assume our model is correct and that asset size C is the same for all industries, we can estimate C by minimizing the number of prediction errors (analogous to estimating a regression coefficient by minimizing the sum of squared errors). This estimate provides information on the relative importance of political and/or tax costs for different size firms. Given the data, C is between the 18th and 22nd largest firms in the *Fortune* 500 in 1973 (see Table 2). This suggests that reduced political and/or tax costs outweigh information production and/or management compensation factors in determining management's position on GPLA only for very large firms. For most other firms, information production costs dominate.

Are the major benefits of reporting lower adjusted incomes derived from tax or political considerations? It is very difficult to differentiate between these two factors, but one possible way is the following. Is the change in adjusted income proportional to firm size? If it is, then both the tax and political factors may be operating. But if there is no association between firm size and the magnitude of the income change, then the tax effect cannot explain why larger firms favor GPLA. Therefore, this result could only be due to political costs. We can obtain estimates of the income effect of GPLA for 11 of the firms whose incomes would be reduced by GPLA (six supporting, five opposing).[36] The average reduction in income for the six firms which supported GPLA is $177.7 million, while the average reduction for the five which opposed GPLA is $38.5 million. Thus, it appears that the income change does vary with size and the pre-

[36] This test was performed on 11 firms with income decreases which Davidson and Weil reported 1973 adjusted earnings. Firms which were manually adjusted by us for Table 2 were excluded from this test since only the sign of the earnings change was calculated.

ceding results are consistent with both the tax and political costs affecting management's attitudes.

The preceding results test only whether the size effect exists for firms which did submit to the FASB. It is interesting to examine the effect of GPLA on firms which did not submit. In particular, the firms of asset size above our estimated C which did not submit are of interest since our model predicts they would submit on the basis of the income effect. Dupont is the last firm above asset size C in Table 2 to vote. It is ranked 18th in the *Fortune* 500 in 1973. There are seven firms ranked higher than 18th which did not make a submission to the FASB. They are IBM (ranked 5th), General Telephone (6th), Mobil Oil (7th), U.S. Steel (13th), Chrysler (14th), Tenneco (15th), and Atlantic Richfield (17th).

The size of the income change is crucial to determining why these seven firms did not submit. If changes are not associated with firm size, the expected benefits of a submission could be very small and may not exceed the submission costs. Unfortunately, Davidson and Weil only estimated the change in earnings in 1973 for three of these seven firms: IBM, U. S. Steel, and Chrysler. All three have income reductions with GPLA and their average reduction is $88 million. This is less than the average reduction for the six firms with income reductions which did submit ($177 million), but it is not trivial. Further, the reductions for two of the three nonsubmissions (IBM and General Telephone) exceed the reductions for four of the six submissions. Consequently, it is difficult to attribute the fact that the three firms did not submit to the lack of an income effect.[37]

In summary, these tests confirm the relationship between size and management attitudes on GPLA. Political costs and, perhaps, tax effects influence management's attitudes on accounting standards. Although we are not able to explain some of the notable nonsubmitting firms' decisions, we would point out that most of the firms submitting are large, and the likelihood of submission increases with asset size (12 of the 18 firms ranked 1–18 in the *Fortune* 500 submitted, four of the 18 firms ranked 19–36 submitted, two of the 18 firms ranked 37–54 submitted, one of the 18 firms ranked 55–72 submitted, etc.).

Discriminant Analysis

The preceding tests were based on the direction of the earnings change, not the magnitude of the change. A discriminant analysis is conducted including management compensation, depreciation, and net monetary assets as independent variables, and using data on 49 of the 53 firms making submissions to ensure consistency of the Davidson and Weil procedures.

The change in price-adjusted income is correlated with the magnitudes of depreciation and net monetary assets. The larger both of these variables in unadjusted terms, the larger will be the decline (in absolute dollars) in adjusted net income. We do not perform an actual price-level adjustment, but rely on the unadjusted magnitudes of depreciation and net monetary assets.

[37] A more likely explanation of U.S. Steel's failure to submit is the fact that the steel industry was not as politically sensitive as the oil industry (for example) at the time. In other words, a given earnings effect has less political cost or benefit. This possibility is not included in our model. This could also explain Chrysler's failure to submit. As number three after General Motors and Ford they may be subject to less political pressure (and hence cost). In addition, the "free rider" effect may explain some of these nonsubmissions.

While we can only expect a positive theory to hold on average, the failure of IBM to submit is puzzling. That firm has anti-trust suits outstanding and some economists allege that it earns monopoly profits. For a discussion of one of these suits and statements by economists that IBM earns monopoly profits, see "The Breakup of IBM" *Datamation*, October 1975, pp. 95-99.

The general form of the discriminant function we estimate is[38]

$$p_i = \alpha_1 + \alpha_2 \frac{\text{DEP}_i}{\text{MKTVL}_i} + \alpha_2 \frac{\text{NMA}_i}{\text{MKTVL}_i} + \alpha_3 (\text{SALES}_i)\,\text{CHG}_i + \alpha_4 \left(\frac{\text{SALES}_i}{\text{TSALES}_i}\right)\text{CHG}_i + \alpha_5\,\text{MCOMP}_i + \alpha_6\,\text{REG}_i \qquad (2)$$

where

$$p_i = \begin{cases} \dfrac{\text{Number of opposing firms}}{\text{Total firms in sample}} & \text{if the } i^{\text{th}} \text{ firm favored GPLA} \\ \dfrac{\text{Number of supporting firms}}{\text{Total firms in sample}} & \text{if the } i^{\text{th}} \text{ firm opposed GPLA} \end{cases}$$

MKTVL_i = the market value of the firm's equity (number of common shares outstanding × average share price)

$$\text{REG}_i = \begin{cases} 1 & \text{if the } i^{\text{th}} \text{ firm was regulated} \\ 0 & \text{otherwise} \end{cases}$$

$$\text{MCOMP}_i = \begin{cases} 1 & \text{if the } i^{\text{th}} \text{ firm had a management incentive scheme} \\ 0 & \text{otherwise} \end{cases}$$

DEP_i = unadjusted depreciation expense in 1973 for the i^{th} firm

NMA_i = net monetary asset position in 1973 for the i^{th} firm

$$\text{CHG}_i = \begin{cases} +1 & \text{if price-level adjusted income is below unadjusted income or if the firm is regulated} \\ -1 & \text{if price-level adjusted income is above unadjusted income} \\ 0 & \text{otherwise} \end{cases}$$

SALES_i = Sales of the i^{th} firm

TSALES_i = Total sales of the Compustat firms with the same SIC code as firm i.

$\dfrac{\text{SALES}_i}{\text{TSALES}_i}$ = a proxy variable for market share

Table 4 presents the results of various functional forms of equation (2) fitted over various subsets of the data.[39] The first two terms,

$$\frac{\text{NMA}}{\text{MKTVL}} \quad \text{and} \quad \frac{\text{DEP}}{\text{MKTVL}},$$

normalize the unadjusted figures by the market value of the equity[40] and the estimated coefficients measure the extent to which an increase in relative depreciation or net monetary assets affect voting behavior. These coefficients, which should

[38] Northwestern Telephone, Commerce Bank of Kansas City, and Indiana Telephone were dropped from the sample due to a lack of data.

[39] The discriminant function is estimated using ordinary least squares. t-statistics on the coefficients are reported. The usual t-tests cannot be performed since the dependent variable is not normally distributed nor can asymptotic properties of large samples be used. However, the t-statistic is still useful as an index of the relative importance of the independent variable.

[40] Normalizing by the market value of the common stock introduces some error since we are not including the market value of the debt or preferred stock. However, since the market value of the common is highly correlated with total market value of the firm, we do not expect serious problems except that there may be some systematic, negative understatement of normalized net monetary assets.

TABLE 4

DISCRIMINANT ANALYSIS

Coefficients (*t*-statistics)

Model Number	*N*	*Sample*	*Constant*	*DEP/MKTVL*	*NMA/MKTVL*	*SALES × CHG*	$\frac{SALES}{TSALES} \times CHG$	*MCOMP*	*REG*	R^2	*Yates Adjusted Chi Square**
1	49	total sample	−.0241 (−.12)	122.6 (.60)	−38.9 (−1.62)	.000044 (3.67)	−.4131 (−1.11)	−.2355 (−1.42)	−.3443 (−1.29)	.358	9.25
2	49	total sample	−.0855 (−.44)	160.4 (.79)	−14.2 (−.98)	.000043 (3.53)	−.4381 (−1.17)	−.1619 (−1.03)		.332	9.25
3	49	total sample	−.0973 (−.50)	143.0 (.70)	−15.6 (−1.07)	.000034 (3.58)		−.1601 (−1.02)		.311	9.25
4	34	unregulated firms	.0431 (.19)	74.0 (.27)	−36.5 (−1.06)	.000044 (3.58)	−.3271 (−.89)	−.2186 (−.89)		.366	19.96
5	34	unregulated firms	.0412 (.18)	86.2 (.32)	−35.3 (−1.03)	.000038 (3.73)		−.2335 (−.96)		.347	13.16
6	49	total sample	−.0079 (−.04)	215.3 (1.09)		.000033 (3.44)		−.2365 (−1.39)	.0077 (.05)	.293	11.74
7	49	total sample	−.0662 (−1.03)			.000033 (3.44)				.201	5.98

* The Yates correction for continuity is useful in establishing a lower bound on the χ^2 statistic.

capture the tax effects, are predicted to be positive under that hypothesis (the larger the depreciation and net monetary assets the greater the decline in adjusted income and the greater the tax benefits).

The sign on normalized depreciation is as predicted, but normalized net monetary assets is of the wrong sign. One of the following three hypotheses explain this result: the tax effect is only operating via depreciation;[41] depreciation and net monetary assets, being inversely related (correlation coefficient ranging from −.41 to −.55), are entering the regression with opposite signs; or the tax effect is not an explanatory factor. Since our sample is very small, it is not possible to use a holdout subset to distinguish between these hypotheses.

The next two variables,

$$(\text{SALES})\,\text{CHG} \text{ and } \left(\frac{\text{SALES}}{\text{TSALES}}\right)\text{CHG},$$

are proxies for political costs. These two variables, assume that political costs are symmetric for both earnings increases and decreases. The multiplicative dummy, CHG, is positive if earnings decline (based on the Davidson-Weil [1975a] results) or if the firm is regulated.[42]

The sign on SALES × CHG is as predicted, positive, and in addition has the highest *t*-statistic of all the independent variables. In addition, the coefficient on SALES × CHG is the most stable coefficient across various realizations and subsamples which leads us to conclude that firm size is the most important variable. The sign of

[41] That is, this sample of firms does not expect the tax laws to be changed to include in taxable income gains/losses on net monetary assets.

[42] Since the regulatory commission bases rates on depreciation, net monetary assets are not expected to be an important consideration, hence operating earnings decline for regulated firms.

$$\frac{\text{SALES}}{\text{TSALES}} \times \text{CHG}$$

is of the wrong sign. But this is probably due to the crude metric of market share,

$$\frac{\text{SALES}}{\text{TSALES}},$$

this variable is attempting to measure.[43] When the market share proxy is eliminated, the model's predictive ability is not impaired.

MCOMP, a dummy variable for management compensation schemes is expected to have a negative sign regardless of the change in earnings. Prior research indicates that executive compensation is more highly associated with operating income (which includes depreciation) than net income (which includes gains/losses on monetary assets).[44] Therefore, MCOMP is not multiplied by CHG. The sign of MCOMP being negative is consistent with our predictions.

If the firm is regulated, the dummy variable, REG, is one. Regulated firms' price-level adjusted operating incomes decline, unambiguously, and therefore these firms should tend to favor GPLA if the regulatory factor is operating. Yet, the sign of the coefficient of REG is negative in Model 1. This sign is negative because REG is inversely related to

$$\text{MCOMP} \quad \text{and} \quad \frac{\text{NMA}}{\text{MKTVL}}$$

(correlation coefficients of $-.60$ and $-.86$ respectively). When

$$\frac{\text{NMA}}{\text{MKTVL}}$$

is deleted from the model (Model 6), the sign of REG reverses, the importance of

$$\frac{\text{DEP}}{\text{MKTVL}}$$

increases, and the discriminatory power of the model improves from a Chi-Square of 9.25 to 11.74. However, the multicolinearity between

$$\text{REG, MCOMP, and } \frac{\text{NMA}}{\text{MKTVL}}$$

precludes our drawing any conclusions regarding the impact of management compensation or regulation on lobbying behavior.

Models 4 and 5 are fitted using only the unregulated firms ($N = 34$). REG and then

$$\frac{\text{SALES}}{\text{TSALES}} \times \text{CHG}$$

have been deleted. The R^2 statistic still remains high and the Yates adjusted Chi Square is significant at the 1 percent level. In fact, Model 4 correctly classifies the voting behavior for 32 out of the 34 firms.

The constant should be capturing the partial effect of information production costs after controlling for the other factors. When the total sample is used in the estimation, the constant is negative as expected. When the regulated firms are excluded, the constant is positive. But in

[43] Our measure of industry sales does not include firms in the industry not on the COMPUSTAT tape and furthermore all the firm's sales are assumed to be in the firm's dominant SIC category.

[44] Our examination of management compensation plans indicates that although the minimum and maximum amounts transferred to the bonus pool depend on the final net income number, we find that the actual bonus paid is most highly associated with operating or current income (depreciation is included, but extraordinary gains and losses are excluded). We correlated the change in management incentive compensation expense for 271 COMPUSTAT firms with changes in operating income and changes in net income after extraordinary items. The correlation coefficient for changes in operating income exceeded that for changes in net income after extraordinary items for over two-thirds of the firms. Gains or losses on monetary assets are not included in operating income. Consequently, only adjusted depreciation (ignoring inventory adjustments) are expected to affect management compensation and the effect is to reduce management pay.

all models the constant is close to zero.

The estimated discriminant functions are consistent with the tests of the theory. All of the discriminant functions are statistieally significant and the intervening variable driving these findings is firm size. In fact, firm size explains over half the explained variance in voting behavior (Model 7).

These results are consistent with those using the Davidson and Weil findings. The discriminant funetions indicate that the political cost factor is more important than the tax factor in affecting managemcnt's attitudes.

The major empirical problem in the diseriminant analysis is the rather small sample size which preeludes using a holdout sample and, furthermore, does not allow more sophisticated eeonometric techniques to control for the multicolinearity. Hence, it is difficult to control for the interaction between the underlying factors. Howcver, these preliminary results are encouraging and suggest that additional research in this area is warranted.

Summary and Conclusions

We have focused in this paper on the question of why firms would expend resourees trying to influence the determination of accounting standards. The histories of the Committee on Accounting Procedures, the Accounting Principles Board, and FASB arc replete with examples of managements and industries exerting political pressure on the standard-setting bodies.

A possible answer to this question is provided by the government intervention argument, namely, that firms having contact (actual or potential) with governments, directly through regulation (public utility eommissions, Interstate Commerce Commission, Civil Aeronautics Board, etc.) or procurement, or indirectly through possible governmental intervention (antitrust, price controls, etc.), can affect their future cashflows by discouraging government aetion through the rcporting of lower net incomes. The empirical evidence with respect to the position 52 firms took before the FASB on priee levcl restatements is consistent with respect to this hypothesis.

The single most important factor explaining managerial voting behavior on General Price Level Accounting is firm size (after controlling for the direction of change in earnings). Thc larger firms, *ceteris paribus*, are more likcly to favor GPLA (if earnings decline). This finding is consistent with our government intervention argument since the larger firms are more likely to be subjected to governmental interference and, hence, have more to lose than smaller eorporations.

The existence of costs generated by government intervention may have more fundamental and important effects on the firm's decisions than just its lobbying behavior on financial aecounting standards. Not only would we expect the firm to manage its reported earnings, but also to alter its investment-production decisions if the potcntial eosts of government interference become large. For example, government intervention costs may lead the firm to select less risky investmcnts in order to eliminate the chanee of high returns which then increase the likelihood of government intervention. If the total risk of these less risky investments tends to be positively correlated with the systematic risk of the firm, then we would expect the beta (the estimate of the covariance between the return on the stock and the market return normalized by the variance of the market) on the common stock to be significantly below one (average risk) for those firms facing large government intervention costs. The evidenee from the sample of firms making

submissions to the FASB on GPLA is consistent with this hypothesis. The average β is .67. Furthermore, firms favoring GPLA tend to have lower betas than the firms in opposition.[45]

Our findings, in a preliminary extension of these results, tend to confirm the decline in systematic risk as firm size increases and as government intervention costs rise. These tentative findings are suggestive of fertile research possibilities of examining the effects of politically motivated factors on the maximizing behavior of firms' managements and shareholders.

We believe that the general findings in this paper, if confirmed by other studies, have important implications for the setting of financial accounting standards in a mixed economy. As long as financial accounting standards have potential effects on the firm's future cashflows, standard setting by bodies such as the Accounting Principles Board, the Financial Accounting Standards Board, or the Securities and Exchange Commission will be met by corporate lobbying. The Committee on Accounting Procedures and the Accounting Principles Board could not withstand the pressure. The former Chairman of the FASB also has complained of the political lobbying, and the FASB has been forced to defer the controversial GPLA topic. The SEC has, until recently, avoided direct involvement in the setting of accounting standards. One could hypothesize that this was in their own interest. By letting the American Institute of Certified Public Accountants be the scapegoat, the Securities and Exchange Commission could maintain their "credibility" with Capitol Hill and the public.

[45] The average betas of various subclasses are:

	Regulated	*Unregulated*	*Combined*
Firms opposing GPLA	.67	.72	.71
Firms favoring GPLA	.50	.65	.59
Combined	.59	.70	.67

Note that as a firm grows via diversification its beta should tend to one.

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