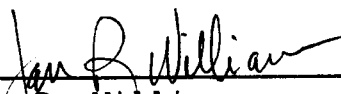
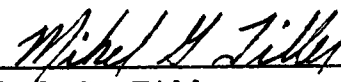


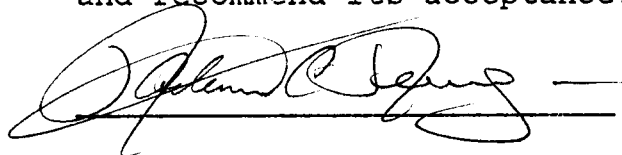
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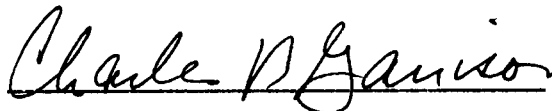
I am submitting herewith a dissertation written by Richard David Mautz, Jr. entitled "The Impact of Supplementary, Inflation-Adjusted Financial Statement Information on Labor's Assessment of Corporate Ability to Pay." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Business Administration.


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We have read this dissertation
and recommend its acceptance:





Accepted for the Council:


Vice Provost and
Dean of The Graduate School

THE IMPACT OF SUPPLEMENTARY, INFLATION-ADJUSTED
FINANCIAL STATEMENT INFORMATION ON LABOR'S
ASSESSMENT OF CORPORATE ABILITY TO PAY

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Richard David Mautz, Jr.

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DEDICATION

This dissertation is dedicated to my parents, Richard D. Mautz and Mary A. Mautz. Their thoughtful guidance and constant example have contributed immeasurably to my education and personal growth. I will always be grateful for the opportunities they have provided me.

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ABSTRACT

General purpose financial reporting rests on the assumption that financial statements prepared to suit the needs of investors and creditors are also useful to a variety of other groups. This assumption was investigated with respect to the use of financial statements by organized labor. Current interest in the usefulness of supplementary, inflation-adjusted disclosures provided the means of narrowing the topic to a researchable question: Do labor union researchers adjust their estimates of corporate ability to pay in response to supplementary, inflation adjusted financial statement disclosures?

An experiment was conducted using officials of United States and Canadian labor unions as subjects. These subjects were asked to review fictitious financial statements and provide subjective assessments of the companies' ability to pay. Half the subjects received supplementary, inflation-adjusted disclosures that indicated substantially reduced earnings. Mean assessments of ability to pay did not vary between subjects receiving the supplements and those receiving historical cost statements only. Subjects receiving the supplements reported lower confidence in their estimates.

Subsequent analyses and consideration led to the conclusion that subjects had systematically disregarded the negative information conveyed by the supplementary disclosures. This finding provided no support for requiring that companies report such information. However, differences between labor and other financial statement users were highlighted by the subjects' selective use of financial statement information.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

The purpose of this dissertation is to study the use of supplementary, inflation-adjusted disclosures by organized labor. The study ascertains whether labor groups incorporate these disclosures into their assessments of employers' ability to pay increased wages and benefits. The disclosures under examination are those prepared under the requirements of Statement of Financial Accounting Standards Number 33, Financial Reporting and Changing Prices (SFAS 33). This chapter sets forth a brief rationale for the study. Section 1.1 introduces labor as a user of financial statements. A discussion of the reasoning underlying the decision to study inflation-adjusted data follows. The specific questions to be addressed by the research are set forth in the final section.

1.1 Labor as a User of Financial Statements

Statement of Financial Accounting Concepts Number 1 (SFAC 1), Objectives of Financial Reporting by Business Enterprises, states that financial reports should be useful in making investment and credit decisions. (FASB, 1981, para. 34) The Financial Accounting Standards Board (FASB)

recognizes investors and creditors as primary users of external financial reports. SFAC 1 also refers to a long list of other users and potential users of financial reports. That list includes management, government agencies, customers, labor unions, and others. (FASB, 1981, para. 24) The implicit assumption of SFAC 1 is that information that is useful to investors and creditors will also prove useful to these other groups.

This assumption is not intuitively appealing with respect to labor organizations. Labor's relationship to the company is fundamentally different from that of an investor or creditor. Investors, creditors and their agents are generally believed to be relatively neutral in their search for information about future cash flows. Rational investors and creditors seek to identify companies whose cash flow prospects are appropriate in light of their risk characteristics. Labor, on the other hand, begins its information search from a position of advocacy. Labor's search for information about cash flows is better described as evidence gathering in support of a desired outcome. Researchers on the staffs of labor unions have incentives to give greater weight to information that supports the union's position and to rely less on information that is detrimental to that position.

If the accounting profession is to continue preparing general purpose financial statements, then the assumption

of universal utility needs to be examined critically. Among the questions that need to be asked are:

1. Do groups other than investors and creditors use financial statements?
2. If so, what types of decisions do they make?
3. How do the needs of these users differ from those of investors and creditors?

The fact that labor unions use financial statements is well documented. A survey of labor union research directors by Pillsbury (1958) revealed that union officials were sufficiently conversant on financial reporting principles to criticize specific practices that rendered financial statements less useful to labor. Later research by Palmer (1977) and Foley and Maunders (1977) confirmed these findings. These studies are reviewed in Chapter 2. This research also concluded that the application of generally accepted accounting principles does not result in financial statements that are well-suited to organized labor's needs. Some of labor's complaints are similar to criticisms leveled at financial accounting by members of other constituent groups such as investors and creditors.

Among the more significant complaints of labor officials is the assertion that the data in published financial statements are too aggregated to provide information needed in collective bargaining situations. Labor leaders also criticize the availability of alternative accounting procedures. These critics allege that such

practices result in a lack of interfirm comparability which limits the statements' utility for their purposes. Labor also alleges that management attempts to engineer operating results through the selection of accounting principles.

Commensurate with the above assertions, labor officials frequently opine that an employer's ability to pay increased wages and benefits is irrelevant to the bargaining process. The rationale underlying this position is that companies are not able to reduce their costs of capital goods and material during unprofitable times. Why then, they ask, should employees accept reduced compensation when net income is low? Regardless of the theoretical merit of this argument, numerous cases of labor concessions in response to company cost cutting efforts can be documented. Apparently, despite labor's reluctance to accept the fact, the ability of an employer to pay is a factor in collective bargaining. Recognizing this contradiction, Herman and Kuhn (1981) stated that, "Ability to pay is at the same time highly relevant and wholly irrelevant."

Herman and Kuhn's discussion of the criteria of wage determination highlighted cost-of-living adjustments (COLAs) as the principal justification offered by labor for wage increases. Other factors discussed include wage comparisons, ability to pay, wage controls, and productivity. Two of their points had special significance for this research. The first point is that labor must

consider employers' ability to pay when formulating wage demands even though it may be reluctant to do so. The second point is that labor is concerned with and knowledgeable about the effects of inflation on the purchasing power of a dollar. Labor unions are keenly interested in the maintenance and improvement of real wages.

In summary, financial reporting rests on the assumption that information which is useful to investors and creditors is also useful to many other user groups. The validity of this assertion with respect to labor unions has not been established by research. Previous research indicates that labor officials are familiar with financial reporting and some of its limitations in the collective bargaining setting. While many labor leaders are reluctant to recognize ability to pay as a constraint in determining wage levels, they apparently are forced to do so. Both parties in the collective bargaining process use financial statements to support their assertions. Labor's principal focus in bargaining for wages is the maintenance and improvement of real wages through cost-of-living increases, but ability to pay is recognized as a constraining factor.

1.2 Studying Inflation-Adjusted Financial Reporting

The decision to study the effects of inflation-adjusted financial statements is a logical extension of the accounting literature because inflation accounting is still

in the experimental stage. The supplementary, inflation-adjusted disclosures mandated by Statement of Financial Accounting Standards Number 33 (SFAS 33), Financial Reporting and Changing Prices, represented a significant addition to the contents of general purpose financial statements. The FASB was particularly interested in, "the extent to which the information is used, the types of people to whom it is useful, and the purpose for which it is used." (FASB, 1979, para. 15) (emphasis added) Statement of Financial Accounting Standards Number 89 (SFAS 89), Financial Reporting and Changing Prices, withdraws the requirement that companies present supplementary, inflation-adjusted disclosures. Under SFAS 89 these disclosures are optional. The FASB continues to encourage experimentation to determine the most useful means of presenting information about the effects of inflation.

Published empirical research does not indicate that financial statement users find the SFAS 33 disclosures useful. Traditional users of financial statements express concern about the impact of inflation, but do not believe that non-historical cost information is useful. This study is designed to assess the extent to which one group of users incorporates the supplementary disclosures into their decisions. The results should provide additional evidence to the FASB on the potential costs and benefits of requiring such disclosures.

Labor officials possess a working familiarity with inflation and its effect on purchasing power. While they are usually concerned with the effects of inflation on real wages, labor leaders are aware of inflation and inflation measures. Lack of familiarity has often been cited by researchers as an explanation for statement users' poor opinion of inflation-adjusted financial reports. Given its concerns with real wages, organized labor may be more likely to use the supplementary information than other users.

Supplementary, inflation-adjusted disclosures also fit well into an experimental research design. Because the disclosures are self-contained, their effect can be determined by segregating subjects into two groups--one receiving only historical cost-based statements, and one receiving both historical cost and supplementary statements. Observed differences between the two groups' responses can be attributed with confidence to the effect of the supplementary disclosures. The decision to study these disclosures focuses the dissertation on a researchable question.

1.3 Overview of the Primary Research Questions

This dissertation is motivated by two primary interests. The first of these concerns the proposition that organized labor's needs for accounting information are the same as those of investors and creditors. SFAC 1 assumes

this to be true, but there is reason to believe otherwise. Questions about the benefits of requiring supplementary, inflation-adjusted information provide a means of narrowing the first concern to a researchable topic. The study is intended to ascertain whether labor groups incorporate inflation-adjusted accounting information into their assessments of employers' ability to pay increased wages and benefits.

Three potential impacts of the supplements' are investigated:

1. Does labor adjust its estimates of companies' ability to pay in response to supplementary, inflation-adjusted disclosures?
2. Do the supplements affect labor's confidence in its estimates of ability to pay?
3. Do the supplements introduce greater variability into labor's estimates of ability to pay?

A positive response to the first question would provide strong evidence that the supplements impact labor's assessments of ability to pay. Positive answers to the second and third questions would be weaker evidence of usefulness. These questions are intended to assess whether labor considers the disclosures, regardless of the ultimate impact on assessments of ability to pay.

CHAPTER 2

RELATED PRIOR RESEARCH

2.0 Introduction

This chapter discusses literature in two areas related to this study. Sections 2.1 through 2.3 review articles dealing with labor's use of accounting information. Studies of the usefulness of inflation-adjusted information are discussed and summarized in sections 2.4 and 2.5. The final section summarizes and integrates the articles in these two areas. Implications for the current research are discussed in section 2.6.

2.1 Studies Advocating Expanded Disclosure to Labor

Accounting researchers have displayed relatively little interest in labor's use of financial statements. Empirical research on the topic is mostly limited to interviews and questionnaire surveys. Other articles consist primarily of (1) expositions by individuals with knowledge and experience in labor; (2) theoretical examinations of the collective bargaining process; and (3) discussions by accounting scholars and practitioners of ways to improve the process by introducing accounting information and techniques. Many of the studies examine the potential

use of accounting information in the collective bargaining process from a normative viewpoint. These studies conclude, almost unanimously, that expanded disclosure of accounting information to labor is desirable. Increased participation in the bargaining process by accountants is also suggested. The support for these suggestions consists of responses to questionnaires and personal interviews.

Pillsbury (1958) examined labor's view of accounting information. His review of the accounting, management and labor literatures revealed that little information was then available on the subject. Pillsbury interviewed and/or contacted by mail the research directors of 57 international unions. He personally interviewed the research directors of 35 of the largest and most influential unions. The rest were asked to respond to a written questionnaire. Although his findings were not quantifiable, Pillsbury made several observations that are of interest to accounting researchers.

First, according to Pillsbury, labor unions use financial statements in much the same way as investors and creditors, to assess past performance and make decisions about future dealings. He notes that

the union research directors see in the corporate financial statements, if altered to conform with labor's need, the basis for some formula or yardstick for the measurement of labor's fair share of the returns of production. (Pillsbury, 1958, p. 47)

This statement implies that labor is potentially a major user of financial statements, but that general purpose financial reporting does not serve its needs.

Pillsbury cites the following specific complaints:

1. Too few businesses, subsidiaries, and plants report their affairs to the public.
2. Specially prepared financial statements are necessary for collective bargaining.
3. Accounting conventions--not corporate accounting reliability-- produce statements of limited usefulness.
4. Amplification--not simplification--is needed.
5. Uniformity, comparability, and understandability are requisite (to usefulness). (Pillsbury, 1958, p. 47)

Pillsbury also reports that

Labor union research directors favor the use of traditional original cost as a basis of handling asset accounts and of calculating depreciation expense. Two reasons are generally given: the use of replacement cost figures introduces an element of arbitrary speculative handling of cost and profit items, and the use of replacement cost defeats a labor union goal of achieving profit figures which are comparable. The unions believe that efforts to provide a theoretical basis for greater than cost charges, such as replacement fund or current- cost-of-real-goods, are deliberate attempts to understate the real net income figures. (p. 49)

Pillsbury's study was performed over 25 years ago. However, it makes at least four important points. First, labor unions use financial statement information in preparing for negotiations. Second, general purpose financial reporting does not serve the needs of this group. Third, labor's complaints with financial reporting are

similar to those voiced by other groups--namely lack of sufficient detail, comparability and understandability. Finally, Pillsbury highlights that labor is skeptical of replacement cost or current cost schemes, viewing them as ploys to minimize reported income.

Although Pillsbury opened several promising avenues for research, Horwitz and Shabahang (1971) noted that:

Very little research has been done to determine the impact of corporate financial reporting on the wage demands of unions or employees...Other than interviews, no research has been done to empirically determine the kinds of financial reports that would be useful to employees or their representatives (union bargaining agents) and how these reports may conflict with the needs of investors, creditors, government, etc. (Horwitz and Shabahang, 1971, p. 245)

Horwitz and Shabahang (1971) examined the relationship between two broad categories of financial statement ratios and general wage changes at the level of the firm. The ratios investigated were categorized as measures of either productivity or of ability to pay. Of seven variables tested, only two displayed significant correlation with wages at the firm level. Net operating profit as a percentage of sales was positively correlated with the wage level, while dividends per share displayed a negative relationship to wages. Horwitz and Shabahang declined to draw strong conclusions from these results, citing limitations of their research. Among these limitations were small sample size, the aggregation of data across industries and the lack of controls for other factors for which

financial statement ratios might surrogate. They recommended further research to explore the information needs of labor.

An NAA sponsored monograph by Palmer (1977) reported the results of a literature review and questionnaire survey about The Use of Accounting Information in Labor Negotiations. Palmer, too, noted the lack of empirical evidence on the subject. He reviewed literature in two areas. The first concerned management's use of accounting data in preparing for labor negotiations. The second consisted of articles written primarily by labor leaders calling for greater disclosure of internal accounting data to unions. Palmer concluded from his review that both labor and management favor increasing the amount of accounting data available to participants in the bargaining process. He noted, however, that collective bargaining literature, "has remained well ahead of actual practice." (Palmer, 1977, p. 7)

Palmer's empirical effort consisted of questioning sixty industrial relations managers, twenty union officials and three labor mediators, either in person or by mailed questionnaires. He reported that the use of accounting data in collective bargaining varied tremendously across different companies and unions. Palmer noted in his conclusions that many of the managers and union officials contacted for the study were not thoroughly familiar with

the data disclosure requirements imposed by the National Labor Relations Board. This suggested that unions were not obtaining desired accounting information because they were unaware of their right to demand it.

Palmer, like Pillsbury and many other previous authors, suggested an expanded role for accountants and accounting information in the collective bargaining process. He also noted the existence of opposition on both sides. Management opposition is, predictably, based on reluctance to give up proprietary information and the bargaining advantage it carries. Labor officials who oppose increased reliance on accounting information criticize the form and content of the data and management practices used in its preparation. (Palmer, 1977, p. 57) In response to this opposition, Palmer cited the experiences of the trucking and airline industries, which he believed demonstrated improved labor relations resulting from increased disclosure of accounting information. Palmer's monograph demonstrated clearly that labor attempts to use accounting information in the collective bargaining process. It also pointed out that labor complains about deficiencies in both the preparation and disclosure of accounting information.

Lau and Nelson (1981) prepared a research monograph for the Society of Management Accountants of Canada in which they examined Accounting Implications of Collective Bargaining. Their text included an historical development

of collective bargaining in Canada; descriptions of several theories of collective bargaining; and the results of a questionnaire addressed to managers, union leaders and government officials. Lau and Nelson examined the accounting aspects of collective bargaining in an attempt to suggest a means of measuring the costs and benefits of strikes versus various settlements. Their objective was to improve the flow of information between the participants in collective bargaining and make the process more efficient.

The questionnaire responses from unions revealed several points that were relevant to this research. Research for negotiations occurs at three levels in Canadian unions. National federations such as the Canadian Labor Congress maintain research offices that compile economy-wide information in support of lobbying functions. National unions also maintain research offices to provide information used in formulating broad goals and strategies to be followed by locals. These offices also serve as technical consultants to officials of locals engaged in bargaining. Responsibility for determining specific goals and costing agreements rests with the local office. Lau and Nelson reported that accountants are not generally involved in preparation or negotiation. They also asserted that the unions' costing procedures are frequently "ball-park" estimates. Lau and Nelson indicated that this results from two factors. First, many union officials believe that cost

is not a relevant factor in collective bargaining. They view their role as obtaining a fair standard of living for union members, regardless of the profitability of the company. A second factor contributing to the inaccuracy of labor's costing attempts is lack of information. Because precise internal accounting data are often unavailable, serious attempts to cost settlements are pointless.

One of Lau and Nelson's conclusions was that the provision of more information to labor unions would contribute to a more cooperative atmosphere between labor and management and help labor objectively assess the reasonableness of its demands and management's proposals. Recognizing that corporate managements need to keep certain information confidential for competitive reasons, Lau and Nelson suggested that a general guideline for information disclosure to unions be developed. They presented, in an appendix, a policy statement of the Canadian Labor Congress on corporate disclosure. Lau and Nelson suggested that this might be a starting point for the development of such a guideline.

Several articles discussed the use of accounting information by labor unions and the further incorporation of accounting information into the collective bargaining process. These articles relied primarily on the experiences of individuals and on anecdotal evidence. To borrow an analogy from Mautz and Sharaf (1961), each of these

discussions added one or two sticks to the bundle of evidence that labor is a major user of accounting information.

Goggans (1964) suggested that accountants may serve a useful role in wage negotiations. He asserted that data related to the firm's ability to pay increased wages are generally most relevant to negotiations. The steel strike of 1959 was offered as an example of a case in which labor and management debated the ability of companies' to pay. The issue was the proper function of depreciation. The union's position was that accelerated depreciation disguised the companies' true profitability and ability to pay. The steel industry maintained that historical cost-based depreciation failed to consider the impact of inflation on the cost of doing business and resulted in overestimates of profitability and ability to pay. Goggans concluded that an independent accountant might have served as an interpreter for both sides, using his expertise to improve communications between them. Goggans' article provided anecdotal evidence that labor uses accounting information in wage negotiations. Another point made by this article was that unions are aware of the potential impact of different accounting methods on reported results and that they attempt to adjust their estimates of ability to pay.

Hess (1967) expressed a popular labor view when he stated that, "ability to pay is not as significant in

negotiations as it once was...A company can't purchase raw materials any cheaper because it is losing money so the question arises, why should the labor cost be cheaper." (p. 42) Hess recognized the increasing complexity of the business environment, however, and predicted an expanded role for the accountant in negotiations. He specifically cited difficulties encountered when trying to interpret financial statements issued by consolidated entities. Apparently, despite labor's reluctance to accept ability to pay as a criterion in negotiations, labor officials are aware of the need to analyze financial statements and to understand financial reporting conventions.

Jack (1970), Miller (1971) and Granof (1973) also discussed roles for accountants and accounting information in the collective bargaining process. Each suggested that the information to be evaluated by both sides is sufficiently complex that the services of an accountant are essential to the process. Hussey (1981) pointed out that, under British law, trade unions can demand disaggregated financial data from employers. United States law also provides unions with access to unpublished accounting information when management asserts inability to pay. The unifying theme of these articles was that collective bargaining is a complex activity involving the use of complex data, one form of which is financial statements.

All asserted that the input of accountants could be a positive influence on both sides of the negotiating table.

2.2 Studies Analyzing Appropriate Disclosure to Labor

Building on the work of these authors, recent research questioned the wisdom of blindly expanding the role of accountants and accounting information in the collective bargaining process. Cooper and Essex (1977), Craft (1981,1984), Foley and Maunders (1977), Maunders and Foley (1984), and Pope and Peel (1981a,b) took the position that the appropriate role of accounting information in collective bargaining and the appropriate level of disclosure by companies to unions should be determined in light of research. These papers described various theoretical frameworks for addressing these questions and provided preliminary empirical results.

Accounting Information Disclosure and Collective Bargaining, by Foley and Maunders (1977), reported that labor uses accounting information in negotiating and monitoring collective bargaining agreements. Foley and Maunders examined sixteen United States arbitration cases and one hundred two negotiating briefs prepared by the research departments of United Kingdom unions. (Foley and Maunders, 1977, pp. 130-32) A variety of accounting indicators of ability to pay are included in these documents. The lists are reproduced in Appendix A.

The primary thrust of Foley and Maunders' work was to consider the impact of expanded disclosure on collective bargaining and possible resulting wage inflation. Having considered numerous arguments for and against increased disclosure, they concluded that the debate could not be resolved without obtaining more knowledge about the role of ability to pay indicators in determining bargained wage levels. This investigation involved two distinct questions. The first was whether collective bargaining by trade unions could influence wage rate inflation. Foley and Maunders reviewed the macroeconomic evidence and concluded that trade unions can successfully apply inflationary pressure to wage rates. The more relevant question to this study is whether the disclosure of additional information fuels that inflationary pressure. Foley and Maunders asserted that this question could not be addressed directly and examined studies that investigated closely related questions.

The studies of ability to pay reported by Foley and Maunders offered conflicting evidence. Brown (1962) (reported in Foley and Maunders) found that industry wage levels might depend on expected ability to pay. Horwitz and Shabahang (1971) presented weak evidence of a relationship between published accounting data and wage increases at the firm level. Foley and Maunders attempted to replicate the Horwitz and Shabahang study using United Kingdom data, but were unable to find a significant relationship between

published company data and wage increases. However, many of the data needed to complete the research were not available in the United Kingdom and had to be improvised. This caveat, combined with questions about the appropriateness of the model and adequacy of controls for confounding factors, was offered as a partial explanation for the lack of significant results.

Discussing the implications of their findings for the accounting profession, Foley and Maunders suggested that effort be directed toward refining the concept of ability to pay and determining means of measuring and reporting it. They proposed that published financial statements might eventually contain a section devoted to the information needs of labor. Their recommendation that disclosure to trade unions be expanded was attached to a call for further research into the information needs of unions and the costs and benefits of such disclosure. Academic accountants were urged to take note of the, "research-worthy problems which are peculiar to the collective bargaining context." (Foley and Maunders, 1977)

Craft (1981) took issue with the conclusions of Palmer (1977) and Foley and Maunders (1977). He asserted that the desirability of increasing disclosure to unions is a function of a variety of variables. The extent of information disclosed to the union and the usefulness of that information to the union were suggested as the two key

variables involved in the analysis of management disclosure policies. (Craft, 1981, p.101) Craft developed a number of policy positions along the axes of these two variables. He further suggested that the role of the accountant and accounting information could vary with other circumstances of the negotiation. The degree of involvement in the negotiations and the relationship to the negotiating parties were proposed as useful variables for defining roles for the accountant. Craft declined to define an appropriate role for the accountant in collective bargaining. Rather, he suggested a number of alternative roles that might be appropriate under different circumstances. While his article presented no empirical evidence, it explored a variety of roles for accountants on both management and labor negotiating teams. A comment by Maunders and Foley (1984) on Craft (1981) and Craft's reply (1984) extended the discussion of appropriate disclosure policies to incorporate dynamic and interactive factors in collective bargaining situations. Neither paper, however, brought any empirical evidence to bear on the question of how information disclosure impacts the collective bargaining process.

Cooper and Essex (1977) examined the issue of disclosure to employees in the context of the employees' decision models. They proposed that an appropriate disclosure policy must be based on an understanding of employee decision models and suggested that accounting

researchers become involved in identifying union and employee decision models. As an interim measure, they recommended opening the books to labor until decision models could be specified. An additional supposed benefit of this policy would be the easing of union officials' fears about deliberate management distortion of information. Cooper and Essex also presented the results of an exploratory questionnaire survey of shop stewards in the engineering industry. The results were presented with the usual caveats accompanying questionnaire research, but some interesting findings appear among the responses.

Responding to the question, "How important are these sources of information to use in bargaining over pay?", shop stewards' mean response was 2.98 of a possible 4 when asked to evaluate the company accounts. (1=not important at all, 2=not very important, 3=fairly important, 4=very important) (Cooper and Essex, 1977, p. 213) This response ranked information from the company accounts third among a total of six items considered.¹ When asked to evaluate the importance of various factors in a pay claim, the stewards rated firm profits third among ten items listed, a mean score of 3.55 on the same scale described above.²

¹Information from the union and from other shop stewards ranked first and second, with mean scores of 3.82 and 3.30, respectively.

²Items one and two were cost of living and comparisons with others in the same workplace. The mean scores on these items were 3.92 and 3.65, respectively.

(Cooper and Essex, 1977, p. 214) The responses were rendered less meaningful by the fact that subjects were presented with a list of items to evaluate in both cases. The shop stewards may have been prompted to assign a relatively high value to items which they had not previously considered. Nonetheless, the results provided evidence that officials at the lowest level of the union hierarchy were familiar with company accounting data and their use in negotiations. Cooper and Essex concluded that companies ought to be concerned with providing information that is relevant to employee decisions. They carefully distinguished between information that employees want and that which they need. Research investigating the decision models of employees and unions was described essential to making this distinction in practice.

Pope and Peel (1981a) examined disclosure to employee groups in a rational-expectations framework. A conclusion of their analysis was that rational employees estimate data that are not available to them. The estimates invariably contain error, which contributes to inefficiency in the bargaining process. Pope and Peel concluded that management does not yield a bargaining advantage by disclosing information. Disclosure reduces the noise that is introduced into the process by labor's incorrect estimates. The only constraint proposed on the provision of information to labor unions is the cost of preparing and distributing

that information. Pope and Peel called for further research into the specific types of information relevant to employees and their agents. In a second article, Pope and Peel (1981b) encouraged participants in the collective bargaining process to reexamine their attitudes toward information disclosure to employees. Again, they suggested that the costs and benefits of incremental information disclosure need to be examined more closely.

2.3 Summary of Literature on Labor's Use of Accounting Information

Research investigating labor's need for and use of accounting information has been limited. Empirical investigation has consisted primarily of questionnaire surveys and interviews with participants in the collective bargaining process. The few experimental studies conducted have produced weak, and sometimes conflicting, results. Nonetheless, several points have been established that bear on this dissertation. There is little doubt that organized labor uses financial statements in preparing for collective bargaining. Pillsbury (1958), Palmer (1977), and Lau and Nelson (1981) reported the results of questionnaires and interviews that unequivocally supported this belief. Although their subjects were not selected randomly, they represented a substantial portion of the labor community over a twenty year period. Foley and Maunders (1977)

reported evidence drawn from United States arbitration cases and United Kingdom negotiating briefs indicating that labor uses accounting information. Foley and Maunders stated that trade unions use accounting information to predict future ability to pay. Numerous articles written by participants in labor negotiations also provided anecdotal evidence that labor uses financial statements.

A second point evident in these studies is that financial statements are not well-suited to labor's needs. Foley and Maunders went so far as to anticipate the incorporation of an employee report in the financial statements. Labor's complaints with financial reporting are similar to those voiced by other users of financial statements. Pillsbury (1958) cited, among other complaints, the lack of uniformity and comparability among the financial statements of different companies. He also reported that labor officials complain of financial statements that are difficult to understand. Palmer (1977) stated that labor union officials are often reluctant to incorporate more accounting data into the bargaining process because they are suspicious of the techniques used in preparing the information.

Another observation of these studies was that not enough was known about labor's information needs to correct the situation. Lau and Nelson (1981) referred to the, "dearth of research in the accounting aspects of labor

relations." (p. 1) Pillsbury (1958), Horwitz and Shabahang (1971), Palmer (1977), Foley and Maunders (1977), Cooper and Essex (1977), and Pope and Peel (1981a,b) all called for further research into labor's information needs. A complete discussion of reasons for the lack of response by accounting researchers is beyond the scope of this work. Several plausible explanations are apparent, however. Among these are: (1) lack of readily accessible data bases (like Compustat or CRSP) reporting on labor negotiations; (2) traditional association of accountants with management; (3) reluctance of labor officials to disclose proprietary information to accounting researchers; and (4) lack of interest among traditional research funding sources such as public accounting firms and large corporations.

An additional hindrance to research on this subject is the lack of a well-developed, comprehensive theory of collective bargaining. Authors of a number of studies have proposed theoretical constructs that they believed would contribute to a meaningful examination of the issues raised, but none has been fully developed. While this lack is an obstacle to meaningful empirical investigation, it is not insurmountable. The accounting profession has no complete conceptual framework. This fact has not prevented researchers from pursuing empirical examinations of interesting questions.

Research into the need for and use of accounting information by organized labor is in its infancy. Questions have been raised about the usefulness of accounting information in its present form and about the appropriate level of disclosure of additional information. The objective of this study is to examine the impact of one type of disclosure, inflation-adjusted information, on preparation for negotiations. The section that follows reviews research intended to determine the usefulness of that information to other groups, primarily investors, creditors, and their agents. The results of that research serve as a partial basis for an examination of the use of inflation-adjusted information by employees and their agents, organized labor unions.

2.4 The Usefulness of Inflation-Adjusted Accounting Information

Published empirical research on the usefulness of inflation-adjusted accounting information is summarized in an FASB Research Report prepared by Frishkoff (1982). A second report prepared by Beaver and Landsman (1982) presents the results of research to assess the information content of SFAS 33 data. The Frishkoff study is discussed first. Because Frishkoff's survey was prepared beginning in 1981, it focuses on research that was conducted primarily before the SFAS 33 disclosures were required. Some of the

studies examined ASR 190 data, while others relied on individual researchers' definitions of inflation-adjusted accounting information. Frishkoff categorized prior research into three groups, (1) studies of individual behavior; (2) studies of market behavior; and (3) other studies of inflation-adjusted financial reporting data and their uses.

Frishkoff's first category incorporated questionnaire surveys, interviews, laboratory and field experiments, and other types of behavioral research such as protocol analysis. He expressed concern about some of the widely recognized drawbacks of these methodologies, but acknowledged their usefulness as rapid, inexpensive means of gathering information. Behavioral research, in general, revealed little enthusiasm for ASR 190 data or other forms of inflation-adjusted information among investors and creditors. (Frishkoff, 1982, p. i) A point relevant to this study is that, as of Frishkoff's review, few laboratory experiments and no field experiments had been conducted employing sophisticated financial statement readers as subjects. The limitations of students as surrogates being well established, Frishkoff stated that future behavioral research into the use of inflation-adjusted accounting information should be addressed to a wide variety of financial statement users. He specifically cited labor unions among the candidates for behavioral research.

Reviewing studies of the effect of ASR 190 data on securities prices and volume, Frishkoff concluded that the evidence was mixed, but mostly failed to support the contention that inflation adjustments had any systematic effect on security prices and volume. No conclusions were drawn about SFAS 33 data, because they were not available when the research was performed. Beaver and Landsman's study, which is discussed later, addressed this question.

Although relatively few predictive ability studies incorporated inflation-adjusted accounting information, one conducted by Baran, Lakonishok, and Ofer (1980) examined the predictive ability of constant dollar adjusted information with respect to bond ratings. The research was noteworthy because it found that a discriminant model employing constant dollar data had slightly better predictive ability than one employing historical cost data. A model incorporating both types of data possessed even greater predictive ability.

The report concluded with Frishkoff's acknowledgement that most of the prior research was dated because it was conducted before SFAS 33 data were available. Frishkoff suggested that behavioral, capital markets and predictive ability studies needed to be replicated and updated to assess the usefulness of the disclosures required under SFAS 33. Among the behavioral projects suggested was the assessment of the opinions of less-queried groups of financial

statement users such as labor union economists, consumer advocates, and governmental leaders. (Frishkoff, 1982, p. 46)

A Research Report prepared by Beaver and Landsman (1982) reported the results of a study designed to assess the information content of SFAS 33 data. Beaver and Landsman defined information content as the ability of an item to predict either stock price changes across time or differing stock price levels across firms. In the introductory materials, they noted that previous research indicated that inflation-adjusted financial reporting disclosures prepared under ASR 190 failed to produce a stock price effect when initially disclosed. Further, the ASR 190 disclosures possessed no incremental predictive ability with respect to stock prices when used in addition to historical cost data.

Beaver and Landsman offered two reasons why they believed the results of research incorporating SFAS 33 data might differ. The first was that SFAS 33 data were more complete and might incorporate information not available in the ASR 190 data. The accompanying drawback was that the SFAS 33 data were more complex and more difficult to interpret. A second point suggesting that SFAS 33 data might have greater predictive ability was the fact that more time had elapsed since inflation-adjusted disclosures first became to the investment community. Perhaps this elapsed

time allowed analysts to better educate themselves about inflation accounting and incorporating such information into their decision models.

Beaver and Landsman employed an events study methodology to examine the explanatory power of the supplementary disclosures provided under SFAS 33. Their results were unequivocal. SFAS 33 disclosures were clearly inferior predictors of stock price changes in the 731 nonfinancial firms examined. To quote directly from the summary:

Once historical cost earnings are known, the Statement 33 earnings variables provide no additional explanatory power with respect to differences across firms in yearly stock price changes...Even after any one of the Statement 33 earnings variables is known, knowledge of historical cost earnings still provides additional explanatory power. (Beaver and Landsman, 1982, p. 10)

Beaver and Landsman interpreted these findings to mean that the SFAS 33 data were merely garbled versions of historical cost earnings variables. Extending their study to examine differing stock price levels across firms yielded essentially the same results. The SFAS 33 earnings variables were unable to provide any incremental explanatory power over historical cost earnings variables. Additional extensions produced similar results.

Three possible explanations were offered for the lack of significant results. One was that stock price adjustments in response to inflation-adjusted data might be too small to be detected. This is a possibility in all such

studies that fail to find significant results. A second explanation was that SFAS 33 data might be so error-ridden as to be irrelevant to inflation-motivated stock price changes. Given the broad guidelines under which the supplementary information is prepared and the alternate sources of inflation-adjusted data available, this is a particularly plausible explanation. The third possibility presented by Beaver and Landsman was that financial analysts had not yet learned to incorporate the SFAS 33 information into their decisions. The authors were skeptical of this explanation in light of their belief that participants in the market are quick to grasp and use any useful information. The conclusions of this study were similar to those reached by Frishkoff. Inflation-adjusted financial statement data, whether prepared according to the guidelines of ASR 190 or those of SFAS 33, did not appear to possess significant information content beyond that of historical cost data. Whether this resulted from irrelevance to the phenomenon under study or from the failure of analysts and others to incorporate relevant information was not clearly established.

More recently, Matolcsy (1984) extended the work on information content of inflation-adjusted accounting numbers. His research investigated the joint and marginal information content of inflation-adjusted accounting numbers with respect to security returns of 197 Australian

companies. Inflation-adjusted income was defined as historical cost income, adjusted for general price level changes by means of the Consumer Price Index. Matolcsy explained that,

joint information content is defined as the sum of the information contents of simultaneously realized signals. Marginal information content of a signal is defined as the information content of that signal beyond the information content of all other simultaneously realized signals. (Matolcsy, 1984, p. 557)

Matolcsy's results confirmed the findings of earlier research. Inflation-adjusted accounting income numbers were found to possess no marginal information content beyond historical cost income numbers. Like previous capital markets researchers, Matolcsy acknowledged that perhaps the lack of significant results reflected factors omitted from his model. However, looking at the sum of the research in this area, there is scant evidence to suggest that inflation-adjusted numbers possess significant information content with respect to market processes. This conclusion appears to hold for information prepared under ASR 190 guidelines, SFAS 33 and other specifications set forth by various researchers.

Recent surveys of bankers, controllers, and other members of the financial community have attempted to assess the usefulness of SFAS 33 disclosures. Like prior behavioral research efforts, they have yielded mixed results. While financial executives often acknowledge the

need for information about inflation's effects, they are frequently skeptical about the disclosures prepared under SFAS 33.

Cornick (1982) surveyed commercial loan officers of large, multiple-branch banks and bank holding companies in the Southeast United States. Cornick's questionnaire was designed to assess the bankers' familiarity with inflation accounting techniques and to determine which items they would like to see adjusted for inflation. The responses indicated that subjects generally lacked a working knowledge of either price level adjusted statements or current value statements. A majority claimed to be somewhat familiar with both techniques. Approximately half of Cornick's subjects responded that they "adjust a loan applicant's financial statements for inflation." The questionnaire did not ask the type of adjustment, nor did it inquire about the outcome of such adjustments.

Of those bankers who claimed to adjust financial statements for inflation, 78% stated that they would continue to make their own adjustments if presented with general price level or current value information. Cornick interpreted these results as an indication that (1) inflation-adjusted information provided by the accounting profession was inadequate, or (2) bankers did not trust the inflation-adjusted information provided by accountants, or both. The simplicity of the instrument and the lack of

detailed information about the execution of this study, suggest that these conclusions may have been stronger than warranted. Nonetheless, they are consistent with previous findings that financial statement users are interested in inflation-adjusted information but that the information provided is not well-suited to their needs. Interviews conducted with questionnaire respondents revealed specific complaints and suggestions about the SFAS 33 disclosures. Cornick suggested that accounting researchers should further investigate the needs of financial statement users so that the SFAS 33 disclosures can be modified to meet these needs.

A survey of controllers and financial analysts conducted by Flesher and Soroosh (1983) attempted to assess the opinions of subjects regarding (1) the need for price-level adjusted financial reports, (2) the perceived usefulness of SFAS 33 disclosures, and (3) the relative importance of the constant dollar and current cost methods of adjustment. The authors apparently intended item 1 to refer to inflation-adjusted financial reports of both types. Flesher and Soroosh obtained response rates of 36.3% and 41.3%, respectively, from CFAs and controllers. Their results were similar to those reported by Cornick (1982). Responding on a four-point scale, from "strongly agree" to "strongly disagree", overwhelming majorities of both groups expressed either strong or mild agreement with the statement that financial reports need to be restated for the effects

of inflation. Responses to questions about the usefulness of disclosures required under SFAS 33 produced mixed results. CFAs expressed concern about the objectivity of constant dollar adjustments, while controllers were mostly satisfied with that aspect of the data. Both CFAs and controllers disagreed with the use of the Consumer Price Index in the preparation of the SFAS 33 disclosures. Both groups agreed, almost unanimously, that current cost data are too subjective to provide an accurate measure of the effects of inflation.

Flesher and Soroosh concluded, as did Cornick, that these users of financial statements are interested in considering the effects of inflation, but that the information provided under SFAS 33 is not especially useful. They went on to assert that, "At this point, it is safe to state that the present data requirements of FAS 33 are not worth the effort of preparing them." (Flesher and Soroosh, 1983, p. 53)

An Arthur Young & Company survey entitled Financial Reporting and Changing Prices, reported on the opinions of senior financial officers at 300 of the largest companies in the United States. Results of the study indicated that these respondents also had mixed opinions about SFAS 33 disclosures. Major findings of the survey included:

1. Uncertainty about the cost effectiveness of SFAS 33 disclosures and their usefulness,
2. The belief that the data are not used by analysts,

3. A preference for the current cost method over the constant dollar method,
4. A general desire to continue the SFAS 33 experiment and to refine the required disclosures. (CPA Journal, January 1982, p.8-9)

2.5 Summary of Literature on Usefulness of Inflation-Adjusted Information

Much research has been conducted as part of the accounting profession's attempt to assess the usefulness of inflation-adjusted accounting information. Studies have focused on ASR 190 data, SFAS 33 data, and a number of other definitions of inflation-adjusted accounting. The results are largely homogeneous. Capital markets studies generally reveal that inflation-adjusted numbers have little or no information content beyond that of historical cost numbers. This finding has been confirmed for ASR 190 data and SFAS 33 data. With regard to explaining stock price changes and levels, inflation-adjusted numbers appear to be nothing more than a detrimental transformation of historical cost. One exception is a study by Baran, Lakonishok, and Ofer (1980) which found increased discriminatory power for predicting bond ratings after the inclusion of a constant dollar adjusted accounting variable.

Behavioral research on this subject has also produced some general findings. There is considerable evidence that a variety of financial statement users are interested in incorporating the effects of inflation into their decisions. Their self-perceived ability to do so ranges from complete

unpreparedness to a working knowledge of inflation accounting that enables them to make their own adjustments to financial statements. There is no general agreement on the relative usefulness of constant dollar and current cost adjustments, but more recent findings seem to indicate a growing preference for the latter.

The most widely reported finding among behavioral studies is that the disclosures prepared under SFAS 33 are not well-suited to the information needs of financial statement users. Although many users express a desire to consider the impact of inflation, few report finding the supplementary disclosures useful for that purpose. Apparently, those who consider inflation explicitly do so by making their own adjustments or by obtaining information from alternative sources. Virtually all of the behavioral studies call for further research and a continuation of the SFAS 33 experiment while the disclosures are refined.

2.6 Implications of Prior Research for the Current Study

This chapter reviews literature in two areas related to the current study, labor's use of financial statements and the usefulness of inflation-adjusted accounting disclosures. Research into labor's use of financial statements reveals that unions are knowledgeable users. However, a number of studies indicate that general purpose financial statements are not well-suited to labor's needs.

This dissertation is a preliminary attempt to discover whether one incremental item of disclosure, inflation-adjusted supplementary data, impacts labor's preparation for negotiations. While this study's potential findings represent a modest addition to the body of knowledge, they will be sufficiently specific to be asserted with relative certainty. Many such research projects need to be completed in order to piece together a picture of labor unions' needs for financial statement information.

The decision to examine the impact of inflation-adjusted supplementary information is supported by the accounting profession's current attempts to assess the usefulness of such information. Results of capital markets research and behavioral explorations of the perceptions of investors and creditors have not yielded strong support for the disclosures, as currently prepared. The addition of evidence about the usefulness of SFAS 33 disclosures to another group, labor, will assist the FASB in evaluating the benefits of such information.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This dissertation is intended to ascertain whether labor adjust its assessments of companies' ability to pay in response to supplementary, inflation-adjusted accounting information. Chapter 3 discusses the experiment employed to address this question. The research design and variables are identified in the first section. A description of the experimental materials and their construction follows in several sections. Sample selection procedures and their implications are discussed next. The final section sets forth the hypotheses to be tested.

3.1 Overview of Design and Experimental Materials

The experiment described herein employed a case consisting of financial statements for three fictitious companies. These materials were mailed to research directors and other officials of national labor unions in the United States and Canada. The subjects were asked to examine the experimental materials and respond to a questionnaire dealing with their perceptions of the relative ability of the three fictitious companies to pay increased wages and benefits to union employees. The case was

constructed to manipulate two independent variables, (1) the financial condition of the companies (FINCON); and (2) the presence or absence of supplementary, inflation-adjusted accounting disclosures (DISCLO). The primary dependent variable, a subjective assessment of ability to pay increased wages and benefits (ATPAY), was measured on a nine point scale. The scale was anchored at the endpoints by the captions "Clearly Unable to Pay" and "Clearly Able to Pay."

FINCON was presented at three levels via three fictitious companies. The companies, Jones Corporation, Miller Corporation and Wilson Corporation were designed to depict varying levels of financial condition. Financial condition was operationalized as a composite of three factors, profitability, liquidity, and capital structure. The levels of financial condition portrayed by Jones, Miller and Wilson were denoted Strong, Moderate and Weak, respectively. Because all subjects received financial statements for all firms, the FINCON variable is nested within subjects. Construction of the fictitious financial statements is discussed in greater detail in a later section of this chapter.

The DISCLO variable was presented at two levels. Half the subjects received financial statements that included supplementary, inflation-adjusted accounting data. The others received materials that did not include the supplement. These two levels of DISCLO were denoted

Supplement and No Supplement. The two by three design resulting from these manipulations is depicted in Figure 3.1. It is a variation of the posttest-only control group design suggested by Campbell and Stanley (1963). Although this design allows uncertainty about the initial equality of experimental groups, random assignment of subjects to groups minimizes the likelihood of any pre-treatment biases. Subjects were randomly assigned to the two between-subjects groups. Responses were analyzed using analysis of variance (ANOVA). The following sections include a description of the details of the experiment, beginning with the contents of the mailings to subjects.

3.2 Contents of the Mailings

Each subject contacted received the following materials:

1. A letter from the researcher;
2. A cover letter from an official of the AFL-CIO;
3. A page of instructions;
4. A set of financial statements and accompanying notes for each of the three fictitious companies;
5. A response form; and
6. A return mail envelope.

Items 1,2, and 3 appear in Appendix B. Items 4 and 5 are reproduced in subsequent separate appendices.

	Weak	Moderate	Strong
No Disclosure			
Disclosure			

Figure 3.1
Experimental Design

The letter explained that the dissertation's purpose was to learn more about labor's needs for accounting information. The recipients were asked either to complete the questionnaire or to forward the materials to the person in their organization best qualified to analyze financial statements. The confidentiality of responses was assured and a summary of the results offered. The closing paragraph stressed the importance of the subjects' participation and thanked them. All letters were produced on accounting department letterhead using a word processor. Each subject received a personalized letter.

Enclosed with each letter was a copy of a letter from Mr. John Zalusky, a member of the Department of Economic Research of the AFL-CIO. Mr. Zalusky's letter was addressed to "Fellow Trade Unionists" and stated that his office was assisting in the completion of the project. The letter also described the research as timely and potentially useful in assessing future training needs. Mr. Zalosky requested that subjects respond and also assured the confidentiality of responses.

The instructions to subjects directed them to assume that their employer (a labor union) was preparing to negotiate with the three fictitious companies in the same industry. All three were expected to resist wage and benefit increases on the grounds that inflation had negatively impacted their ability to pay. Information about

audit reports, numbers of union employees and current wage levels was included to establish the homogeneity of the companies. Subjects were asked to focus on assessing the relative ability of the companies to pay, ignoring the need for cost-of-living increases and the desire to maintain comparable wages at the three companies. The objective of these instructions was to control for factors which are known to be relevant to collective bargaining but would have introduced extraneous variance into the experiment. These controls tended to limit the generalizability of results, but were useful as a means of increasing internal validity.

Return mail envelopes were included with the experimental materials as an additional encouragement for subjects to respond. United States subjects were provided with postage-paid return mail envelopes. Because return envelopes were not available with Canadian postage, Canadian respondents receive addressed envelopes and a Canadian one dollar bill for postage. The dollar was explained in the letter to Canadian respondents. This differential practice had the potential to affect response rates, but was unlikely to introduce a bias into the responses themselves. All return mail envelopes were numbered to allow follow-up mailings and to provide summaries of results to those respondents who requested one.

3.3 Construction of the Financial Statements

The objective in constructing the financial statements was to present three firms operating in the same industry, of approximately the same size, and varying from financially strong to financially weak. This was accomplished by creating base financial statements and making adjustments to them to create the three levels of FINCON. All three sets of financial statements included the following:

1. Comparative statements of earnings for two years, including per share data;
2. Comparative statements of financial position for two years;
3. Comparative statements of changes in financial position for two years; and
4. Notes stating that inventories are valued on a last-in, first-out (LIFO) basis and that depreciation has been computed using accelerated methods.

All three companies were approximately the same size. Table 3.1 presents the total assets, net sales, and number of common shares outstanding for Miller, Wilson and Jones Corporations. From Miller Corporation, the smallest, to Jones Corporation, the largest, total assets varied by only 17%. Net sales varied only 12% between the largest and smallest. Common shares outstanding ranged from a low of 12,350 at Miller to a high of 13,650 at Wilson. The percentage change was only 10.5%. The intended effect of these minor variations in size was to depict three companies sufficiently similar to eliminate size as a collective bargaining issue. The instructions stated that all three

TABLE 3.1
SELECTED MEASURES OF SIZE

	Miller (Moderate)	Wilson (Weak)	Jones (Strong)
Total Assets	\$387,870	\$428,700	\$453,362
(common size)	1.00	1.11	1.17
Net Sales	\$762,779	\$808,849	\$850,661
(common size)	1.00	1.06	1.12
Common Shares Outstanding	12,350	13,650	13,000
(common size)	1.00	1.11	1.05

companies operated in the same industry. The only differentiation made possible by the financial statements should have been based upon relative financial condition.

Table 3.2 presents ratio analyses of the companies. The ratios are segregated into four categories: Liquidity, Profitability, Capital Structure, and Activity. Examining Table 3.2 and the financial statements, which are presented in Appendix C, reveals that Jones Corporation was clearly the most liquid, most profitable and least leveraged of the three. Miller Corporation was somewhat less attractive in terms of these three attributes. Wilson Corporation was the least favorable of the three companies. Measures of turnover are not mentioned in the collective bargaining literature as a determinant of wage changes. Therefore, the three companies were constructed with relatively similar activity ratios to minimize extraneous variation in the responses.

Statements of changes in financial position were also presented for each company. These were prepared using a cash and near-cash definition of funds. Cash Provided by Operations and the Net Change in Cash were manipulated to correspond with the companies' relative financial conditions.

Fischer (1969) cited merchandise inventories and depreciation provisions as two areas of the financial statements that deserve special attention when evaluating

TABLE 3.2
SELECTED FINANCIAL STATEMENT RATIOS

	Miller (Moderate)	Wilson (Weak)	Jones (Strong)
Liquidity			
Working Capital	\$167,867	\$115,539	\$209,703
Current Ratio	3.05	1.72	3.43
Quick Ratio	1.55	0.87	1.76
Cash from Operations/ Current Liabilities	0.52	0.04	0.88
Profitability			
Return on Investment	5.4%	(3.3%)	14.5%
Earnings Per Share	\$1.74	(\$1.08)	\$4.89
Return on Equity	9.3%	(11.1%)	23.0%
Return on Net Sales	2.8%	(1.8%)	7.5%
Capital Structure			
Book Value/Share	\$19.29	\$9.11	\$22.76
Debt/Equity	62.8%	244.7%	53.3%
Debt/Total Assets	38.6%	71.0%	34.8%
Turnover			
Total Asset Turnover	1.93	1.86	1.94
Receivables Turnover	7.9	6.6	8.5
Inventory Turnover	5.3	5.1	5.0

an employer's claim of inability to pay. The Summary of Significant Accounting Policies was identical for the three companies and considered only these items. The first note stated that inventories were valued on the last-in, first-out (LIFO) basis. The second explained that plant assets were stated at cost and depreciated using accelerated methods. LIFO and accelerated depreciation both tend to minimize reported income. This was consistent with the instructions to subjects stating that the employers were likely to resist wage increases on the grounds of inability to pay. The notes were brief so as to establish comparability between the companies' accounting choices without introducing accounting choices as an issue in the subjects' analyses.

These materials constituted four full or partial pages for each company, twelve pages in total. When combined with the other supporting materials, they appeared quite lengthy. In order to make them appear shorter, they were reduced to two-thirds of elite type size. These smaller pages were mounted sideways on both sides of an 8 1/2 by 11 inch piece of paper. The pages were arranged so that the paper could be folded in half to form a booklet. The twelve pages were thus reduced to three pages, each folded in half.

In summary, a set of financial statements was created for each of the three fictitious companies. The objective in constructing the statements was to present three

companies of similar size, operating in the same industry, but with varying financial conditions. Financial condition was deemed to be a function of liquidity, profitability and capital structure. Ratios computed for the companies demonstrated a strictly ordinal relationship on the the dimensions manipulated. The result was that Jones Corporation depicted Strong FINCON. Miller and Wilson Corporations represented Moderate and Weak levels, respectively. The financial statements were reproduced on different colors of paper to assist subjects in differentiating between the companies. Jones' statements were on buff paper. Miller and Wilson's were on blue and green, respectively. Assignments of names and colors to levels of FINCON were random.

3.4 Accounting for Changing Prices

Statement of Financial Accounting Standards Number 33, Financial Reporting and Changing Prices (SFAS 33), was issued in September 1979 and was effective for fiscal years ending on or after December 25, 1979. SFAS 33 applied to public enterprises having either (1) inventories and property, plant, and equipment (before deducting accumulated depreciation) amounting to more than \$125 million or (2) total assets amounting to more than \$1 billion (after deducting accumulated depreciation). (FASB, 1979, para. 101)

SFAS 33 required that those companies report selected financial information, adjusted for the effects of changing prices, as a supplement to the primary, historical cost financial statements. SFAS 33 was amended and/or interpreted by eight subsequent pronouncements and two Technical Bulletins. These amendments and interpretations pertained primarily to applications of SFAS 33 to specific industries and did not impact this experiment materially.

A significant amendment to SFAS 33 occurred in November 1984 with the issuance of Statement of Financial Accounting Standards Number 82, Financial Reporting and Changing Prices: Elimination of Certain Disclosures (SFAS 82). SFAS 82 eliminated the requirements for disclosure of constant-dollar information for companies presenting current cost/constant-dollar information. This amendment was in response to feedback from the accounting and business community that constant-dollar information was of limited usefulness in business decisions. The disclosure requirements following the issuance of SFAS 82 were as follows:

1. Income from continuing operations on a current cost/constant dollar basis;
2. Purchasing power gain or loss on net monetary items;
3. Increases or decreases in current cost amounts of inventory and property, plant, and equipment, net of inflation; and,
4. Current cost amounts of inventory and property, plant and equipment at year end.

An Exposure Draft issued in December 1984, but never adopted as a formal statement, served as a codification of previous pronouncements related to changing prices. This document contained only two provisions not included in the current authoritative literature. Both were relatively minor, and, in any case, were not officially a part of GAAP.

Statement of Financial Accounting Standards Number 89, Financial Reporting and Changing Prices (SFAS 89), was issued in December 1986. The effect of this statement was to make presentation of inflation-adjusted information optional in all statements issued after December 2, 1986. SFAS 89 encourages businesses to continue experimenting with inflation-adjusted information to develop more useful means of reporting. Three of the seven FASB members dissented on the grounds that the effects of inflation are too important to be dealt with partially or ignored. They suggested that current low inflation rates provide an opportunity to experiment with different methods of incorporating inflation into the financial statements.

Accounting for changing prices in Canada is governed by Section 4510 of the Canadian Institute of Chartered Accountants (CICA) Handbook, "Reporting the Effects of Changing Prices." The Canadian standard applies to publicly traded companies that have either (1) inventories and property, plant, and equipment in excess of \$50 million before depreciation, depletion, and amortization; or (2)

total assets (net of depreciation, depletion, and amortization) of \$350 million or more as of the the beginning of the fiscal year being reported upon. (CICA, 1983, p.86) This standard became effective for fiscal years beginning after January 1, 1983. Section 4510 and some examples of the disclosures provided in financial reports are provided in Financial Reporting in Canada, 1983 edition, a publication of the CICA that is similar to the AICPA publication, Accounting Trends and Techniques. The requirements and examples were compared with those provided in the 1984 edition of Accounting Trends and Techniques. The Canadian and United States requirements were sufficiently similar that one set of experimental materials could reasonably be sent to both United States and Canadian subjects.

The accounting profession remains uncertain about the costs and benefits of accounting for changing prices as well as the methods of doing so. In order to produce a meaningful instruments, the supplements were patterned after an example disclosure presented in the 1984 edition of Accounting Trends and Techniques. The illustrations provided in this publication were representative of typical financial report presentations and provided the basis for an instrument that would be familiar to subjects.

3.5 Construction of the Supplementary, Inflation-Adjusted Disclosures

A separate supplement was prepared for each of the fictitious companies and entitled, "Supplementary Information on the Effects of Inflation." Each supplement included a note describing the basis on which the information was prepared and explaining the effects of the adjustments on income. The adjusted income statement was prepared on the current cost basis, assuming that sales and operating expenses occurred uniformly throughout the year. The two items adjusted were cost of goods sold and depreciation expense. For each company, current cost cost of goods sold was 107% of the historical cost figure. Depreciation expense was 180% of historical cost. These adjustments resulted in material decreases in net income for all three companies. The magnitude of the adjustments was arbitrary. The adjustments to income made in the supplements were perceived as material by pretest subjects.

The adjusted statement of earnings also included the gain or loss from changes in the purchasing power of net monetary items. Because the weak company, Wilson, was most heavily leveraged, it experienced the largest purchasing power gain. Miller and Wilson were stronger and had fewer monetary liabilities. Accordingly, their purchasing power gains were smaller.

The current costs of inventory and fixed assets were prepared by adjusting historical cost amounts using the same factor for each company. The five year summary of current cost income showed Wilson, the weak company, incurring increasing losses. Miller, the moderate company experienced losses, but they were decreasing. Jones, the strong company, had decreasing losses followed by positive current cost income in the current year.

In summary, the supplements were constructed to indicate that changing prices had similar effects on the cost of goods sold and depreciation expense amounts for all three companies. Because the historical cost incomes varied, the percentage changes between historical cost and current cost income for the three companies were different. This is a natural consequence of current cost adjustments. Other factors held constant, companies with smaller incomes are harder hit by increases in cost of goods sold and depreciation expense. The five year summary data reinforced the relative financial positions of the companies. Examples of the Supplementary Information on the Effects of Inflation are presented in Appendix D.

3.6 Construction of the Response Form

All subjects were asked to complete a response form containing the same set of ten questions. Several of the questions asked subjects to make the same evaluation of

Wilson, Miller and Jones Companies. To avoid the possibility of an order effect in the responses, six versions of the response form were produced. Subjects were randomly assigned to one of the forms. The six forms were identical except that the presentation order of the three companies was varied in questions that referred to them individually. The six versions presented all possible orders of the companies. The order selected for the first question was maintained throughout each version of the form. Response forms were reduced and printed in the same booklet format as the financial statements and inflation-adjusted supplements. Bright yellow paper was used for easy identification.

Question one addressed the primary research question, asking subjects to evaluate the relative ability of the three companies to pay increased wages and benefits. The responses were coded on a nine-point scale anchored with the captions, "Clearly unable" and "Clearly able." Intermediate points on the scale were not labeled. Since there were three items to be evaluated, the nine-point scale allowed subjects to ignore the endpoints and still maintain some distance between rankings. The selection of nine points was arbitrary. A shorter scale might have compressed the responses making it difficult to observe differences. A longer scale might have increased the variability of responses unnecessarily. A second question asked subjects

to indicate their confidence in the evaluations made in response to question one. Responses were again to be made on a nine-point scale anchored with the captions "very uncertain" and "very confident." The objective of this question was to determine the effect of the additional inflation-adjusted disclosures on subjects' perceptions of their own ability to accurately evaluate financial condition.

Question three was composed of a series of requests for demographic information. This information included a description of the subject's position, the length of time he or she had held the position and the length of time he or she had worked in a labor-related position. Questions on education level, educational specialty and professional designations were also included. The final questions asked subjects about the frequency with which they analyze financial statements, their opinion of the usefulness of such information in preparing for negotiations and suggestions for other types of data useful in preparing for negotiations. Responses to question three were to be used to test the effectiveness of random assignment of subjects to treatments. The items in question three were also useful as a buffer between the primary questions and those designed to check the experimental manipulations.

Question four asked respondents to rank the companies from strongest to weakest in terms of overall financial

condition. Blanks were provided and labeled "Strongest", "Middle", and "Weakest". The purpose of the question was to test the effectiveness of the financial condition manipulation.

The fifth question asked subjects to indicate agreement or disagreement with a statement that inflation was an important factor in evaluating ability to pay. Responses were solicited on a nine-point scale anchored with the captions "Strongly Disagree" and "Strongly Agree." Question five was intended to help explain the situation in which the DISCLO failed to produce a significant effect.

The degree to which subjects considered the effects of inflation when evaluating the three companies was addressed by question six. Responses were solicited on nine-point scales anchored by "Not at All" and "A Great Deal." Literature on the use of accounting information in collective bargaining indicates that some participants believe that accounting data are relevant only if the employer is in financial distress. Question six was an attempt to determine whether the same is true for information about the effects of inflation. The responses to this question were also intended to facilitate a comparison of the general awareness of inflation between the two DISCLO treatment groups.

Subjects' agreement with a statement that ability to pay was important to the wage determination process was

tested in the seventh question. Endpoints of the nine-point scale were labeled "Strongly Disagree" and "Strongly Agree." In the event that the FINCON manipulation failed to produce significant differences, the responses to question seven were intended to help interpret that result.

Questions eight, nine and ten solicited additional comments, the length of time spent completing the task, and a request for or refusal of a summary of research results. The final item on the response form was a brief paragraph urging subjects to insure that all questions had been answered and to return it in the envelope provided. They were also thanked for their participation. The response form is presented in Appendix E.

3.7 Subject Selection and Mailing Lists .

Pillsbury (1958) reported that labor unions employ research directors whose duties include analyzing financial reports of companies with which the union is preparing to negotiate. His findings made clear that these individuals are conversant on accounting principles and their effect on reported income and financial position. Research directors seem to be ideal subjects for this study.

Potential subjects were drawn from two directories of labor organizations. The Directory of U.S. Labor Organizations, 1984-1985 edition, was published by the Bureau of National Affairs, Inc., a private sector

publisher. Its contents are based largely upon responses to questionnaires mailed to labor union national headquarters. The directory lists 216 labor organizations and identifies the top officers of each and other demographic information. The United States portion of the sample was drawn from this source.

The second source was the 1985 Corpus Almanac & Canadian Sourcebook, published by Southam Communications Limited, Don Mills, Ontario. The Labour & Employment section of this publication includes a list of 232 international trade unions operating in Canada. Many of these are Canadian branches of the same organizations listed in the BNA directory. However, separate listings of the chief Canadian officers are included.

The mailing list was drawn from the BNA directory as follows. First, all organizations representing government employees or professionals were eliminated. These two groups were not deemed comparable to trade unions in terms of the types of employers with which they bargain. After these eliminations, 138 labor organizations remained. Of these, 60 listed the name of a research director or comparable official among their top officers. These individuals were included as subjects. For the remaining 78 organizations, the mailing was directed to the president or director of the organization with a request that the

materials be forward to the individual most familiar with financial statement analysis.

Government employees' associations and professional organizations were also eliminated from the Canadian source, leaving 162 organizations. None of the Canadian organizations identified a research director among their officers. Mailings were addressed to the chief officer in Canada with the same request that was made of U.S. union presidents. Table 3.3 describes the potential subjects drawn from these two sources.

The sample described in this section does not constitute a random sample of labor union officials. From one perspective, it represents the population of research directors and chief executives of trade unions operating in the United States and Canada and identified in the aforementioned publications. Alternatively, the subjects represent a judgmentally selected sample of labor union officials. The criterion for selection is the possession of a relatively high degree of knowledge about financial statement analysis. The primary problem with non-random samples is one of generalizability. Because the sample was not randomly selected from the population of labor officials, the study's findings cannot be extended to other labor officials and organizations not included in the study. This limitation is mitigated by the fact that the individuals selected to participate in the study are known

TABLE 3.3

DESCRIPTION OF THE SUBJECTS SELECTED

United States Directory:

Total Organizations Listed	216
Less: Professional and Govern- mental Organizations	(78)
U.S. Subjects Selected	138

Canadian Directory:

Total Organizations Listed	232
Less: Professional and Govern- mental Organizations	(70)
Canadian Subjects Selected	162
Total Subjects Selected	300

COMPOSITION OF SUBJECTS BY POSITION

Nationality	Research Directors	Other	Total
United States	60	78	138
Canada	0	162	162
Totals	60	240	300

to assist local labor officials engaged in financial analyses. The subjects' beliefs and knowledge are, thus, reflected in decisions made by others in the population of interest.

3.8 Development of Hypotheses

Hypothesis testing is appropriate only when there is a sound basis for forming a priori expectations. Ideally, a comprehensive theory of the behavior of the subjects of interest provides that basis. No such theory describing the process through which labor assesses financial condition and ability to pay appears in the literature. Accordingly, the literature reviewed in Chapter 2 served as the basis for hypotheses.

Research examining labor's use of financial statements provided clear support for the proposition that labor officials were familiar with financial reporting conventions, their effect on reported income and position, and some of the common tools of financial analysis. This conclusion supported the first hypothesis. Stated in null form (as were all subsequent hypotheses), it was:

H1: Subjects' assessments of ability to pay will not be affected by the different levels of financial condition presented in the experimental materials.

The alternative to H1 was, of course, that subjects would correctly perceive the different financial conditions

of the companies and conclude that stronger companies were more able to pay than weaker companies. H1 was to be tested statistically, by examining the significance of the FINCON main effect in the ATPAY ANOVA.

The second hypothesis concerned the impact of the supplementary, inflation-adjusted disclosures upon the assessments described in H1. Stated in null form, it was:

H2: Subjects' assessments of ability to pay will not be affected by the level of disclosure presented in the experimental materials.

Testing this hypothesis involved assessing the statistical significance of the DISCLO main effect. Subjects receiving the supplementary information were expected to systematically evaluate all three companies as less able to pay increased wages and benefits. Such a finding would provide evidence that accounting information adjusted for changing prices had information content for labor.

H3 concerned the possibility of an interaction between the FINCON and DISCLO variables.

H3: The effect of the financial condition manipulation on subjects' assessments of ability to pay will not differ across subjects who are presented with different levels of disclosure in the experimental materials.

The third hypothesis involved a test of the significance of the FINCON X DISCLO interaction. Subjects

were expected to ignore the supplementary disclosures at the higher levels of FINCON. Labor literature indicated that some officials believe accounting information to be relevant only when there is serious doubt about an employer's ability to pay. The same rationale might apply to the supplementary disclosures presented in this experiment.

Variability of responses and the subjects' confidence in their evaluations were addressed by the fourth, fifth, and sixth hypotheses. Stated in null form, they were:

- H4: The variability of subjects' assessments of ability to pay will not differ across the levels of disclosure presented in the experimental materials.
- H5: Subjects' confidence in their evaluations of ability to pay will not be affected by the level of disclosure presented in the experimental materials.
- H6: Subjects' confidence in their evaluations of ability to pay will not be affected by the different levels of financial condition presented in the experimental materials.

Hypothesis four and five were motivated by the concern that the supplementary materials would be unfamiliar to subjects. H4 hypothesized that this unfamiliarity would manifest itself in the form of greater variability in responses. Subjects attempting to incorporate the supplementary information were not expected to have experience doing so. Accordingly, their responses would vary more than subjects not receiving the supplements. Reduced confidence following from the same unfamiliarity was hypothesized in H5. The rationale for H6 was similar.

Weaker companies were expected to generate greater uncertainty among subjects than stronger companies.

Hypotheses one through six were constructed to address the primary research questions. Further analyses were anticipated to examine additional questions raised by the data. Checks of manipulations and demographic effects were also planned. Pilot and pretest results indicated however, that manipulations were effective and demographic effects negligible.

CHAPTER 4

ANALYSIS AND RESULTS

4.0 Introduction

Chapters 1 through 3 described the rationale for this study and explained the experiment. Chapter 4 describes the results of the experiment and evaluates the hypotheses set forth in the last section of Chapter 3. Section 4.1 discusses the mailings, response rates and tests performed to evaluate possible non-response bias. Tests of hypotheses are considered individually in the next sections. Each test is discussed in terms of the specific statistical procedure employed, its outcome, and consequent rejection or nonrejection of the null hypothesis. Tables containing relevant statistics are included in the text where they are deemed necessary to understanding the discussion of results. Other statistics and a summary of the pilot test results are reported in appendices. Following the hypothesis tests, sections are devoted to post hoc analyses aimed at obtaining a clearer understanding of the results. A final section summarizes and integrates the results of the analysis. Detailed interpretation of the findings is reserved for the final chapter of this work.

4.1 Mailings, Response Rates and Non-Response Bias

The 300 subjects described in Table 3.3 were contacted by mail. Of the packages mailed 24 were returned

undeliverable. Of the remaining 276 subjects contacted, fifty-nine (21.4%) returned usable responses in the 101 days following the initial mailing. Canadian subjects accounted for 35 of the responses. The balance (24) came from United States subjects. Seventeen of these were in response to a second mailing that was made 32 days after the initial mailing. The second mailing included the entire package of experimental materials.

The low overall response rate enhanced the possibility that respondents differed in some important respect from non-respondents. Such a non-response bias can lead to erroneous conclusions about the population of interest. Although the pilot test results indicated that non-response was probably resulting from the length of the task, the data were tested for the presence of non-response bias.

Late respondents have often been employed as surrogates for non-respondents in attempts to make such tests. Accordingly, the data were partitioned into two groups, (1) responses to the initial mailing, and (2) responses to the second mailing. Means and standard deviations were computed for the major variables of interest for each of the two groups. They are presented in Table 4.1.

Visual inspection of the mean differences between the two groups suggested that no important differences exist between the two groups. T-tests were performed to

TABLE 4.1
MEANS AND STANDARD DEVIATIONS OF SELECTED VARIABLES*
BY EARLY VERSUS LATE RESPONSE GROUP**

Variable	Early (n=123)	Late (n=54)
ATPAY	5.935 (2.939)	5.611 (3.147)
CONFID	6.772 (2.586)	6.611 (2.757)
INFIMP	4.374 (2.625)	4.412 (2.426)
INFCON	3.050 (2.351)	3.593 (2.359)
ATPIMP	6.425 (2.519)	6.444 (2.478)

* Standard Deviations are presented parenthetically beneath means.

** The Early group includes all responses received prior to the second mailing. Late responses are those received in response to the second mailing.

substantiate that belief. They are reported in Appendix F and support the assertion that no significant differences exist between the two groups.

Differences between Canadian and United States subjects were a second possible source of bias in the responses. This possibility was investigated by entering NATION as a blocking variable in both the ATPAY and CONFID ANOVAS. The NATION variable did not enter either analysis as a significant factor. Differences between Canadian and United States subjects were deemed insignificant to the study.

4.2 Hypotheses One, Two and Three

The first, second and third hypotheses concerned the effects of the financial condition and disclosure level manipulations on subjects' assessments of the companies' relative ability to pay increased wages and benefits. Table 4.2 presents the means and standard deviations of ATPAY by levels of FINCON and DISCLO. Visual inspection of those means revealed that the FINCON manipulation was apparently effective, while DISCLO had no apparent effect on subjects' assessments of ATPAY. Two way analysis of variance (ANOVA) was used to examine the impact of FINCON and DISCLO on ATPAY. The model for the ANOVA was specified as follows:

TABLE 4.2
ATPAY MEANS AND STANDARD DEVIATIONS
BY FINCON and DISCLO

DISCLO	FINCON		
No Disclosure (n = 34)	Weak	Moderate	Strong
Mean	2.676	6.588	8.353
Standard Deviation	2.170	2.388	1.178
Disclosure (n = 25)			
Mean	2.960	6.600	7.800
Standard Deviation	1.904	2.179	2.041

$$Y = M + A_i + B_j + (AB)_{ij} + C_{k(i)} + E_{ijk}$$

where:

M was an overall mean,

A was the treatment effect of the DISCLO manipulation,

B was the treatment effect of the FINCON manipulation,

AB was the treatment effect of the DISCLO by FINCON manipulation,

C was the effect of subjects nested within levels of DISCLO (within subjects error), and

E was the experimental error term.

The subscripts were defined as follows:

i = the levels of DISCLO (0,1)

j = the levels of FINCON (1,2,3)

k = subjects (1-59).

Results of the ANOVA employing ATPAY as the dependent variable are presented in Table 4.3. Two facts were readily apparent from the inspection of those results. First, the FINCON manipulation was clearly effective. The FINCON factor was significant at the .0001 level. Second, neither the DISCLO main effect nor the DISCLO X FINCON interaction had significant effects on subjects' assessments of the companies' ability to pay increased wages and benefits. The statistical analysis confirmed the informal inspection of cell means, permitting the rejection of H1, but failing to provide evidence to reject H2 or H3.

Stated directly, subjects responded to the different levels of financial condition portrayed by the three fictitious companies by changing their assessments of

TABLE 4.3
ANALYSIS OF VARIANCE RESULTS
DEPENDENT VARIABLE: ATPAY

Source	d.f.	Mean Square	F	p
DISCLO (see note)	1	0.379	0.06	.8039
FINCON	2	423.595	121.19	.0001
DISCLO X FINCON	2	2.623	0.75	.4745
SUBJECT(DISCLO) (Error(between))	57	5.122		
Error (within)	114	3.495		
Total	176			

note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the demonstrator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

ability to pay. No evidence was found to indicate that subjects who received supplementary, inflation-adjusted disclosures made different assessments of ability to pay than those who received historical cost information only. Nor was there evidence to suggest that the financial condition effect varied between those subjects receiving and not receiving the supplementary materials.

Further investigations of differences between cell means across levels of FINCON were conducted using t-tests. The results of those tests appear in Table 4.4. Those results strengthened the initial finding of a significant FINCON main effect. All pairwise comparisons of cell means within levels of DISCLO yielded statistically significant differences. Put another way, subjects in both disclosure treatment groups were able to clearly distinguish the three fictitious companies from each other in terms of ability to pay based upon financial condition. No comparisons were made across the two levels of DISCLO because the overall F-test did not indicate the presence of a statistically significant effect.

4.3 Hypothesis Four

The fourth null hypothesis considered the effect of the disclosure level manipulation upon the variability of subjects' assessments of ability to pay. Statistically, the test of H4 compared the variances about the mean in each of the No Disclosure cells with the variances in the corresponding Disclosure cells. These comparisons took the

TABLE 4.4
PAIRWISE COMPARISONS OF ATPAY CELL MEANS
BY FINCON AND DISCLO

Comparison	t (114 d.f.)	p
No Disclosure:		
Strong vs. Weak	12.5210	< .0005
Strong vs. Moderate	3.8928	< .0005
Moderate vs. Weak	8.6281	< .0005
Disclosure:		
Strong vs. Weak	9.1528	< .0005
Strong vs. Moderate	2.2693	< .0250
Moderate vs. Weak	6.8835	< .0005

form of F-ratios. The results, which are presented in Table 4.5, indicated that a significant difference existed only in the Strong case.

Although this finding indicated that H4 could be partially rejected, another explanation of the difference was favored. Reviewing the mean assessments of ATPAY in Table 4.2 revealed that the Strong/No Disclosure cell had a mean score of 8.353. Thirty-seven of fifty-nine respondents selected the anchor point labeled "Clearly Able to Pay." Apparently the perceived differences between the three companies were too large to be accommodated by the nine point response scale. The artificial restriction of responses caused by the scale had at least three implications for the analysis.

First, the difference between the variances of the Strong/No Disclosure and Strong/Disclosure cells was not attributed to the DISCLO manipulation. Rather, the restricted response range was deemed responsible for the difference. The fourth hypothesis was not rejected.

A second consequence was that mean differences between evaluations of the Strong company and the other two may have been artificially minimized. Many subjects who selected the anchor point might have selected a value even further from the other two companies, had one been available. This was not considered an issue since the Strong company was found to be significantly different from the other two in the pairwise comparisons despite the conservative bias.

TABLE 4.5
COMPARISONS OF ATPAY VARIANCE
BY DISCLO

Comparison	F-ratio	Critical F-ratio (alpha = .05)
No Disclosure/Weak vs. Disclosure/Weak (d.f. = 33,24)	1.30	1.94
No Disclosure/Moderate vs. Disclosure/Moderate (d.f. = 33,24)	1.20	1.94
No Disclosure/Strong vs. Disclosure/Strong (d.f. = 24,33)	3.00*	1.89

The third issue concerned the validity of the t-tests used to make pairwise comparisons of cell means. The validity of a t-test depends on several assumptions about the distributions of the data. Among these is homogeneity of variance, which certainly did not hold in this study. Wilcoxon rank sum tests were performed to confirm the results of the pairwise comparisons of ATPAY cell means. The Wilcoxon procedure makes no such restrictive assumptions on the data.

The results of this analysis confirmed and strengthened those obtained using t-tests. Comparisons across levels of DISCLO yielded no significant differences. This finding was consistent with the absence of a DISCLO main effect in the ANOVA. The comparisons across levels of FINCON confirmed the results of the t-tests. Every pairwise comparison, corresponding to those presented in Table 4.4, resulted in a statistically significant difference.

4.4 Hypotheses Five and Six

The effects of the FINCON and DISCLO manipulations on subjects' confidence (CONFID) in their assessments of ability to pay were examined using an ANOVA similar to the one employed in the tests of the first three hypotheses. The model was identical to the one previously described, except that CONFID was substituted for ATPAY as the dependent variable. Means and standard deviations of the CONFID responses by FINCON and DISCLO appear in Table 4.6. The ANOVA results are presented in Table 4.7.

TABLE 4.6
CONFID MEANS AND STANDARD DEVIATIONS
BY FINCON AND DISCLO

DISCLO	FINCON		
No Disclosure: (n = 34)	Weak	Moderate	Strong
Mean	6.588	6.794	8.294
Standard Deviation	2.819	2.532	1.268
Disclosure: (n = 25)			
Mean	5.520	5.960	6.640
Standard Deviation	2.946	2.669	2.722

TABLE 4.7
RESULTS OF ANALYSIS OF VARIANCE
DEPENDENT VARIABLE: CONFID

Source	d.f.	Mean Square	F	p
DISCLO (see note)	1	60.741	4.62	.0359
FINCON	2	31.587	10.79	.0001
DISCLO X FINCON	2	2.570	0.88	.4185
SUBJECT(DISCLO) (Error(between))	57	13.158		
Error (within)	114	2.928		

Total	176			

note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the denominator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

Analysis of those results indicated that both the FINCON and DISCLO manipulations impacted subjects' confidence in their assessments of ATPAY. The main effects for those two variables were significant at .0001 and .0359 levels, respectively. As in the previous ANOVA, the interaction between FINCON and DISCLO was not significant. These results rejected both the fifth and sixth hypotheses. In other words, both the different levels of financial condition portrayed by the three fictitious companies and the different levels of disclosure presented to subjects had significant effects on these subjects' confidence in their assessments of ability to pay. As in the analysis of the first three hypotheses, overall F-ratios were only a first step in the analysis. Pairwise comparisons of cell means were made using t-tests to obtain more specific insight into the effects of FINCON and DISCLO on CONFID. The results of those tests are reported in Tables 4.8 and 4.9.

Analysis of those results suggested that the two main effects were driven primarily by the distinctiveness of the Strong company. Comparisons within levels of DISCLO revealed that subjects in both treatment groups were significantly more confident in their evaluations of the Strong company than of the Weak company. Within the No Disclosure cells, they were also more confident in evaluating the Strong company than the Moderate. No significant differences in confidence were observed between the Moderate and Weak companies in either treatment group. Comparing confidence across the two levels of DISCLO yielded

TABLE 4.8
PAIRWISE COMPARISONS OF CONFID CELL MEANS
BY FINCON

Comparison	t (114 d.f.)	p
No Disclosure:		
Strong vs. Weak	4.1108	< .0005
Strong vs. Moderate	3.6145	< .0005
Moderate vs. Weak	0.4964	> .2500
Disclosure:		
Strong vs. Weak	2.3140	< .0250
Strong vs. Moderate	1.4050	< .1000
Moderate vs. Weak	0.9091	> .1500

TABLE 4.9
PAIRWISE COMPARISONS OF CONFID CELL MEANS
BY DISCLO

No Disclosure vs. Disclosure	t (108 d.f.)*	p
Strong	2.4936	< .0100
Moderate	1.2573	> .1000
Weak	1.6101	< .1000

* T statistics were constructed using a blended error term. Degrees of freedom were computed using the Satterthwaite approximation suggested by Winer (1971, p. 545).

a significant difference only in the case of the Strong company. Apparently, the supplementary disclosures introduced some uncertainty into subjects' evaluations where very little existed in the absence of those disclosures. The supplementary disclosures did not significantly decrease confidence in the cases of the other two companies.

As was the case in the ATPAY analysis, the assumption of homogeneity of variance was violated. Wilcoxon rank sum tests were again performed to confirm the results of the pairwise comparisons of cell means. Replicating the tests reported in Table 4.8 yielded only two significant differences: between the Strong and Moderate companies and between the Strong and Weak companies, both within the No Disclosure treatment. No significant differences were observed within the Disclosure treatment. These results, while weaker than the t-test findings, supports the assertion that the distinctiveness of the Strong No Disclosure company was driving the FINCON main effect.

Comparisons across DISCLO levels (corresponding to those reported in Table 4.9) exactly confirmed the findings of the t-test. A significant difference was observed only in the Strong company cells. The distinctiveness of the Strong/No Disclosure condition was also the apparent driving force behind the DISCLO main effect.

4.5 Explanation of the Failure to Find a DISCLO Effect

A primary objective of this research was to assess the impact of supplementary, inflation-adjusted information on

labor's evaluations of ability to pay. As reported in section 4.2, the experiment failed to discover evidence that labor officials made any adjustment in response to the supplementary information presented. Attempts to find a significant DISCLO effect using analysis of covariance were also unsuccessful.¹ This section considers some alternative explanations for the failure to find an effect and attempts to narrow the possibilities.

One possible explanation for the failure to find a significant effect is that the manipulation was not strong enough. Examination of the pilot test results (see Appendix G) revealed that the disclosure manipulation produced a significant main effect. This led to the conclusion that the DISCLO manipulation was sufficiently strong. Apparently, the disparity between the pilot test results and those of the actual experiment was the result of some difference(s) between the student subjects and the labor officials. This was not entirely surprising, since accounting students are almost certainly more sensitive to sophisticated accounting and reporting techniques than most other populations of possible subjects. Further, the shortcomings of students as subjects have been widely discussed.

A second possibility is that subjects ignored the supplementary information, focusing only on the historical cost data. This would have rendered the manipulation

¹Results of analyses using three covariates are reported in Appendix H.

ineffective, regardless of its strength. A comparison was made of the average times needed to complete the response questionnaire in the two treatment groups. Subjects in the No Disclosure treatment spent an average of 21.6 minutes completing the response form. Those receiving the supplementary materials reported having spent an average of 30 minutes. The Wilcoxon rank sum procedure indicated that this difference was statistically significant at the .0002 level.

Another approach to determining whether subjects actually considered the supplementary information was to examine their reports of the degree to which they considered inflation in performing the experimental task. A post-test question intended to measure this yielded mean scores (on a nine point scale) of 3.242 in the No Disclosure group and 3.187 in the Disclosure group. The mean difference was not significant, statistically, and was not in the predicted direction.

The third item considered in determining whether subjects processed the supplementary information was the outcome of the CONFID analysis. These results indicated clearly that subjects in the Disclosure treatment group were less confident of their assessments of ATPAY than were their counterparts in the No Disclosure group. Because the two treatment groups were otherwise identical, the supplementary materials must have been responsible for this difference.

The foregoing analyses suggested that subjects had noticed and processed the supplementary disclosures to some

extent. One of the manipulation checks was ineffective at detecting this fact. The post test question was apparently flawed and measured a variable other than that intended by the researcher.

Having concluded that the DISCLO manipulation was effective, other explanations were sought for subjects' failure to adjust their estimates of ability to pay. One possibility was that subjects did not understand the disclosures and had no basis on which to adjust their estimates. The response questionnaire did not assess this directly, because the subjects' self-assessments of their knowledge of inflation accounting were not deemed meaningful.

A second possibility was that subjects believed that the impact of inflation was irrelevant to companies' ability to pay increased wages. The mean response to a post test question addressing this issue was 4.385 on a nine point scale. No significant differences existed between responses in the two DISCLO treatment groups. This outcome, almost exactly the midpoint of the scale, provided little help in answering the question of whether subjects considered the impact of inflation to be relevant in determining ability to pay. The strongest statement possible based on its outcome is that subjects did not consider inflation completely irrelevant.

A third possible explanation was that subjects elected to ignore the effect indicated by the supplementary materials. The subjects in this experiment had at least two

motivations to ignore the supplementary materials. First, the literature in this area indicates that labor is often skeptical of sophisticated accounting techniques which they believe are management ploys to understate ability to pay. Second, inflation-adjusted disclosures almost always make companies appear weaker and less able to pay. One would expect labor to tend to ignore information which systematically contradicts its avowed purpose (higher wages and benefits).

The foregoing explanations are all considered plausible. However, none is a direct indictment of inflation-adjusted accounting information. Any combination of the three could explain labor's failure to react to potentially useful information. The fourth explanation considered was that the supplementary disclosures had no information value. This explanation is consistent with prior research efforts assessing the usefulness of such disclosures. Those studies have indicated that inflation-adjusted attempts to date have merely garbled historical cost data. Because the financial statements used in the experiment were fictitious, no means was available to test the incremental information content of the supplementary disclosures.

To summarize, subjects apparently examined the supplementary, inflation-adjusted materials, but failed to adjust their estimates of ability to pay for one of four reasons: (1) they did not understand the disclosures and were, therefore, unable to make meaningful adjustments; (2)

they did not consider the impact of inflation relevant to the determination of financial condition and/or ability to pay increased wages; (3) they chose to ignore the reported impact of inflation on ability to pay; or, (4) the supplementary, inflation-adjusted disclosures possessed no information content beyond historical cost data.

All four of these possible explanations lead to the same conclusion; namely, that supplementary, inflation-adjusted disclosures prepared in accordance with generally accepted accounting principles have no effect on labor's assessments of companies' ability to pay increased wages and benefits.

The first three explanations considered leave the possibility that the disclosures might become useful in the future. Education and changes in attitude might lead labor to accept and incorporate inflation-adjusted data into its decisions. Explanation four, however, leaves no solution but the revision or elimination of the supplementary disclosures. This was apparently the conclusion of the FASB when it voted to discontinue the requirement of supplementary, inflation-adjusted disclosures. Chapter 5 considers these explanations in detail and sets forth conclusions.

4.6 Summary of Analysis and Results

Following a successful pilot test, the experimental materials were mailed to labor officials in the United States and Canada. The response rate was low (21.4%), but

early/late tests failed to detect any evidence of a non-response bias. The primary analysis was conducted employing financial condition (FINCON) and disclosure level (DISCLO) as independent variables. Subjects' assessments of ability to pay (ATPAY) served as the dependent variable. The analysis of variance indicated FINCON exerted a significant influence on subjects' assessments of ATPAY. Neither the DISCLO effect nor the DISCLO X FINCON interaction were statistically significant. Comparisons of cell means revealed that subjects were capable of clearly distinguishing between the three levels of financial condition portrayed by the fictitious companies. A related analysis found that no significant differences existed between the variability of responses among subjects in the two DISCLO treatment groups.

The secondary analysis employed the same independent variables and substituted subjects' confidence in their evaluations (CONFID) as the dependent variable. Both the FINCON and DISCLO main effects were significant in this ANOVA. Again, the DISCLO X FINCON interaction failed to have a significant impact on the dependent variable. Subsequent comparisons of cell means suggested that both main effects were driven by the distinctiveness of the Strong company. Subjects were substantially more confident in their evaluations of this profitable, liquid company than of its less attractive counterparts. These comparisons also revealed that the supplementary information introduced uncertainty into the evaluation of the Strong company, where

little existed in the No Disclosure treatment group. The supplements apparently had little or no effect in the cases of the Moderate and Weak companies.

Finally, the failure to detect a DISCLO main effect in the primary analysis was considered. Further investigation and reasoning led to the conclusion that the DISCLO manipulation had failed to impact assessments of ATPAY for one of four reasons. The first was that subjects had failed to understand the disclosures and were, thus, unable to make meaningful adjustments. A second explanation offered was that subjects considered the impact of inflation irrelevant to the determination of ATPAY. Third, perhaps subjects elected to ignore the negative signals contained in the supplementary disclosures. The final possibility considered was that the disclosures possessed no incremental information beyond the historical cost statements.

The first three explanations were deemed to be functionally equivalent. All three lead to the conclusion that supplementary, inflation-adjusted disclosures prepared in accordance with generally accepted accounting principles have no impact on labor's assessment of companies' ability to pay. The fourth was deemed a more serious indictment of SFAS 33 disclosures. A more complete discussion of these alternatives appears in Chapter 5 with the conclusions.

CHAPTER 5

SUMMARY, CONCLUSIONS, LIMITATIONS AND EXTENSIONS

5.0 Motivation for Study

The purpose of this dissertation was to study the use of supplementary, inflation-adjusted accounting disclosures by organized labor. The study was intended to ascertain whether labor groups incorporate such disclosures into their assessments of employers' ability to pay increased wages and benefits. The disclosures under examination were those prepared in accordance with the requirements of SFAS 33 and subsequent amending statements.

The research was motivated by two primary interests. The first followed from a section of SFAC 1 that discussed the primary users of accounting information. In that section, the FASB identified investors, creditors and their surrogates as the primary users of financial reporting information. A list of other users and potential users followed, including management, government agencies, customers, labor unions, and several others. The implicit assumption of SFAC 1 was that information useful to the primary user groups would also prove useful to members of these other groups. This study focused on the information needs of labor unions in order to learn more about how their needs compared to those of investors and creditors.

The controversy surrounding the desirability and usefulness of inflation-adjusted accounting measures

provided the second motivation for this dissertation. Because the disclosures prepared under the provisions of SFAS 33 were experimental, the FASB was actively seeking input to aid in the evaluation of those disclosures. Research published prior to the inception of this study centered on market measures of usefulness and on the traditional user groups, investors, creditors and their representatives. A second benefit of this study was the acquisition of knowledge about the costs and benefits of preparing inflation-adjusted disclosures.

5.1 Prior Research Efforts

Literature was reviewed in two areas prior to the design and execution of the dissertation. The first of these, research concentrating on labor's use of accounting information, yielded little empirical evidence. There were, however, several themes that were consistent across most of the articles reviewed. Virtually all of the authors agreed that labor uses published financial statements in preparing for negotiations. Labor officials are also apparently quite sophisticated in their understanding and analysis of the statements. Several of the articles pointed out areas in which financial reports are deficient for labor's needs. The variety of accounting techniques available and the resulting fluctuations in income and assets were also highlighted as areas of concern to labor researchers.

Research into the usefulness of inflation accounting was the second literature examined. These studies generally suggested that readers of financial reports are concerned with the potential impact of inflation on financial performance and condition. Most also concluded, however, that the disclosures prepared under current GAAP do not satisfy the needs of investors and creditors. This finding led several authors to the conclusion that the disclosures possess no information content beyond that contained in historical cost numbers.

5.2 Overview of Research

The strongest evidence that labor incorporates inflation-adjusted information into its assessments of ability to pay would have consisted of a demonstrated effect on the outcome of contract negotiations. Preliminary investigations revealed that there were far too many factors involved in the collective bargaining process for the researcher to hope to find the effect of one experimental disclosure. Accordingly, the dissertation focused on an intermediate judgment that serves as an input to negotiations. This was the subjective assessment of ability to pay.

An experiment was designed to detect the effects of two factors on subjects' assessments of ability to pay increased wages and benefits. The factors were financial condition

(FINCON) and the level of disclosure presented in the financial statements (DISCLO). Financial condition was presented at three levels through the use of three fictitious companies' financial statements. The two levels of disclosure were effected by either including or excluding supplementary, inflation-adjusted disclosures with the historical cost statements.

All subjects received all three sets of fictitious financial statements. One half the subjects received the supplementary disclosures, while the other half did not. The repeated measure on FINCON was a means of economizing on subjects. Subjective assessments of ability to pay were measured on a nine-point Likert-type scale as were subjects' reports of their confidence in those assessments.

Six hypotheses were proposed: Stated in null form, they were:

H1: Subjects' assessments of ability to pay will not be affected by the different levels of financial condition presented in the experimental materials.

H2: Subjects' assessments of ability to pay will not be affected by the levels of disclosure presented in the experimental materials.

H3: The effect of the financial condition manipulation on subjects' assessments of ability to pay will not differ across subjects who are presented with different levels of disclo in the experimental materials.

H4: The variability of subjects' assessments of ability to pay will not differ across the levels of disclosure presented in the experimental materials.

H5: Subjects' confidence in their evaluations of ability to pay will not be affected by the level of disclosure presented in the experimental materials.

H6: Subjects' confidence in their evaluations of ability to pay will not be affected by the different levels of financial condition presented in the experimental materials.

5.3 Conclusions

The results of the analysis permitted the rejection of only Hypotheses 1, 5, and 6. Stated directly, the evidence demonstrated that subjects were sensitive to the financial condition of the companies when evaluating ability to pay. Additionally, they were able to distinguish the three companies in terms of financial condition. The presence or absence of supplementary, inflation-adjusted disclosures had no noticeable effect on subjects' assessments of ability to pay; nor did the level of disclosure interact with financial condition in the determination of ability to pay. Variability in the assessments of ability to pay was also unaffected by the presence or absence of the supplementary materials.

Both financial condition and disclosure level were found to impact subjects' confidence significantly. Subjects were generally more confident in their evaluations of stronger companies than of weaker companies. Subjects were also found to be significantly less confident of their assessments when they had received the supplementary materials.

Four rival hypotheses were considered as explanations of the failure to find a significant DISCLO effect. One of these was that subjects did not understand the disclosures sufficiently to incorporate them into their assessments of ability to pay. A second possibility was that the labor officials who participated in the experiment did not consider the impact of inflation relevant in determining ability to pay. The third explanation followed from previous research efforts. This was the assertion that the disclosures possess no incremental information content. A final explanation was that subjects elected to disregard the information conveyed by the supplementary disclosures.

The question of whether subjects understood the disclosures was not answered definitively by the study's results. Subjects' self-assessments of understanding were not deemed meaningful, and were not sought. No other direct means of assessing subjects' understanding was apparent. However, regardless of the subjects' level of sophistication in analyzing financial statements, one fact was abundantly clear in the supplements. In every case, net income adjusted for changes in specific prices was dramatically lower than its historical cost counterpart. Even an individual with little or no financial training would undoubtedly notice this fact. Subjects must have understood at least this basic negative signal in the disclosures.

A posttest question measured subjects' perceptions of the relevance inflation's impact in assessing ability to pay. The responses in both groups were nearly the midpoint of a nine point scale, anchored by "Very Unimportant" and "Very Important." This did not demonstrate differing opinions between subjects receiving and not receiving the disclosures. It did, however, lead to the conclusion that the subjects believe inflation to be a non-trivial factor in the assessment of ability to pay.

The third explanation, no information content, was more difficult to dismiss. The bulk of prior research indicates that supplementary, inflation adjusted disclosures possess no incremental information beyond historical cost data. The results of this study tended not to support that conclusion. The reduction in subjects' confidence that accompanied the supplementary information provided clear evidence of information content. Unlike a market study, this experiment provided no evidence about the correctness of the supplements' effects. To make such an assessment would require an inappropriate normative judgment.

The foregoing reasoning leads to the conclusion that the subjects in this experiment processed the supplementary information, realized that it did not support the desired conclusion, and elected to disregard it. The result of that decision was no change in the estimates of ability to pay, but a significant decrease in subjects' confidence. This

explanation is consistent with the earlier discussion of labor's information gathering goals.

In summary, the results of this study provide support for the conclusions of previous authors and those of the FASB. Supplementary, inflation-adjusted financial statement information has no apparent impact on labor's assessments of ability to pay. Accordingly, there is no apparent reason to require presentation of the disclosures in their present form.

The second major conclusion of this dissertation is that labor's approach to financial statement analysis is colored by the desire to gather information which will support demands for increased wages. This finding calls into question the implicit assumption of SFAC 1 that information which is useful to investors and creditors will also prove useful to other financial statement readers.

5.4 Limitations

The conclusions drawn from this study must be interpreted in light of several limitations. The most obvious limitation to virtually any empirical project is the extent to which findings may appropriately be generalized. The generalizability of this dissertation's results is limited by several factors. First, experimental research must be an abstraction from real-world settings. The process of simplifying a rich, real-world environment into

a well-controlled experiment entails the risk of eliminating factors essential to understanding the phenomenon of interest. The possibility that this occurred in the design of the dissertation experiment limits the generalizability of any findings.

A second limiting factor is the fact that the subjects who participated in this study were selected judgmentally and did not necessarily represent a cross section of all potential labor officials and members who might have an interest in financial reports and inflation accounting. This was mitigated somewhat by the fact that the subjects selected represented the group most likely to be knowledgeable about the disclosures of interest. The potential impact of this restricted sample was intensified by the large number of non-respondents to the mailing. Although no evidence of a bias was found in the analysis, the low response rate introduced the possibility that respondents differed in some important way from non-respondents.

Another fact to be considered in considering the conclusions of this dissertation is that the experiment tested for the effects of inflation-adjusted supplements in only one basic situation. In the cases of all three companies, the supplementary information resulted in systematic decreases in income. No cases were constructed to consider the impact of such disclosures when their

results were neutral or positive. This limitation was partially mitigated by the fact that the overwhelming majority of real-world inflation adjustments examined yielded negative adjustments to income.

Finally, as an exploratory study, this dissertation was conducted without benefit of a well-developed literature on the use of accounting information by organized labor. Prior empirical work was almost nonexistent when compared to other areas of inquiry in accounting research. No comprehensive theory of labor's use of accounting numbers was available to guide the construction of hypotheses. Thus, the dissertation's conclusions could not assist in confirming or disproving any theory of behavior.

5.5 Extensions

The introductory section to this chapter described two primary motivations for this research. The first of these was to learn more about the needs for and uses of accounting information by organized labor. The second was to obtain additional evidence about the usefulness of inflation-adjusted accounting data. The experiment was successful in demonstrating that labor officials can perform a simple financial statement analysis and reach a logical conclusion. No support was found for the proposition that supplementary, inflation-adjusted accounting information has any impact on assessments of companies' ability to pay.

Of the two areas, the former appears to hold much more promise for accounting researchers. Very little has been published about labor's specific needs for accounting information. Nor has a comprehensive theory been suggested to explain how labor processes financial information about employers. This study demonstrated that labor has incentives to systematically ignore information detrimental to its case. Future explorations of this phenomenon might incorporate theories of behavior borrowed from psychology, political science and economics in the development of a theory.

The findings of this and other research about inflation accounting's use leave little doubt that its present form is not ideal. Further investigation into labor's use of such information would probably yield little of interest. However, labor groups certainly have a different relationship to corporations than do investors and creditors. Future studies of costs and benefits accompanying consideration of accounting disclosures need to include labor among the constituents of the firm. To exclude labor and the benefit it might derive from an item of disclosure might bias the accounting profession to find costs in excess of benefits in cases when the opposite is true. Among the specific areas which might be considered are (1) interim reporting, (2) segment reporting, (3)

reporting of lease obligations, and (4) reporting of pension obligations.

An article by Liberty and Zimmerman (1986) provides an example of the extension of accounting research to consider collective bargaining issues. Liberty and Zimmerman investigate the hypothesis that managements of companies entering labor negotiations reduce earnings in order to resist wage increases or possibly effect wage decreases. Examining quarterly and annual earnings announcements, the find no evidence to support the hypothesis that management suppresses earnings. This study does not consider the impact of accounting choices on reported income. Nor does it recognize the fact that inability to pay may only be a factor in extreme cases. Opportunities exist to extend Liberty and Zimmerman's work and learn more about the importance of accounting information to the collective bargaining process.

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APPENDICES

APPENDIX A

ABILITY TO PAY MEASURES CITED IN FOLEY AND MAUNDERS (1977)

ABILITY TO PAY INDICATORS CITED IN U.S. ARBITRATION CASES

Accumulated profits, accumulated surplus and past profits.

Profits of the industry (in industry wide bargaining).

Amount of dividend payments and dividends per share (on all classes of stock).

Working capital (amount and changes in).

Changes in invested capital--total and per share.

Effects of loss of line of credit on working capital.

Income before interest on income bonds.

Relationship of labour cost to total costs.

Rate of return (profit/capital funds invested).

Rate of profit on sales.

Profits before and after taxes.

Relationship of par value and market value of shares.

Profit after fixed charges (before dividends).

Departmental or divisional (versus entity) profits.

Earnings per share.

Profits in the future.

Net book value of plant and equipment.

Expenditure for ordinary maintenance of equipment.

Gross revenues (changes over a period of time in physical units of output and dollars).

The amount of company securities retired.

(reproduced from Foley and Maunders, 1977, pp. 130-31)

ABILITY TO PAY INDICATORS CITED IN U.K. NEGOTIATING BRIEFS

Turnover	77
Trading profit	66
Dividends	61
Profit before tax	55
Capital employed	52
Directors emoluments	49
Mark up (gross profit/sales)	49
Net profit/capital employed	49
Gross profit/capital employed	47
Aggregate remuneration	41
Gross assets	39
Net assets	38
Depreciation	37
Reserves	32
Sales/employee	32
Labour cost/total cost	31
Profit after tax	28
Trading profit/employee	21
Remuneration/employee	21
Output	15
Earnings for ordinary shareholders	9
Output/employee	8
Gross profit, before tax and interest	4
Cash flow	4
Investment grants	3
Output/man hours	3
Exports	2
Gross profit/employee	2
Labour costs	2
Scrip issue	2
Assets/income	1
Capacity utilisation	1
ash overflow	1
Dividend yield	1
Fixed assets	1
Fixed assets/employee	1
Sales/man hour	1
Share price	1
Total income	1
Trading profit/capital employed	1
Value added/employee	1
Total no. of Briefs	102

(reproduced from Foley and Maunders, 1977, p. 132)

APPENDIX B

INITIAL LETTERS, FOLLOW-UP LETTERS, COVER LETTER,
INSTRUCTIONS

Department of Accounting

January 1, 1900

Mr. Union Official
United States Labor Union
1000 Somewhere Street
Anywhere, USA 00000

Dear Mr. Official:

As part of a doctoral dissertation project, I am attempting to learn more about labor's needs for accounting information. I am asking you, as a labor official, to respond to a brief questionnaire. If there is another individual in your organization who is especially qualified to analyze accounting information, you may wish to forward these materials to them for completion.

Completing the questionnaire should require only about twenty minutes. A postage-paid envelope is enclosed for your convenience in returning the questionnaire. You will be provided a summary of the research results if you so desire. Your response will, of course, be confidential. The number on the envelope is for followup purposes only.

Your participation is vital to the success of this research. Thank you for your assistance.

Yours Truly,

R. David Mautz, Jr.
Assistant Professor

RDM/asp

Enclosures

Department of Accounting

January 1, 1900

Mr. Union Official
Canadian Labor Union
1000 Somewhere Street
Anywhere, Canada A1A 1A1

Dear Mr. Official:

As part of a doctoral dissertation project, I am attempting to learn more about labor's needs for accounting information. I am asking you, as a labor official, to respond to a brief questionnaire. If there is another individual in your organization who is especially qualified to analyze accounting information, you may wish to forward these materials to them for completion.

Completing the questionnaire should require only about twenty minutes. A return envelope and a dollar for postage are enclosed for your convenience in returning the questionnaire. You will be provided a summary of the research results if you so desire. Your response will, of course, be confidential. The number on the envelope is for followup purposes only.

Your participation is vital to the success of this research. Thank you for your assistance.

Yours Truly,

R. David Mautz, Jr.
Assistant Professor

RDM/asp

Enclosures

Department of Accounting

January 1, 1900

Mr. Union Official
United States Labor Union
1000 Somewhere Street
Anywhere, USA 00000

Dear Mr. Official:

Several weeks ago you received a letter asking that you respond to a questionnaire. A number of your colleagues have already done so, but I have not yet received your response. A complete set of responses is vital to the success of this research and to insure that its conclusions are accurate.

Will you take a few minutes to examine the enclosed materials and return the completed response form? I have enclosed a postage-paid, self-addressed envelope for your convenience. A cover letter from Mr. John Zalusky of the AFL-CIO is also enclosed.

Your participation is vital to the success of this research. I will look forward to receiving your response as soon as possible. If you have already responded, thank you for your assistance.

Yours Truly,

R. David Mautz, Jr.
Assistant Professor

RDM/asp

Enclosures

Department of Accounting

January 1, 1900

Mr. Union Official
Canadian Labor Union
1000 Somewhere Street
Anywhere, Canada A1A 1A1

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Yours Truly,

R. David Mautz, Jr.
Assistant Professor

RDM/asp

Enclosures

American Federation of Labor and Congress of Industrial Organizations



815 Sixteenth Street, N.W.
Washington, D.C. 20008
(202) 637-5000

EXECUTIVE COUNCIL

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October 16, 1985

Dear Fellow Trade Unionists:

We have agreed to help Professor David Mautz in conducting a research project on the understanding of financial reports. The study seems to be particularly timely in view of the number of unions that have found it necessary to assess corporate financial ability to pay, prospects of employee ownership, and participation in management.

Your cooperation in this study may be a significant demand of your time, but the results will be helpful in assessing the desirability of future training needs. We will share the results with you when they become available. We have been assured that all responses will be held confidential.

Sincerely,


John L. Emsky, Economist
Department of Economic Research

opeiu #2, afl-cio
JLZ:wb

I N S T R U C T I O N S

When responding to this questionnaire, assume that your employer (a labor union) is preparing to negotiate with three companies that operate in the same industry. Recent negotiations indicate that these employers are likely to resist wage and benefit increases on the grounds that it is not economically feasible to pay more for labor. They claim that inflation has impaired their company's financial condition and its ability to pay increased wages and benefits.

You have been asked to evaluate relative ability of the three companies to pay increased wages and benefits. Condensed financial reports for the three companies are enclosed. Each of the reports has been audited by a national accounting firm and received an unqualified (clean) opinion. The three companies employ about the same number of union employees and pay wages and benefits which approximate industry averages.

Because of the limited data available, you should ignore the need for cost of living adjustments and the need to maintain comparable wages and benefits at the three companies. FOCUS ONLY ON THE IMPACT OF EACH COMPANY'S FINANCIAL CONDITION UPON ITS RELATIVE ABILITY TO PAY INCREASED WAGES AND BENEFITS.

Please return your completed response form in the enclosed envelope at your earliest convenience. Remember, individual responses will not be identified in the research report.

Thank you for your participation in this study. If you have any questions, please contact:

R. David Mautz, Jr.
Department of Accounting
College of Business
Virginia Polytechnic Institute & State University
Blacksburg, VA 24061

Phone: (703) 961-6591 (Office)
(703) 552-6598 (Home)

APPENDIX C

FICTITIOUS FINANCIAL STATEMENTS

Jones Corporation
Statement of Earnings
For the Years Ended 12-31-19A7 and 12-31-19A6
(in thousands of dollars)

	19A7	19A6
Net Sales	\$850,661	\$761,455
Cost of Goods Sold	636,648	585,261
Gross Profit on Sales	\$214,013	\$176,194
Selling, General, & Administrative Expenses	74,055	61,686
Depreciation & Amortization Expense	20,069	22,031
Income before Income Taxes	\$119,889	\$ 92,477
Income Tax Expense	56,348	42,077
Net Income	\$ 63,541	\$ 50,400
	=====	=====
Earnings Per Common Share	\$ 4.89	\$ 3.88
	=====	=====

Jones Corporation
Statements of Financial Position
12-31-19A7 and 19A6
(in thousands of dollars)

	19A7	19A6
ASSETS		
Current Assets:		
Cash and Temporary Investments	\$ 50,362	\$ 39,500
Accounts Receivable-Net	101,686	98,685
Inventory	135,609	119,681
Other Current Assets	8,252	7,496
Total Current Assets	\$295,909	\$265,362
Plant and Equipment-Net	149,701	146,876
Other Assets	7,752	9,976
Total Assets	\$453,362	\$422,214
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts Payable	\$ 72,826	\$ 69,300
Other Current Liabilities	13,380	4,676
Total Current Liabilities	\$ 86,206	\$ 73,976
Long Term Debt	71,339	91,181
Total Liabilities	\$157,545	\$165,157
Stockholders' Equity:		
Common Stock, \$1 par value, 13,000 shares issued and outstanding	\$ 13,000	\$ 13,000
Paid in Capital in Excess of Par	20,418	20,418
Retained Earnings	262,399	223,639
Total Stockholders' Equity	\$295,817	\$257,057
Total Liabilities & Stockholders' Equity	\$453,362	\$422,214
	=====	=====

Jones Corporation
Statement of Changes in Financial Position
For the Years Ended 12-31-19A7 and 12-31-19A6
(in thousands of dollars)

	19A7	19A6
SOURCES OF CASH AND MARKETABLE SECURITIES		
Operations:		
Net Income (Loss)	\$63,541	\$50,400
Accrual to Cash Adjustments		
Depreciation and Amortization Expense	20,069	22,031
Decrease in Accounts Receivable	(3,001)	(15,788)
Increase in Inventory	(15,928)	(10,016)
Increase in Other Current Assets	(756)	(499)
Increase in Accounts Payable	3,526	5,133
Increase in Other Current Liabilities	8,704	3,785
Cash and Marketable Securities Provided by Operations	\$76,155	\$55,046
Other Sources:		
Sale of Plant Assets	2,224	992
Total Sources of Cash and Marketable Securities	\$78,379	\$56,038
USES OF CASH AND MARKETABLE SECURITIES		
Net Addition to Plant Assets	\$22,894	\$12,463
Net Reduction of Long Term Debt	19,842	14,367
Declaration and Payment of Cash Dividends	24,781	20,664
Total Uses of Cash and Marketable Securities	\$67,517	\$47,494
Net Increase in Cash and Marketable Securities	\$10,862	\$ 8,544
	=====	=====

Miller Corporation
Statement of Earnings
For the Years Ended 12-31-19A7 and 12-31-19A6
(in thousands of dollars)

	19A7	19A6
Net Sales	\$762,799	\$688,459
Cost of Goods Sold	619,925	567,639
Gross Profit on Sales	\$142,874	\$120,820
Selling, General, & Administrative Expenses	85,462	70,243
Depreciation & Amortization Expense	19,066	20,929
Income before Income Taxes	\$ 38,346	\$ 29,648
Income Tax Expense	16,883	13,228
Net Income	\$ 21,463	\$ 16,420
	=====	=====
Earnings Per Common Share	\$ 1.74	\$ 1.33
	=====	=====

Miller Corporation
Statements of Financial Position
12-31-19A7 and 19A6
(in thousands of dollars)

	19A7	19A6
ASSETS		
Current Assets:		
Cash and Temporary Investments	\$ 33,693	\$ 26,426
Accounts Receivable-Net	93,227	99,301
Inventory	115,004	119,246
Other Current Assets	7,839	7,121
Total Current Assets	\$249,763	\$252,094
Plant and Equipment-Net	130,743	139,532
Other Assets	7,364	9,477
Total Assets	\$387,870	\$401,103
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts Payable	\$ 69,185	\$ 81,035
Other Current Liabilities	12,711	8,216
Total Current Liabilities	\$ 81,896	\$ 89,251
Long Term Debt	67,771	86,526
Total Liabilities	\$149,667	\$175,777
Stockholders' Equity:		
Common Stock, \$1 par value, 12,350 shares issued and outstanding	\$ 12,350	\$ 12,350
Paid in Capital in Excess of Par	19,397	19,397
Retained Earnings	206,456	193,579
Total Stockholders' Equity	\$238,203	\$225,326
Total Liabilities & Stockholders' Equity	\$387,870	\$401,103
	=====	=====

Miller Corporation
Statement of Changes in Financial Position
For the Years Ended 12-31-19A7 and 12-31-19A6
(in thousands of dollars)

	19A7	19A6
SOURCES OF CASH AND MARKETABLE SECURITIES		
Operations:		
Net Income (Loss)	\$21,463	\$16,420
Accrual to Cash Adjustments		
Depreciation and Amortization Expense	19,066	20,929
Decrease in Accounts Receivable	6,074	1,400
Decrease in Inventory	4,242	511
Increase in Other Current Assets	(718)	(1,565)
Decrease in Accounts Payable	(11,850)	(2,798)
Increase in Other Current Liabilities	4,495	854
Cash and Marketable Securities Provided by Operations	\$42,772	\$35,751
Other Sources:		
Sale of Plant Assets	2,113	62
Total Sources of Cash and Marketable Securities	\$44,885	\$35,813
USES OF CASH AND MARKETABLE SECURITIES		
Net Addition to Plant Assets	\$10,277	\$11,840
Net Reduction of Long Term Debt	18,755	13,649
Declaration and Payment of Cash Dividends	8,586	6,765
Total Uses of Cash and Marketable Securities	\$37,618	\$32,254
Net Increase in Cash and Marketable Securities	\$ 7,267	\$ 3,559
	=====	=====

Wilson Corporation
Statement of Earnings
For the Years Ended 12-31-19A7 and 12-31-19A6
(in thousands of dollars)

	19A7	19A6
Net Sales	\$808,849	\$746,714
Cost of Goods Sold	696,596	632,129
Gross Profit on Sales	\$112,253	\$114,585
Selling, General, & Administrative Expenses	105,873	82,375
Depreciation & Amortization Expense	21,072	23,133
Income before Income Taxes	(\$ 14,692)	\$ 9,077
Income Tax Expense	---	3,891
Net Income	(\$ 14,692)	\$ 5,186
	=====	=====
Earnings Per Common Share	(\$ 1.08)	\$.38
	=====	=====

Wilson Corporation
Statements of Financial Position
12-31-19A7 and 19A6
(in thousands of dollars)

	19A7	19A6
ASSETS		
Current Assets:		
Cash and Temporary Investments	\$ 6,467	\$ 20,446
Accounts Receivable-Net	132,427	114,134
Inventory	135,496	136,179
Other Current Assets	1,665	7,871
Total Current Assets	\$276,055	\$278,630
Plant and Equipment-Net	144,505	154,220
Other Assets	8,140	10,475
Total Assets	\$428,700	\$443,325
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts Payable	\$131,467	\$124,565
Other Current Liabilities	29,049	24,080
Total Current Liabilities	\$160,516	\$148,645
Long Term Debt	143,832	155,636
Total Liabilities	\$304,348	\$304,281
Stockholders' Equity:		
Common Stock, \$1 par value, 13,650 shares issued and outstanding	\$ 13,650	\$ 13,650
Paid in Capital in Excess of Par	21,439	21,439
Retained Earnings	89,263	103,955
Total Stockholders' Equity	\$124,352	\$139,044
Total Liabilities & Stockholders' Equity	\$428,700	\$443,325
	=====	=====

Wilson Corporation
Statement of Changes in Financial Position
For the Years Ended 12-31-19A7 and 12-31-19A6
(in thousands of dollars)

	19A7	19A6
SOURCES OF CASH AND MARKETABLE SECURITIES		
Operations:		
Net Income (Loss)	(\$14,692)	\$ 5,186
Accrual to Cash Adjustments		
Depreciation and Amortization Expense	21,072	23,133
Increase in Accounts Receivable	(18,293)	(15,311)
Decrease in Inventory	683	42
Decrease in Other Current Assets	6,206	511
Increase in Accounts Payable	6,902	1,219
Increase in Other Current Liabilities	4,969	300
Cash and Marketable Securities Provided by Operations	\$ 6,847	\$15,080
Other Sources:		
Sale of Plant Assets	2,335	4,663
Total Sources of Cash and Marketable Securities	\$ 9,182	\$19,743
USES OF CASH AND MARKETABLE SECURITIES		
Net Addition to Plant Assets	\$11,357	\$13,086
Net Reduction of Long Term Debt	11,804	15,085
Total Uses of Cash and Marketable Securities	\$23,161	\$28,171
Net Decrease in Cash and Marketable Securities	(\$13,979)	(\$ 8,428)
	=====	=====

SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Inventories are valued on a last-in, first out (LIFO) basis.

Plant Assets are stated at cost. Depreciation is generally computed using accelerated methods.

APPENDIX D

SUPPLEMENTARY, INFLATION-ADJUSTED INFORMATION

Jones Corporation
Statement of Earnings Adjusted for Changing Prices
For the Year Ended 12-31-A7
(in thousands of dollars)

	As Reported	Adjusted For Changes In
	HISTORICAL	SPECIFIC PRICES
	COSTS	COSTS
Net Sales	\$850,661	\$850,661
Cost of Goods Sold	636,648	681,213
Selling, General, & Administrative Expenses	74,055	74,055
Depreciation & Amortization Expense	20,069	36,124
Income before Income Taxes	\$119,889	\$ 59,269
Income Tax Expense	56,348	56,348
NET INCOME	<u>\$ 63,541</u>	<u>\$ 2,921</u>
	=====	=====
Gain from Decline in Purchasing Power of Net Amounts Owed		\$ 1,233
		=====
Increase in General Price Level of Inventories and Fixed Assets		\$ 27,104
Effect of Increase in Specific Prices of Inventories and Fixed Assets		19,401
Excess of Increase in General Price Level Over Increase in Specific Prices		\$ 7,703
		=====

NOTE: At 12-31-A7, the current cost of inventory was \$187,140 and the current cost of fixed assets, net of accumulated depreciation, was \$276,947.

Five-Year Comparison of Selected Supplementary Data Adjusted for the Effects of Changing Prices

In thousands of average 19A7 dollars	19A7	19A6	19A5	18A4	19A3
Net Sales	\$850,661	\$761,455	\$698,583	\$659,041	\$639,846
Current Cost Information:					
Net Income (Loss)	2,921	(8,193)	(11,654)	-----	-----
Net Income (Loss) Per Share	.22	(.63)	(.90)	-----	-----
Excess of Increase in General Price Level over Increase in Specific Prices	7,703	1,695	2,475	-----	-----
Net Assets at Year-End	474,594	370,162	307,234	-----	-----
Purchasing Power Gain	1,233	1,911	3,191	-----	-----
Cash Dividends Per share	1.91	1.59	1.27	1.01	.97
Market Price Per Share at Year-End	78.24	56.26	45.07	46.11	40.30
Average Consumer Price Index	275.9	251.3	222.3	198.4	183.5

Miller Corporation
Statement of Earnings Adjusted for Changing Prices
For the Year Ended 12-31-A7
(in thousands of dollars)

	As Reported	Adjusted For Changes In Specific Prices
	HISTORICAL COSTS	CURRENT COSTS
Net Sales	\$762,799	\$762,799
Cost of Goods Sold	619,925	663,320
Selling, General, & Administrative Expenses	85,462	85,462
Depreciation & Amortization Expense	19,066	34,319
Income before Income Taxes	\$ 38,346	(\$ 20,302)
Income Tax Expense	16,883	16,883
NET INCOME (LOSS)	<u>\$ 21,463</u> =====	<u>(\$ 37,185)</u> =====
Gain from Decline in Purchasing Power of Net Amounts Owed		\$ 3,287 =====
Increase in General Price Level of Inventories and Fixed Assets		\$ 23,346
Effect of Increase in Specific Prices of Inventories and Fixed Assets		16,711
Excess of Increase in General Price Level Over Increase in Specific Prices		\$ 6,635 =====

NOTE: At 12-31-A7, the current cost of inventory was \$158,706 and the current cost of fixed assets, net of accumulated depreciation, was \$241,875.

Five-Year Comparison of Selected Supplementary Data Adjusted for the Effects of Changing Prices

In thousands of average
19A7 dollars

	19A7	19A6	19A5	18A4	19A3
Net Sales	\$762,799	\$688,459	\$631,614	\$590,293	\$562,184
<u>Current Cost Information:</u>					
Net Income (Loss)	(37,185)	(40,058)	(63,550)	-----	-----
Net Income (Loss) Per Share	(3.01)	(3.24)	(5.15)	-----	-----
Excess of Increase in General Price Level over Increase in Specific Prices	6,635	1,458	2,129	-----	-----
Net Assets at Year-End	393,037	324,469	269,309	-----	-----
Purchasing Power Gain	3,287	3,550	4,154	-----	-----
Cash Dividends Per share	.70	.55	.46	.31	.30
Market Price Per Share at Year-End	19.14	13.59	11.42	12.17	10.80
Average Consumer Price Index	275.9	251.3	222.3	198.4	183.5

Wilson Corporation
Statement of Earnings Adjusted for Changing Prices
For the Year Ended 12-31-A7
(in thousands of dollars)

	As Reported HISTORICAL COSTS	Adjusted For Changes in Specific Prices CURRENT COSTS
Net Sales		
Cost of Goods Sold	\$808,849	\$808,849
Selling, General, & Administrative Expenses	696,596	745,358
Depreciation & Amortization Expense	105,873	105,873
Income before Income Taxes	21,072	37,930
Income Tax Expense	(\$ 14,692)	(\$ 80,312)
	---	---
NET INCOME (LOSS)	(\$ 14,692)	(\$ 80,312)
	=====	=====
Gain from Decline in Purchasing Power of Net Amounts Owed		\$ 13,495
		=====
Increase in General Price Level of Inventories and Fixed Assets		\$ 26,600
Effect of Increase in Specific Prices of Inventories and Fixed Assets		19,040
Excess of Increase in General Price Level Over Increase in Specific Prices		\$ 7,560
		=====

NOTE: At 12-31-A7, the current cost of inventory was \$186,984 and the current cost of fixed assets, net of accumulated depreciation, was \$267,334.

Five-Year Comparison of Selected Supplementary Data Adjusted for the Effects of Changing Prices

In thousands of average
19A7 dollars

	19A7	19A6	19A5	18A4	19A3
Net Sales	\$808,849	\$746,714	\$685,059	\$784,393	\$737,329

Current Cost Information:

Net Income (Loss)	(80,312)	(57,569)	(49,651)	-----	-----
Net Income (Loss) Per Share	(5.88)	(4.22)	(3.64)	-----	-----
Excess of Increase in General Price Level over Increase in Specific Prices	7,560	1,663	2,428	-----	-----
Net Assets at Year-End	298,669	200,223	166,185	-----	-----
Purchasing Power Gain	13,495	8,706	5,213	-----	-----
Cash Dividends Per share	-0-	-0-	.11	.21	.17
Market Price Per Share at Year-End	7.83	8.16	8.73	9.54	8.61
Average Consumer Price Index	275.9	251.3	222.3	198.4	183.5

SUPPLEMENTARY INFORMATION ON THE EFFECTS OF INFLATION
(UNAUDITED)

This supplementary information provides measurements of the effects of changing prices on historical cost financial data using the current cost method.

Current Cost

Current cost data represent the current cost of the assets of the company and reflect specific price changes of those assets. Current costs for property, plant and equipment were developed on the basis of externally generated indices appropriate to the industries in which the Company operates. Depreciation was calculated on the indexed cost of these properties, using the same methods and lives as were used in the historical cost financial statements. Inventories and cost of goods sold were measured on the basis of current production of replacement cost.

Purchasing Power Gain

A separate disclosure is provided of the gain resulting from the decline in purchasing power of net amounts owed. The decline in purchasing power is measured by increases in the Consumer Price Index for Urban Consumers (CPI-U).

Conclusion

Under the current cost method, net income is lower than as reported in the historical cost statement of income. This adjustment results from increases in two expense items. Cost of goods sold includes additional costs resulting from the restatement of inventories to their current costs. Depreciation expense is higher due to the upward indexation of property, plant and equipment values to reflect the estimated cost of replacement. The provision for income taxes has not been reduced since the cost increases resulting from inflation are not deductible for tax purposes.

APPENDIX E

RESPONSE FORM

RESPONSES

Please respond to each question and return this sheet in the postage-paid envelope. Thank you for your participation.

1. On the scales below, assess the relative ability of each company to pay increased wages and benefits. (circle one point)

JONES	*	*	*	*	*	*	*	*	*	*
	Clearly									Clearly
	Unable									Able

MILLER	*	*	*	*	*	*	*	*	*	*
	Clearly									Clearly
	Unable									Able

WILSON	*	*	*	*	*	*	*	*	*	*
	Clearly									Clearly
	Unable									Able

2. On the scales below, indicate your confidence in the evaluations you made in part 1. (circle one point)

JONES	*	*	*	*	*	*	*	*	*	*
	Very									Very
	Uncertain									Confident

MILLER	*	*	*	*	*	*	*	*	*	*
	Very									Very
	Uncertain									Confident

WILSON	*	*	*	*	*	*	*	*	*	*
	Very									Very
	Uncertain									Confident

3. Respond to each of the following questions in the manner indicated.

What is your official title or position?

How many years have you held your current position?

How many years have you worked for a labor organization or in a closely related position?

What is your highest level of education?

- ☐ High School Diploma
- ☐ Some College
- ☐ Bachelor's Degree
- ☐ Some Graduate Education
- ☐ Master's Degree
- ☐ Doctor's Degree
- ☐ Other (please specify) _____

In what field or major is your education concentrated?

- ☐ Accounting
- ☐ Business
- ☐ Engineering
- ☐ Law
- ☐ Liberal Arts
- ☐ Science
- ☐ Other (please specify) _____

What professional designations or certifications do you hold?
(please list) _____

How often have you examined or analyzed corporate financial statements in conjunction with your work?

- ☐ Very Often
- ☐ Often
- ☐ Occasionally
- ☐ Almost Never
- ☐ Never

How useful is the information presented in published financial statements in preparing for and conducting negotiations?

- ☐ Very useful
- ☐ Useful
- ☐ Somewhat useful
- ☐ Of very little use
- ☐ Completely useless

What other types of financial information (not available in the published financial statements) would you find useful in preparing for or conducting negotiations?

4. In the spaces below, rank the three companies (JONES, MILLER, and WILSON) from strongest to weakest in terms of their overall financial condition.

_____ Strongest
_____ Middle
_____ Weakest

5. Evaluate the following statement. (circle one point)

"The impact of inflation on a company's financial condition is an important factor to be considered in determining that company's ability to pay increased wages and benefits."

* * * * *

Strongly Disagree Strongly Agree

6. On the scales below, indicate the extent to which you considered the impact of inflation when assessing each company's financial condition. (circle one point)

JONES * * * * *

Not At All A Great Deal

MILLER * * * * *

Not At All A Great Deal

WILSON * * * * *

Not At All A Great Deal

7. Evaluate the following statement. (circle one point)

"The ability of a firm to pay increased wages and benefits is an important factor in determining an appropriate wage and benefit level."

* * * * *

Strongly Disagree Strongly Agree

8. Please use this space to make any comments you would like to address to the researcher.

9. Approximately how many minutes did you spend completing this questionnaire? _____
10. Would you like to receive a summary of the results of this research? YES/NO

Thank you for your participation in this study. Please check to make sure you have answered all questions and return this form in the postage-paid envelope.

APPENDIX F

EARLY/LATE T-TESTS

TABLE F1
PAIRWISE COMPARISONS OF SELECTED CELL MEANS
BY EARLY AND LATE

Early vs. Late	t (175 d.f.)	p
ATPAY	.6569	> .25
CONFID	.3717	> .25
INFIMP	.0902	> .25
INFCON	1.407	< .10
ATPIMP	.046	> .25

APPENDIX G

PILOT TEST RESULTS

Prior to the execution of this experiment, a pilot test was conducted to assess the effectiveness of the experimental manipulations and check the materials for errors and other sources of extraneous variation. The pilot test subjects were senior accounting majors and first year graduate students in accounting. They were assigned randomly to treatments, with the restriction that each of the two student groups be equally divided between the two treatment groups.

Responses from the two groups yielded 23 subjects in the No Disclosure cells and 15 in the Disclosure cells. Personal conversations with the non-respondents indicated that the majority had failed to respond as a result of heavy coursework demands. Several of the non-respondents in both treatment groups mentioned the length of the experimental materials as an additional factor. Tables G1 through G7 present the results of the pilot test analyses. The statistics contained therein supported the following general conclusions:

1. Both the FINCON and DISCLO manipulations were effective. Results of the ANOVA employing ATPAY as the dependent variable indicated that both of these main effects were statistically significant. Subsequent pairwise comparisons showed that subjects were able to discern the fictitious companies from each other with great accuracy, and that assessments of ability to pay varied

significantly across the two disclosure treatments in two of the three cases.

2. Variation about the mean assessment of ability to pay was apparently unaffected by the different levels of disclosure. One of three comparisons between subjects receiving supplementary materials and those receiving historical cost information only yielded a significant difference. This difference occurred in the Strong cells and was attributed to the fact that the mean score in the Strong/No Disclosure was so close to the endpoint as to severely diminish the potential for variation.
3. A secondary analysis employing CONFID as the dependent variable failed to produce meaningful results. The CONFID ANOVA yielded only one statistically significant factor, the FINCON X DISCLO interaction term. Observation of cell means and a graphical analysis failed to uncover any relationship which the researcher could interpret. Apparently, the student subjects who participated in the pilot test were sufficiently confident in their analytical abilities that the manipulations effected had no noticeable effect.
4. No major inaccuracies were discovered in the experimental materials as a result of the pilot test. Nor were any of the materials deemed overly difficult to comprehend.

Although a few of the subjects suggested that the task was too long, the researcher concluded that it could not be shortened materially without sacrificing the realism needed to evoke meaningful responses.

The balance of this appendix consists of Tables G1 through G7. These tables are referenced in the main body of Chapter 4 when they are helpful in understanding the experimental results.

TABLE G1
MEANS AND STANDARD DEVIATIONS OF ATPAY
BY FINCON AND DISCLO

DISCLO	FINCON		
No Disclosure (n = 23)	Weak	Moderate	Strong
Mean	2.783	6.043	7.609
Standard Deviation	1.858	1.492	1.076
Disclosure (n = 15)			
Mean	2.467	5.000	5.733
Standard Deviation	1.807	1.813	2.576

TABLE G2
ANALYSIS OF VARIANCE RESULTS
DEPENDENT VARIABLE: ATPAY

Source	d.f.	Mean Square	F	p
DISCLO (see note)	1	31.667	11.71	.0016
FINCON	2	157.896	47.83	.0001
DISCLO X FINCON	2	5.528	1.67	.1946
SUBJECT(DISCLO) (Error(between))	36	2.704		
Error (within)	72	3.301		
Total	113			

note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the denominator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

TABLE G3
PAIRWISE COMPARISONS OF ATPAY CELL MEANS
BY FINCON AND DISCLO

Comparison	t (72 d.f.)	p
No Disclosure:		
Strong vs. Weak	9.0071	< .0005
Strong vs. Moderate	2.9227	< .005
Moderate vs. Weak	6.0844	< .0005
Disclosure:		
Strong vs. Weak	4.9231	< .0005
Strong vs. Moderate	1.1049	> .15
Moderate vs. Weak	3.8182	< .0005
No Disclosure vs. Disclosure:		
Strong	3.2096	< .005
Moderate	1.7844	< .05
Weak	.5406	> .25

TABLE G4
COMPARISONS OF ATPAY VARIANCE
BY DISCLO

Comparison	F-ratio	Critical F-ratio (alpha = .05)
No Disclosure/Weak vs. Disclosure/Weak (d.f. = 22,14)	1.0573	2.15
No Disclosure/Moderate vs. Disclosure/Moderate (d.f. = 14,22)	1.4766	2.39
No Disclosure/Weak vs. Disclosure/Weak (d.f. = 14,22)	5.7314*	2.39

TABLE G5
MEANS AND STANDARD DEVIATIONS OF CONFID
BY FINCON AND DISCLO

DISCLO	FINCON		
No Disclosure (n = 23)	Weak	Moderate	Strong
Mean	6.174	6.304	6.130
Standard Deviation	1.614	1.460	1.660
Disclosure (n = 15)			
Mean	6.800	5.400	6.133
Standard Deviation	1.656	0.986	1.642

TABLE G6
ANALYSIS OF VARIANCE RESULTS
DEPENDENT VARIABLE: CONFID

Source	d.f.	Mean Square	F	p
DISCLO (see note)	1	0.229	0.06	.8156
FINCON	2	3.676	2.52	.0873
DISCLO X FINCON	2	5.377	3.69	.0298
SUBJECT(DISCLO) (Error(between))	36	4.156		
Error (within)	72	1.457		
Total	113			

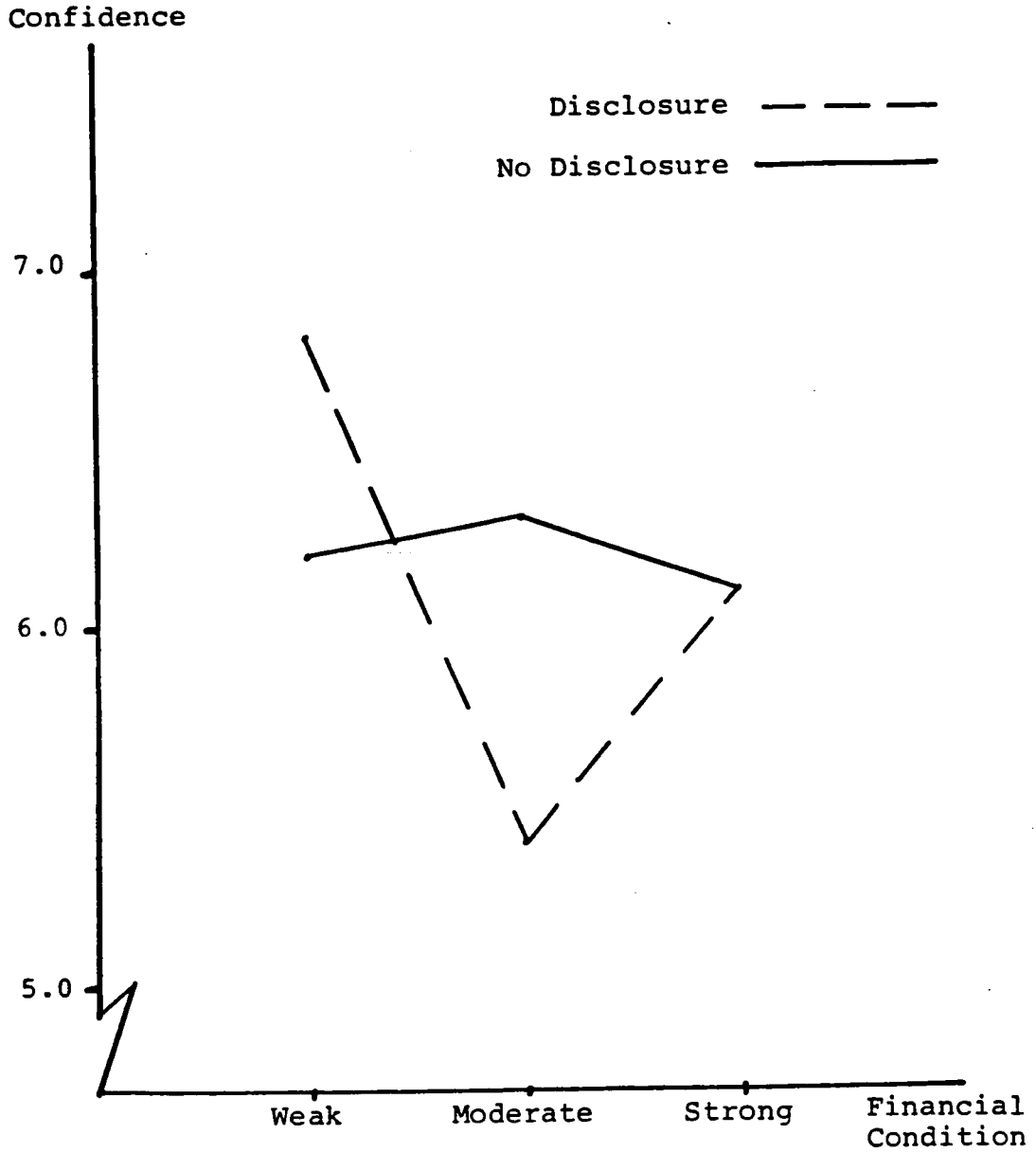
note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the denominator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

TABLE G7

GRAPH OF THE DISCLO X FINCON INTERACTION

DEPENDENT VARIABLE: CONFID



APPENDIX H

ANALYSIS OF COVARIANCE RESULTS

TABLE H1
ANALYSIS OF COVARIANCE RESULTS
DEPENDENT VARIABLE: ATPAY
COVARIATE: ATPIMP

Source	d.f.	Mean Square	F	p
ATPIMP (Covariate)	1	1.698	0.57	.4523
DISCLO (see note)	1	20.234	1.73	> .10
FINCON	2	29.508	9.88	.0001
DISCLO X FINCON	2	2.684	0.90	.4100
SUBJECT(DISCLO) (Error (between))	56	11.728		
Error (within)	111	2.986		
Total	173			

note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the denominator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

TABLE H2
ANALYSIS OF COVARIANCE RESULTS
DEPENDENT VARIABLE: ATPAY
COVARIATE: INFCON

Source	d.f.	Mean Square	F	p
INFCON (Covariate)	1	0.065	0.02	.8834
DISCLO (see note)	1	54.715	4.151	< .05
FINCON	2	30.570	10.22	.0001
DISCLO X FINCON	2	2.893	0.97	.3833
SUBJECT(DISCLO) (Error (between))	56	13.181		
Error (within)	111	2.990		
Total	173			

note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the denominator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

TABLE H3
ANALYSIS OF COVARIANCE RESULTS

DEPENDENT VARIABLE: ATPAY

COVARIATE: INFIMP

Source	d.f.	Mean Square	F	p
INFIMP (Covariate)	1	0.423	0.14	.7076
DISCLO (see note)	1	44.863	3.36	< .10
FINCON	2	32.574	10.90	.0001
DISCLO X FINCON	2	2.801	0.94	.3946
SUBJECT(DISCLO) (Error (between))	56	13.362		
Error (within)	111	2.987		
Total	173			

note:

The F-ratio used to test the DISCLO main effect was constructed using the between subjects error term (SUBJECT(DISCLO)) in the denominator as suggested by Winer (1971, p. 521). The other tests were performed using the residual error term.

VITA

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