An Evaluation of the Entity Theory as a Partial Solution to the Non-Comparability Enigma of Inter-firm Income Statement Analysis

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AN EVALUATION OF THE ENTITY THEORY AS A PARTIAL SOLUTION TO THE NON-COMPARABILITY ENIGMA OF INTER-FIRM INCOME STATEMENT ANALYSIS
AN EVALUATION OF THE ENTITY THEORY
AS A PARTIAL SOLUTION TO THE
NON-COMPARABILITY ENIGMA OF
INTER-FIRM INCOME STATEMENT ANALYSIS

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

By

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CHAPTER I

INTRODUCTION

Accounting has often been characterized as the language of business. A business language, as any language, should have a primary reason for existence; i.e., the effective completion of the communication process. Many elements are important in the communication process but three are indispensable:

1. The observer-communicator,
2. Statements about events,
3. The user of statements about events or the communicatee.

In the accounting process, the accountant serves as the observer-communicator, the accounting statements contain the messages or statements about events, and the recipients of the accounting reports are the communicatee. Baladouni has pointed out that:

As observer-communicator, the accountant is responsible for selecting events and producing statements about them. To be able to perform these functions, the accountant must first of all determine the needs of users of accounting statements, a decision of utmost importance. In fact, these needs constitute the only justification for communication to occur.  

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2 Ibid.
Since the communication process is bilateral, the communicatee should become the communicator when his needs as user are not being met. In accounting it is frequently impossible for the recipients of financial statements to communicate directly with the preparers of the statements. However, through the media of speeches, articles, monographs, books, and the like, the users of financial statements are able to reverse their role and become the communicator.

The message that has been frequently transmitted to accountants in recent years is that the investor is the primary user of published financial statements, that he uses them for guidance in investment decisions, and that he wishes to be able to compare the results of operations of various firms under consideration as possible investments. The importance of the investor group as users of financial statements is demonstrated by the emphasis given by the American Institute of Accountants Study Group on Business Income:

Let us consider two major purposes of accounts:
(1) to assist in guiding investment decisions;
(2) to assist in the division of the income originating in business among the several claimants.\(^3\)

William W. Werntz also gave great emphasis to the investor as he considered the direction accounting research

should take:

In summary, I have suggested as possible long-range objectives of accounting research, first, the definite consideration of accounting principles and procedures to determine what their effect on public investors is and what procedures and principles the interests of public investors would require to be followed; second, a reconsideration of the technique of financial reporting to public investors. 

The Problem

The investment community, the primary users of financial statements, has expressed dissatisfaction in recent years over the increasing difficulty of making meaningful comparisons of the operating results of different firms. Many agree with David Norr that the real struggle is over problems common to all businesses. Some of the common problems that cross industry lines are noted below:

Investment Credit
Tax-loss Carry-forwards
Tax Allocations
Pension Costs
Research and Development Costs
Business Combinations
Depreciation Policies
Inventory Valuation Methods.

Each of the items mentioned above have undoubtedly been a problem source for many analysts and investors. These


problem areas, however, may be more symptomatic than causal. For instance, Louis Goldberg suggested that there are four basic premises upon which an accounting theory must be built, as follows:

1. The Unit of Activity
2. The Unit of Outlook
3. The Unit of Measurement
4. The Unit of Record.

Failure to consider the second premise, the Unit of Outlook, as a guide for the observer-communicator to use as a basis for developing the viewpoint from which events are expressed may be at least a part of the non-comparability problem. According to Goldberg, proper attention to the premise of clearly defining the Unit of Outlook would involve adopting either the entity theory, the proprietary theory, the funds theory, or his own commander theory.

Purpose of Study

The purpose of this study has been to evaluate deductively the proposition that income as determined under the entity theory is more comparable between firms than income as determined under contemporary generally accepted accounting principles and to investigate whether or not empirical support exists for the propositions inherently contained in the entity theory.

Importance and Justification

The importance of effective communications with both actual and prospective investors is evidenced by the fact that "America's largest corporations . . . are allocating up to twenty per cent of their total public relations budget for financial audiences." A significant part of this expenditure is directed toward the production and distribution of the annual report.

Since "published data are primarily for the use of investors . . . ," this dissertation has been directed toward the computation and presentation of net income for use in the audited financial statements of the annual report. These published income statements should allow the investor to evaluate the financial progress of the firm, to make meaningful comparisons of the results of two or more firms, and to evaluate the present worth of the firm.

The concern of the American Institute of Certified Public Accountants (AICPA) over the comparability problems arising as a result of the problem areas mentioned earlier has been evidenced by the pronouncements they have issued. These problem areas are presented again (below), along with the AICPA publications that deal wholly or in part with


the problem:

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Referring again to Goldberg's basic premises of accounting theory mentioned earlier, it is the contention of this study that the first three items above are essentially problems involving the Unit of Outlook while the rest of the items, with the exception of Business Combinations, are problems involving the Unit of Measurement. The Business Combination problem seems to be one of defining the type of economic event that has taken place. If the entity theory were adopted as the Unit of Outlook and, as a result, income taxes were treated as a distribution of income rather than as an expense, there would be a direct effect on three of the eight problem areas mentioned above. Accordingly, this study has intended to evaluate the entity theory as a partial solution to the comparability problems that have arisen from treating various items as expenses in income.
computations rather than as distributions of income. Income as determined under the entity theory is an expression of events from the point of view of all equity holders taken as a group. As a result, the computation of income under the entity theory would not be influenced by discretionary financial and income tax policies.

Hendriksen pointed out the benefits to investors accruing from the entity concept very succinctly:

This concept of income has merit for several purposes:
(1) The decisions regarding the sources of long-term capital are financial rather than operating matters. Therefore, the net income to investors reflects more clearly the results of operations.
(2) Because of differing financial structures, comparisons among firms can be made more readily by using this concept of income.
(3) The rate of return on total investment computed from this concept of income portrays the relative efficiency of invested capital better than does the rate of return to stockholders.⁹

Methodology

An essential part of a study of this nature is the review of literature. Data transmitted by the communication process must be based on sound theoretical grounds and be used by the communicatee in order for the data to provide useful information to the recipient. Research into secondary sources was necessary to establish the need for comparable income statements as well as to demonstrate that the entity theory is capable of providing a unit of outlook that can

serve as a sound theoretical basis for the expression of the events presented in income statements. Accordingly, a portion of this work was concerned with deductively outlining the comparability needs and demonstrating the relevance of the entity theory to those needs.

The empirical portion of the study consisted of an evaluation of the results of a mail survey to two professional groups. The questionnaire was designed to determine the extent to which the unit of outlook as expressed by the entity theory agreed with the outlook of investors and accountants.

Chartered Financial Analysts were chosen as the test group representing the investor. This group was chosen because they are probably the best informed and most experienced users of financial statements for purposes of investment analysis and portfolio management.

Certified Public Accountants were chosen as the test group for accountants since, as a group with recognized professional standing, they are more often concerned with the preparation of financial statements for public dissemination than any other comparable group of accountants.

Sample size for polling each universe was determined statistically and care was exercised to maintain randomness in choosing the sample. Open-end questions were not used, but rather each respondent was required to choose between two or more definitions or situations as presented. A
pre-printed answer sheet on a postal card was used in an effort to increase the level of responses to the questionnaire.

The questionnaire was pre-tested with class-room groups of students at the University of Arkansas and with the Northwest Arkansas Chapter of Certified Public Accountants, none of which were used in the sample. The pre-testing procedure resulted in several revisions of the questionnaire for corrections of apparent biases and for clarifying instructions, questions, and answers.

**Limitations**

The first group of limitations which apply to this study may be classified as general limitations. The study was concerned primarily with published income statements of publicly held corporations as commonly found in their annual reports. It was further limited to the geographical area of the United States. The application of the entity theory was limited to its potential effect on the reporting of the results of financial and income tax policies of publicly held corporations. Finally, the study was limited by the assumption that the primary purpose of the income statements in annual reports is to report information vital and useful to investors.

The second group of limitations are the statistical limitations. Any study which includes a sampling of a
population automatically runs the risk of incurring problems that might tend to invalidate the data and/or the conclusions. Some of these having particular relevance to this study are the following:

1. Questionnaire bias resulting from either the wording or type of questions may be a problem. An attempt to eliminate or reduce this bias was made by the pre-testing and subsequent revision of the questionnaire.

2. Response validity may be questionable if the questionnaire does not measure what it was intended to measure. Care was taken in the preparation and revision of the questionnaire to eliminate words and phrases that would possibly elicit pre-formed conclusions by the respondents.

3. Response reliability may be a problem if proper attention to the questions is not exercised by the respondents. The choice of the universe, the cover letter, and the postal card response form were used to assure mailing to concerned as well as interested, competent parties, to emphasize the importance of the return, and to minimize the time needed by a respondent to complete the questionnaire.

4. Sample reliability, or the question of how well the population is represented by the sample, may be a problem since the universe of investors is inferred by sampling a subset of that universe, the Chartered Financial Analysts, and the universe of accountants is inferred by
sampling only Certified Public Accountants. On logical grounds it seems reasonable to assume that the results of a random sample of the most professional segment of a population would contain more reliability, because of the knowledge and background of the professional groups, than a purely random sample of the entire population.

Organization of Remainder of Study

The study is organized into five chapters. Chapter two contains an examination of the non-comparability enigma from the point of view of the investor. Chapter three includes a theoretical discussion of the entity theory and a demonstration of its relevance to some of the problem areas. Chapter four encompasses the summary and evaluation of the empirical test, an explanation of how the questionnaire was developed, and a description of the pre-testing procedure. Chapter five includes the summary of the study, conclusions and recommendations.
CHAPTER II

THE NON-COMPARABILITY ENIGMA

A consideration of the problem of non-comparability in financial statements requires a discussion of the investment process itself for "the obligation or contract of a debtor is at the same time an investment plan for the creditor." Economic theory views capital as a broad class of productive factors held for future use by an enterprise. The emphasis is placed on capital kinds rather than capital sources and traditionally capital has been assumed to be forthcoming at normal rates of return, an implicit cost of capital concept. Capital, from the standpoint of the firm, is viewed in another context. It is spoken of as a capital kind, including practically every accounting asset, and a capital source, generally any supplier of goods or services as well as investment money that is to be used in the business. There is a third perspective from which capital must be viewed and that is from the viewpoint of the individual saver in the economy. The individual is concerned with the destination of his savings in terms of both yield and safety.

These three viewpoints of capital are unified through the medium of investment markets since investment markets have a social purpose of directing new investment into the most profitable channels in terms of future yield. Investment markets provide an outlet for the savings of individuals in society and make these savings available to business units. All capital contracts include some form of compensation, whether implicit or explicit, to the capital supplier. "This compensation is for measurement purposes usually related to the advance, investment, or current value involved in the contract; the rate of return is thus an integral part of the finance arrangement." Investment markets, therefore, are the facilitating agencies or institutions which through the compensation included in capital contracts serve to bring together the suppliers and users of capital funds. Whether the compensation is called discount, interest, dividends, or premium, the difference between what is received (or invested) now and what is to be paid (or received) later is the cost of capital. This cost of capital is equivalent to Keynes definition of the marginal efficiency of a unit of capital as "that rate of discount which would make the present value of the series of annuities given by the returns expected from the capital-asset during its life just equal to its supply price." Thus, from the standpoint of macro-economics,

2Ibid.

financing is the mechanism that determines the volume, composition, and industrial destination of capital formation.

**The Need for Comparability**

As a general rule, the first step in investment analysis is to evaluate the industry within which the prospective investment is operated. This step includes an analysis and evaluation of the general nature of the industry together with the expected effect of projected changes in macroeconomic variables. The effect of changes in the national economy are of great importance in analyzing the probable changes in the supply of raw materials to the industry and in the demand for the finished product. Other factors such as the expected effect of governmental regulation and industry-wide research and development efforts aid in gaining a perspective as to the future prospects for the industry.

Investors are also interested in evaluating risk factors relating to the economy in general. An evaluation must be made as to the risks arising from probable changes in the investment market, the money rate, and purchasing power. Each of these factors as well as the industry analysis will have an impact on the investment decision.

Having evaluated the industry and other macroeconomic variables the investor usually turns to an analysis of companies within the industry to find the best investment prospect. Company analysis usually involves consideration of
such things as:

1. Competitive position  
2. Earnings and profitability  
3. Operating efficiency  
4. Current financial position  
5. Capital structure  
6. Quality of management.

The evaluation of the six factors above is an attempt to obtain a measure of how well the company has been able to contend with business risk. Business risk is defined for this purpose as the risk that the business will fail. Past performance is, of course, no perfect predictor of future behavior but it at least provides an indication of future potential. Measures of competitive position, earnings, operating efficiency, financial position, capital structure and management have real meaning to the potential investor only when they are compared with other companies in the industry or with industry norms.

Obstacles are frequently present, however, that make comparisons difficult. One obstacle is that of defining the industry and the members of the industry. The merger activities of United States corporations in the last decade have produced many conglomerates of varying sizes that do not fit neatly into any one industry. Thus finding two or more companies that have the same or similar product lines or divisions has become difficult if not impossible. In many

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cases, however, there is one dominant division within the corporate group which determines the industry classification.

Quasi-monopoly conditions frequently exist which make comparisons difficult. Physical proximity to sources of raw materials and ownership of raw material reserves by a company often gives it an advantage over other companies in the industry. Brand name consciousness of consumers, sheer size of a company and a reputation for quality service often produce company differentiation that is more apparent than real. Patents and copyrights can impute a degree of protection in particular areas to firms to an extent that comparisons become difficult.

The Comparability Problem

The obstacles to comparison mentioned above certainly do cause difficulties in effecting a comparative analysis. Generally, however, these differences can be effectively compensated for by evaluating the competitive position and operating efficiency of the companies under analysis. There is another area where non-comparability becomes a problem and this is in the area of accounting differences. It is essential that accounting differences be considered since the best measure of the ability of a firm to cope with business risk is earning power. The importance of earnings to the common stockholder is apparent since this equity holder has the residual interest in the earnings of the corporation. Earnings are important to the holders of fixed-income
securities as well "because all fixed-income securities as long-term investments must look to the earnings stream for the payment of interest or preferred dividends; the most significant test of their investment stature is the size of these charges relative to the indicated flow of earnings." 5

The income measurement process is of great importance to the investor since much weight is given to the income figures in the decision to buy securities.

Comparability of financial statements is important in two respects. One relates to the period to period comparability of statements for a particular firm. The other relates to the problem of comparing one firm with another.

Comparability of statements of a particular firm between periods is important to the investor since it allows him to detect trends as they develop over time. Inter-period comparability has been effectively achieved during the past thirty years through the adoption of and adherence to the principles of consistency and disclosure in financial reporting. 6 An AICPA statement on auditing procedure requires the auditor to state in his opinion whether the statements are presented in accordance with generally accepted accounting principles, that such principles have been consistently observed in the current period in relation to the prior


period, and to make any informative disclosures regarded as 
necessary that are not contained in the body of the state-
ments. The AICPA as well as the Securities and Exchange 
Commission (SEC) is specific with regard to disclosure of 
accounting changes. The SEC rule is typical and refers to 
"any change in accounting principle or practice, or in the 
method of applying any accounting principle or practice, made 
during any period for which financial statements are filed 
which affects comparability of such financial statements with 
those of prior or future periods." When there is a change, 
as defined, the change must be disclosed and its effect stated. 
The progress achieved in inter-period reporting is primarily 
a result of the existence of a competent and independent 
accounting profession. The increase in inter-period comparab-
ility over the past thirty years has undoubtedly helped 
both the investor and company management. "For it is a fact-- 
one that is beginning to be universally recognized--that a 
highly developed economy and free and active capital markets 
go hand in hand with a highly respected and competent inde-
pendent accounting profession. It is unlikely that the former 
could exist without the latter." The existence of the high

7 Committee on Auditing Procedure, Statements on Auditing 
Procedure No. 33—Auditing Standards and Procedures (New York: 
American Institute of Certified Public Accountants, 1963).

8 Securities and Exchange Commission, Regulation S-X, 

9 James J. Mahon, "Accounting Principles Debate and 
Investor Confidence," Financial Executive, XXXIV (December, 
1966), 32.
economic level of the United States and the free and active capital markets is prima facie evidence of the effectiveness of the accounting profession.

The existence of alternative accounting practices for the reporting of various economic events has caused the accounting profession to receive much criticism from the investment community for failing to provide information that is directly comparable between firms. This criticism is a result of the proposition that the financial statements of a public company should be prepared mainly for use by investors in deciding whether to buy, sell, or hold securities, and that investment decisions would be made much easier if the statements of all corporations reflected comparable accounting procedures. This position is a result of philosophical pragmatism which is marked by "the doctrine that the meaning of conceptions is to be found in their practical bearings, that the function of thought is as a guide to action, and that the truth is pre-eminently to be tested by the practical consequences of belief."¹⁰ Charles Horngren has stated the pragmatic view of accounting as it relates to the investor very clearly: "Published data are primarily for the use of investors . . . . Ideally, financial statements must be constructed for maximum usefulness. Judgment as to usefulness is made ultimately by the user, not the producer."¹¹


The users of published financial statements, the investment community, have indicated through speeches, publications and other media that the primary problem areas of inter-firm income statement analysis are those arising from alternative methods of accounting for investment tax credits, tax-loss carry-forwards, tax allocations, pension costs, research and development costs, business combinations, depreciation of assets, and inventory valuations. There are other accounting areas where accounting differences can cause difficulties in comparing the results of two or more firms. These other areas do not seem to cross industry lines as frequently nor have as much impact on the investment decision as those mentioned above, and accordingly are not discussed in this section.

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Investment Tax Credit

The Revenue Acts of 1962 and 1964 contained a provision for a direct credit against the income tax based upon a specified percentage of the cost of certain qualifying depreciable property that was acquired during the taxable year. The two acts differed in that the credit in the 1962 Act was required to be deducted from the depreciable basis of the property while the 1964 Act provided for a "free" credit, i.e., the basis of the asset was not required to be reduced

by the amount of the credit.

Subsequent to the 1962 Act and prior to the 1964 Act, the accounting for the tax credit took two forms. One was the full flow-through method in which the full amount of the credit was deducted from the tax liability in the year in which the asset was acquired and put into service. The other method was called the 52-48 method in which 48 per cent of the credit was deducted from the tax in the year of acquisition and the remaining 52 per cent (the tax effect of the reduction in asset basis at then current rates of 52 per cent) was allocated to future income similar to other differences in the timing of income recognition. The 1964 Act, however, removed the requirement that the asset basis be reduced for the amount of the credit, and the usage of the 52-48 method ceased. At this point the prevalent practice took two forms: one was the above mentioned full flow-through of the credit to income, and the other was to defer the tax credit and allocate it to income over the productive life of the asset.

In Opinion No. 2, issued in 1962, the Accounting Principles Board of the AICPA stated, "We conclude that the allowable investment credit should be reflected in net income over the productive life of acquired property and not in the year it is placed in service." The deferral of the credit

was acceptably reflected as either a reduction in asset basis or as a deferred income item provided that, in either event, it was allocated over the productive life of the property. While Opinion No. 2 reduced the ambiguity present in reported earnings, it apparently failed the pragmatism test. Largely as a result of pressures brought on the Board by the business community, the Board reconsidered the problem and subsequently issued Opinion No. 4 in 1964. In this opinion the Board concluded that, "In the circumstances the Board believes that, while the method of accounting for the investment credit recommended in paragraph 13 of Opinion No. 2 should be considered to be preferable, the alternative method of treating the credit as a reduction of Federal income taxes of the year in which the credit arises is also acceptable."14 The difficulty in reaching agreement on this issue is evident in the voting record of the twenty Board members: seven assented with no qualifications, eight assented with qualifications and five dissented.

The Tax Reform Act of 1969 has generally repealed the investment tax credit. The credit will, however, remain in effect for certain classes of pre-termination property until 1972. The history of the investment tax credit reveals that it has been characterized by an "on again - off again" status—

14Accounting Principles Board, Opinion No. 4, Accounting for the "Investment Credit" (New York: American Institute of Certified Public Accountants, 1964), p. 22.
it was introduced in 1962, modified in 1964, suspended with some exceptions from October 10, 1966 until March 9, 1967, and then repealed in 1969. There is general agreement that the credit has been effective as a stimulus for investment and it will likely be used again when economic conditions warrant.

**Tax-loss Carry-forwards**

The Internal Revenue Code allows a corporation that has sustained an operating loss to carry the loss back three years and forward five years. The accounting problem that has arisen from this provision is to determine which year shall reflect the resulting benefit of the tax-loss carry-back or carry-forward. In the consideration of the carry-back, the Accounting Principles Board recognized that the loss gave rise to a refund (or a claim therefore) of taxes paid in prior years that is both objectively measurable and realizable. Accordingly, the Board concluded "The tax effects of any realizable loss carry-backs should be recognized in the determination of net income (loss) of the loss periods." The Board, however, was not able to accord the same treatment to loss carry-forwards because, in their words, "a significant question generally exists as to realization of the tax effects of carry-forwards, since realization is dependent upon future

taxable income."\textsuperscript{16} As a result, the Board concluded that "the tax benefits of loss carry-forwards should not be recognized until they are actually realized, except in unusual circumstances when realization is assured beyond any reasonable doubt at the time the loss carry-forwards arise."\textsuperscript{17} The Board attempted to establish guidelines for use in determining whether realization is assured beyond any reasonable doubt; however, the fact remains, that with regard to a single economic event--a tax loss--there is one accounting treatment for carrying it back and two methods for carrying it forward.

**Tax Allocations**

Taxable net income is frequently computed differently from accounting net income. According to Hendriksen the major differences between taxable and accounting net income can be classified as:\textsuperscript{18}

(1) permanent differences arising from special legislative allowances or restrictions permitted or required for economic, political, or administrative reasons not related to the computation of accounting net income;

(2) differences arising from the direct charging or crediting to retained earnings of items included in the computation of taxable net income; and

(3) differences in timing of charges and credits to net income.

\textsuperscript{16}Ibid., p. 173.

\textsuperscript{17}Ibid.

Permanent differences are those such as statutory depletion, differences in tax versus accounting basis for depreciable assets, interest received on municipal obligations, and premiums paid on officers' life insurance. These differences affect the computation of the total tax over the lifetime of the corporation, and "since permanent differences do not affect other periods, inter-period tax allocation is not appropriate to account for such differences."\(^{19}\)

The second type of differences have required intra-period allocation, but since the issuance of APB Opinion No. 9 these differences have effectively been eliminated.\(^{20}\)

The primary problem concerning tax allocations has arisen because of the third type of differences mentioned above—differences in timing. The most prevalent example of these differences is the practice of using accelerated depreciation for tax purposes and straight-line depreciation for accounting purposes on the same asset. Since the difference in taxable and accounting net income, in this case, is a result of the timing of the deduction, the tax liability of the firm over the lifetime of the firm is not changed. Therefore, inter-period tax allocation procedures were developed to account for these timing differences. In the past,

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\(^{19}\)Accounting Principles Board, *Opinion No. 11*, p. 169.

three practices emerged:

(1) The tax effect was not allocated between periods.
(2) The tax effect was allocated for some items but not for others. (Partial allocation)
(3) The tax effect was allocated between periods in the financial statements for all items. (Comprehensive allocation)

In addition, three methods developed for handling the allocations—the deferred method, the net of tax method, and the liability method. The deferred method emphasized the tax effects of timing differences on income of the period in which the differences originated whereas the liability method focused on the tax rates expected to be in effect when the timing differences reversed. The net of tax method, on the other hand, was a procedure whereby the tax effects of the timing differences were deducted from the specific asset or liability from which the timing difference arose. The situation extant prior to APB Opinion No. 11 allowed seven different accounting treatments in reporting (or not reporting) the tax effect of timing differences. With the issuance of APB Opinion No. 11 the Board effectively eliminated the alternatives. Their statement was as follows:

The Board has considered the various concepts of accounting for income taxes and has concluded that comprehensive inter-period tax allocation is an integral part of the determination of income tax expense . . . The deferred method of tax allocation should be followed since it provides

21Grady, Inventory, p. 375.
the most useful and practical approach to inter-
period tax allocation and the presentation of
income taxes in financial statements.\textsuperscript{22}

While APB Opinion No. 11 has done much to reduce the
available reporting alternatives, there were several areas
which were not covered by the Opinion and were left for
further study by the Board. These were the tax effects
resulting from:

(1) Undistributed earnings of subsidiaries.
(2) Intangible development costs in the oil and
gas industry.
(3) "General reserves" of stock savings and
loan associations.
(4) Amounts designated as "policyholders' surplus" by stock life insurance companies.
(5) Deposits in statutory reserve funds by
United States steamship companies.

\textbf{Pension Costs}

Pension payments made indirectly to recipients through
a pension fund have resulted in varying accounting procedures,
as follows:\textsuperscript{23}

(1) Expense was charged when payments were
made to the fund.
(2) Expense was recorded on an accrual basis
covering normal or current cost over the
period of service of the employees.
(3) So-called past service credits at the time
of adoption of the plan were either:
   (a) Not provided for, except as to
       interest, or
   (b) Accrued over a period permitted
       in the Income Tax Code, over the
       remaining service life of the
       employees or over a longer period
       such as total average service life
       of the employees.

\textsuperscript{22}Accounting Principles Board, \textit{Opinion No. 11}, p. 169.
\textsuperscript{23}Grady, \textit{Inventory}, p. 374.
In November, 1966, the APB released Opinion No. 8 which clarified to a great extent the acceptable reporting practices for pension funds. The Board stated, "Accounting for pension costs should not be discretionary." They also stated, "All members of the Board believe that the entire cost of benefit payments ultimately to be made should be charged against income subsequent to the adoption or amendment of a plan." Three alternative time periods were left as acceptable periods over which prior service costs could be recognized, however. The board went on to state that the pension cost should be actuarially determined and should result in a provision lying between the minimum and maximum as defined in APB Opinion No. 8.

**Research and Development Costs**

Accounting principles permit two methods of accounting for research, development and experimentation costs:

1. The costs are charged to expense as they are incurred, and
2. The costs are accumulated as deferred charges and then amortized over an arbitrary, but relatively short period.

The existence of these two methods for the same economic event has caused difficulties in effectively comparing the earnings of two or more firms. "The current position of

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the AICPA, which permits either capitalization or immediate write-off under similar situations, leads only to confusion and a lack of adequate data for informed decisions. The Accounting Principles Board has an accounting research study in the draft stage that deals with this problem, but at the present time no opinion has been issued.

Business Combinations

The comparability problems associated with business combinations result primarily from the existence of two basic methods of accounting for the combination. In the purchase method the acquiring corporation records as its cost the acquired assets less the liabilities assumed; and any difference between the cost of an acquired company and the sum of the fair values of tangible and identifiable intangible assets less liabilities is recorded as goodwill. The reported income of the combined company includes the earnings of the acquired company only after the acquisition. The pooling of interests method accounts for a business combination as the uniting of the ownership interests of two or more companies by an exchange of equity securities. The recorded assets

26 Hendriksen, Accounting Theory, p. 432.


28 Accounting Principles Board, Opinion No. 16, p. 284.
and liabilities of the constituent corporations are carried forward to the combined corporation at their original amounts. The reported income of the constituents for prior, current, and future periods is combined and restated as income of the combined corporation.

The Accounting Principles Board concluded in Opinion No. 16 that both the purchase and pooling of interests methods have merit and accepted neither method to the exclusion of the other. However, the Board emphasized that "the two methods are not alternatives in accounting for the same business combination." The Opinion specified conditions under which each of the methods would be appropriate. The Opinion was issued in August, 1970, and the effectiveness of the Opinion remains to be seen at the time of this study.

The issuance of "hybrid" securities in connection with mergers and acquisitions has raised a conceptual problem from the standpoint of financial analysis. Debt securities that are convertible into stock and debt securities issued with stock purchase warrants do not fit neatly into existing debt/equity categories. Earnings per share, for instance, must be computed both before and after the possible dilution effect of the conversion privilege.

29Ibid., p. 294.
30Ibid.
Depreciation Methods

Considerable differences exist between companies with respect to the choice of estimated lives and depreciation calculation methods for assets of like kind. Depreciation methods commonly in use, all of which vary considerably in their cost expiration patterns, are:

(1) Straight-line
(2) Decreasing charge (declining balance, sum of years' digits methods)
(3) Increasing charge (annuity, sinking fund methods)
(4) Unit of production (usage methods)

In order to facilitate comparisons and because of the significant effects on financial position and the results of operations of the depreciation methods used, the Accounting Principles Board has required in Opinion No. 12 that "a general description of the method or methods used in computing depreciation with respect to major classes of depreciable assets be made in the financial statements or in notes thereto." The AICPA also has an accounting research study in the preliminary research stage on this subject.

Inventory Valuation Methods

Generally accepted accounting principles allow company managements to choose inventory valuation methods on the basis of assumed cost flows as well as on assumed or actual product

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flows. As a result, many methods of associating product costs with revenue have evolved. These valuation methods include:

(1) Specific identification of costs with products sold
(2) Average cost methods (simple average and weighted average)
(3) First-in, first-out flows
(4) Last-in, first-out flows (of which the base-stock method is a variant)

In allowing the various methods mentioned above, the AICPA stated that "the major objective in selecting a method should be to choose the one which, under the circumstances, most clearly reflects net income." The opinion of many observers is that the inventory methods in use are more likely to be chosen on the basis of which one most clearly reflects the desired net income. At the time of this study, the AICPA has an accounting research study in the preliminary research stage that will deal more extensively with this subject.

Useful Comparability in Financial Reporting

Corporate financial reports are typically viewed as a form of communication between management and the users of financial data. They represent a story of the past, and properly understood and properly used, form the basis for certain types of judgments about the future. Corporate


managements and the accounting profession have directed attention particularly toward the information needs of the investor, as follows:

In general, the investor and the professional analyst are concerned with making an evaluation of how well a particular company is doing; projecting the future earnings and market appreciation potential for each of several investment alternatives; and comparing these alternatives in an effort to make an investment decision. The corporate financial report serves as the basic informational source in serving these needs.  

To adequately evaluate the afore-mentioned problem areas in terms of their effect on useful comparability, it is well to consider each of the problem areas from a conceptual standpoint. It must be kept in mind that there is a significant difference between using an alternative accounting method to reflect differing circumstances and using alternative accounting differences for the same circumstances.

Louis Goldberg has submitted that there are four basic premises upon which the trains of reasoning in accounting are based. They are:

(1) The Unit of Activity  
(2) The Unit of Outlook  
(3) The Unit of Measurement  
(4) The Unit of Record

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The Unit of Activity is an event—an occurrence which can be distinguished from other occurrences by differences in time, place, space, and/or character. The identification of an event is a first step in the accounting process.

The Unit of Outlook is concerned with the point of view from which accounting procedures are enacted. The viewpoint from which an event is seen determines how the event is to be expressed in the communication process.

The Unit of Measurement has as its primary function to cause the expression of events within and comprising a given venture to be brought into meaningful relationships with each other.

The Unit of Record is the single measurable event and the basis of the event is a decision. Whenever a decision is made which can be translated into suitable measurable terms it can be made the subject of record for accounting purposes.

Goldberg submitted that accounting procedures can be expressed and explained by reference to these four basic premises. If accounting procedures can be expressed and explained by reference to these four premises, then it follows logically that problem areas in accounting stem from the failure to properly apply one or more of the basic premises. Each of the problem areas mentioned earlier should be capable of explanation by reference to the basic premises.

Pension costs, research and development costs,
depreciation methods, and inventory valuation methods are identifiable events which would have the same expression regardless of the Unit of Outlook and which result from a decision that is capable of being recorded. The non-comparability problems arising in these areas are a result of failure to properly apply the concept of the Unit of Measurement. To say that these problems are measurement problems does not imply that uniformity of accounting procedures would be a solution. Proper measurement insists that a series of events within a given venture must be brought into meaningful relationships with each other. Thus alternative accounting practices for differing circumstances would seem to be a proper and valid application of the Unit of Measurement concept. Rappaport stated:

The real comparability problem is not simply the existence of alternate accounting methods. The problem is fitting the particular set of business facts with the appropriate accounting method and how this is to be done. If it can be done objectively, then the use of lifo by one company and fifo by another for example, would not hamper but rather would improve their comparability.\(^{37}\)

Each business is an individual economic unit and reacts to business conditions differently. As a result, the differing circumstances may require differing accounting treatments. Declining balance depreciation for one company may well

express the expiration pattern of an asset and yet be entirely inappropriate for another similar company.

Also, as Rappaport stated:

Another point to be noted is that results of differences in accounting methods for companies that have been in business for some time have a way of washing out; thus there may be little distortions of comparisons between two companies even though different accounting methods were used.38

The difference in net income which would result from capitalizing and amortizing research and development costs versus recording directly as expense, for example, would be small if both companies were well established and the research effort was carried out on a regular ongoing basis. Similarly, the differences in net income resulting from price level changes as a result of using first-in, first-out and last-in, last-out for two established companies that maintain relatively stable inventory levels would not be greatly significant. The GNP Implicit Price Deflator for the period 1958-1968 varied from a 1.1% to 3.8% change for each year from the previous year.39 Thus the probable difference resulting from the usage of the two inventory methods in 1968 would have been a maximum of 3.8% of cost of goods sold.

The primary problem with regard to business combinations

38Ibid.

seems to stem from inattention to the premise of the Unit of Activity. The combinational event which has taken place must be identified. It must be differentiated from other similar occurrences by the differences in the character of the event. Adequate guidelines for distinguishing the characteristics of a purchase versus a pooling of interests must be established to properly account for the combination. With such guidelines, the existence of the two methods will enhance rather than hamper the comparative analyses.

The remainder of the problem areas, the investment credit, tax-loss carry-forwards, tax allocations, and to a degree the hybrid securities resulting from business combinations have as the root cause of their problem the lack of a proper definition of the Unit of Outlook. These areas are identifiable events which are capable of being measured and result from a decision which requires a translation into suitable terms which can be the subject of record. It is the contention of this study that these problem areas are explainable and capable of expression by reference to the Units of Activity, Measurement, and Record but have not been correctly expressed with reference to the Unit of Outlook. A further contention is that the root problem of non-comparability of income statements in general stems from a misapplication of the Unit of Outlook in the development of accounting principles, and that the problem could be corrected through the adoption of and strict adherence to the entity
theory as defined by William A. Paton and others.

Chapter three contains an outline and summary of the development of the entity theory and includes a deductive demonstration of its relevance to the problem of non-comparability of inter-firm income statement analysis.
CHAPTER III

THE ENTITY THEORY

John Bowyer has pointed out, in his book *Investment Analysis and Management*, that "the key to successful investing is careful selection and valuation of available investment opportunities. This examination and analysis involves three chronological segments--past performance, present condition, and future prospects."¹ Properly prepared accounting statements should provide the basis for the examination of past performance and present condition, and, when analyzed in context with other known variables, should aid materially in the evaluation of the future prospects of a firm.

From a social point of view the object of all economic activity is to derive maximum benefit from the existing pool of resources. This is the objective of "optimum allocation of resources" which is a central concept of economic theory. From the standpoint of the firm, this translates into the profit maximization objective which is a primary criterion by which resources are allocated to individual business units. Profit (accounting net income) is an expression of how well company managements have been able to meet competitive conditions and maximize profits.

The absence of any absolute index which investors may use as a measure of managerial efficiency makes the comparability of financial statements a condition vital to the investment process. The attitude of many in the investment community may be similar to Bowyers:

Differences in accounting practices which affect the comparability of financial statements can sometimes be corrected by making adjustments. Normally, the analyst's wisest course of action is to select for comparison another company that has similar accounting practices.²

Information provided through the accounting process should facilitate rather than limit comparisons. The non-comparability problem alluded to earlier indicates that accounting has not been completely successful in fulfilling its function of communication.

Only with a sound theoretical basis can accounting achieve the desired consistency and universal applicability necessary for maximum usefulness. Two major theories of accounting have emerged that purport to establish the basis for the development of accounting principles.³ They are known as the proprietary theory and the entity theory, both of which have influenced the generally accepted accounting principles currently in use. Goldberg referred to this

²Bowyer, Investment Analysis, p. 189.
³Vatter's "Fund Theory" is not discussed here since it has not been widely accepted.
theoretical premise as the Unit of Outlook.4

The need for a clear definition of the Unit of Outlook or frame of reference can be readily demonstrated by an example given by Paton.5 In this illustration there was a man named Jones who owned, among other things, a grocery store. Paton suggested there were at least three possible viewpoints which the accountant might adopt as the basis for his work. They were:

(1) Jones, the economic citizen
(2) Jones, the grocery proprietor
(3) The Jones Grocery Store.

If the accountant adopted the first viewpoint, the accounting records would be organized to show all the properties and obligations of Jones, both those related to the grocery operation and those related to his other business and private interests. The accounting profession has long held that this viewpoint is too broadly constructed and has insisted on smaller entities even if they are artificial constructs. Adherence to generally accepted accounting principles requires that the viewpoint be limited to the grocery operation—the business entity. "A business entity consists of an organization of persons and properties which


have been brought together for certain economic objectives."  
Having limited himself to the business entity, the accountant must choose between the other two viewpoints as the basis for his work.

If the accountant adopted the second proposition, he would account for the activities of the grocery store from the viewpoint of Jones, the proprietor, in his strictly business capacity. This viewpoint is, on the whole, highly rational and accomplishes the desired objective of keeping the business and private affairs carefully distinguished.

In early business firms, the owner, entrepreneur, manager, and financier of the firm were all embodied in the proprietor. Consequently, the viewpoint from which accounting theory was developed was that of the proprietor. Each transaction that occurred in the business was recorded in terms of its effect on the proprietor. Liabilities were considered to be the obligations of the proprietor himself and thus were viewed as negative assets. Since the proprietor was the center of interest, heavy stress was placed upon determining the changes in and the status of the wealth of the proprietor. Assets, under this viewpoint, were carried at current values and any diminution of the owner's interest was treated as an expense.

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Proposition three would view the grocery business as a distinct economic unit, a genuine business enterprise which involves a more or less complex list of properties and various equities in the properties, including those of the owner and others. Paton called this the "managerial view." It has the distinct advantage of not requiring that the functions of ownership and management be embodied in the same person. "Such a point of view . . . is perhaps the most sound on the economic side but it has limitations from the legal standpoint." The notion that legal constructs must, on occasion, be disregarded to report economic substance has been a hallmark of sound and effective reporting. Proposition three has been referred to as the "managerial theory" the "equity theory" and the "entity theory." It is referred to as the "entity theory" throughout this study.

The Historical Development of the Entity Theory

Business conditions prior to the twentieth century were summarized by Kell as follows:

(1) The proprietor furnished most, if not all, of the capital.
(2) The proprietor was both in active and absolute control of the business.
(3) Creditors regarded their debt as the personal liability of the proprietor.
(4) Legal title to the business properties was vested in the proprietor.
(5) The primary function of accounting was record keeping.

7Paton, Accounting Theory, p. 64.
This emphasis on the proprietor, coupled with the fact that accounting was primarily concerned with record keeping rather than reporting, led to the widespread adoption of the proprietary concept as the proper expression of accounting theory. As a result, the proprietor was the center of interest and recording changes in the wealth of the proprietor was considered to be the prime purpose of accounting.

During the period of time in which the proprietary theory was becoming firmly entrenched, there emerged a new kind of business organization—the corporation—which gave legality to the concept of the business entity. In 1818, Chief Justice John Marshall defined the corporation as being "an artificial being, invisible, intangible, and existing only in contemplation of law." Paton explained the importance of the corporation in the development of the entity theory as follows:

It is in the case of the corporation that an actual legal existence puts substance in the accountant's assumption of a business entity. The state endows the corporation with a being which is separate and distinct from its membership. Limited liability and other important consequences result. Thus the corporation is the business enterprise par excellence.

The influence of the corporate form of business organization had a profound effect on business conditions. The

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pre-twentieth century business conditions presented by Kell earlier would read as follows after the introduction of the corporate form.

(1) The proprietor need not furnish all, indeed not even most, of the capital.
(2) The proprietor need not be both in active and absolute control of the business.
(3) Creditors regarded their debt as the obligation of the firm.
(4) Legal title to the business properties was vested in the corporation.
(5) The primary function of accounting became that of reporting rather than mere record keeping.

The concept of the corporation as "an institution in its own right, separate and distinct from the parties who furnish the funds," apparently caused early writers such as Sprague, Folsom, and Gomberg to lean toward the entity theory in their discussions of transactional analysis. As early as 1850, Gomberg pointed out the similarities between capital and liability accounts. Sprague introduced his equation of "Have + Trust = Owe + Worth" in 1880. Folsom, in 1873 and later in 1881, introduced the concept of accounting for transactions in terms of their service characteristics to the firm rather than on behalf of the proprietor. The development of the entity theory was gradual, evolving with changing economic conditions.

Corporate directors are legally in a fiduciary position.


They act as trustees for the funds entrusted to them by shareholders, creditors and other claimants. Because of the fiduciary nature of corporate accounting it became important to account for cost invested in assets, rather than market values, to the equity holders. Under the entity theory, liabilities are considered obligations of the firm, rather than negative assets or direct liabilities of the owners. They represent the equity of the creditors in the assets contributed by them. Thus, the accounting equation (according to the entity theorists) was expressed as "assets = equities", or stated another way, "capital kinds = capital sources."

With the development of the corporation came the need to differentiate between earned and contributed capital since the charters granted by the states forbade the distribution of contributed capital as dividends. This led to an increased emphasis on the form and content of the income statement that was not heretofore present. The abstract concepts of the entity theory improved the analysis of accounting transactions, enhanced the teaching of accounting, and caused accountants to look at financial reporting with a new perspective.

The failure of the proprietary theory to provide an adequate level of abstraction in accounting for the corporate form became even more apparent when it was found to be both possible and useful for a corporation to acquire a controlling interest or merge completely with another corporation. Through the device of acquiring subsidiaries, one artificial
being (a corporation) was "owned" by another artificial being. Merger activities required accountants to again look through the legal form to the economic substance of the transaction. The legality of the entity involved in consolidated statements is not of prime importance since as George Husband pointed out, "for accounting purposes it is the entity of experience which is important."13

The entity theory was first postulated in comprehensive form by William A. Paton in his Accounting Theory published in 1922, which was his doctoral dissertation. In his book he posed these questions:

Shall the proprietary or the managerial point of view be adopted in stating the theory of accounts? Shall accounts and transactions be classified and analyzed from the standpoint of the entire business enterprise as an operating unit, or shall accounting principles be presented in terms of a single interest, the proprietary?14

His conclusion to these questions was:

The income sheet (sic) of the large corporation, certainly is not an adjunct of any single interest or equity in the balance sheet, to be defined in terms of that interest; and any attempt to view it so results in distortion of so serious a character as largely to destroy the utility of the statement.15

In the years since Paton presented the complete entity theory, accounting practice has gradually accepted the basic

13Husband, "The Entity Concept", 552.
14Paton, Accounting Theory, p. 52.
15Ibid., p. 53.
notions of the entity theory as far as the balance sheet is concerned. The income statement, however, still retains much of the proprietary viewpoint. As a result, there is no clearly defined frame of reference which is dominant in accounting theory. This situation has led to various efforts to redefine the viewpoint upon which accounting principles are based.

In 1965, Louis Goldberg presented his "Commander" or "managerial" point of view which in his opinion destroyed neither the entity nor the proprietary theories but rather reconciled the two in much the same manner that Hicks reconciled Keynesian and Classical economics. Goldberg held that "the source of a satisfactory theory of accounting should be in social phenomena . . . . The commander theory is based on social facts (1) that different people have control or command over different resources, and (2) that every person has command over some resources."16 A corollary to that statement might be that every resource has a commander and an owner which may or may not be the same person. The entity theory, according to Goldberg, is that portion of the commander theory as it applies to publicly held corporations. He interpreted the corporation in this manner:

The investor has command over his resources until he becomes a shareholder in a company; at that moment he transfers his command over the quantum

of resources invested to those who have control over the affairs of the company, that is, to the directors and managers. He remains the owner of shares, that is, of certain (usually restricted) rights to participation in periodic distribution of the company's "profits" and in the final distribution of its assets; in this sense, he is a part-owner of the company's resources, but he has no command over the resources which his shares purport to represent. . . . Accounting analysis is undertaken so that commanders of resources may be put in a position where they can make decisions on a basis of reasoned interpretation rather than guesswork. 17

Accounting should facilitate management in its role as commander of the firm's assets and the investor in his role as commander of his funds as they are transformed into corporate securities.

The Entity Theory Viewpoint in Perspective

The influence of both the entity and the proprietary theories on the development of generally accepted accounting principles can be seen through a review of most accounting textbooks published since 1922. 18 The textbooks cannot be classified as a purely one or the other approach. Both theories were implied in accounting practice before they were presented in the literature as basic premises. In general, the entity theory has been more pervasive with regard to its effect on the balance sheet, specifically the equity side; while, the proprietary theory has had its primary

17 Ibid., p. 164.
effect on the income statement.

Both the proprietary and entity theories agree on the "entity of activity" concept. "The existence of a business entity separate from the personal affairs and other interests of the owners and other equity-holders is recognized in all concepts of ownerships and equities."19 The entity theory, however, focuses on the firm as a unit for the development of accounting principles while the proprietary viewpoint focuses upon a particular class or interest in a firm. In identifying the entity viewpoint, Paton pointed out:

It is the "business" whose financial history the bookkeeper and accountant are trying to record and analyze; the books and accounts are the records of "the business"; the periodic statements of operation and financial condition are the reports of "the business"; the assets are the properties of "the business", and the equities are its ownership and obligations.20

In summary, then, the entity theory views equities as the entire group of claims against the assets, rather than the claim of one ownership interest; and, "since corporate net income is not considered to be directly the net income of the stockholders, revenues and expenses are not increases and decreases in stockholders' equity. Revenue is the product of the enterprise, and the expenses are the goods and services consumed in obtaining the revenue. Therefore, expenses are deductions from revenue, and the difference represents the corporate income to be allocated to the several classes of

19Ibid., p. 396.
20Paton, Accounting Theory, p. 473.
equityholders."\textsuperscript{21}

Hendriksen has pointed out that a study of equity concepts reduces to the following two main questions:

(1) Who are the beneficiaries of net income?
(2) How should the equity relationships be shown in the financial statements?\textsuperscript{22}

The position of the entity theory as it applies to these queries is presented in the following two subsections.

**Equity Relationships**

The segregation of capital sources into distinct categories such as owners and creditors depends upon the validity of the notion of "ownership" as it applies to a corporation. From a legal standpoint, ownership implies at least control and title.

Control implies possession or the ability to direct possession as well as directing the use to which the resources are put. Both the creditor and proprietary interests have the ability to direct the possession of resources into but not out of the corporation. The decision to invest in a corporation places, legally, the situs of possession and control in the hands of the corporation. Neither type of security interest has the right to direct the use to which the resources are put. Both, through legal and contractual arrangements, have the power to influence to a degree the

\textsuperscript{21}Hendriksen, Accounting Theory, p. 398.

\textsuperscript{22}Ibid., p. 403.
decisions of the corporate commanders. Thus, from the standpoint of possession and control, the differences between the creditor and proprietary interests do not seem to be greatly significant. Eells and Walton in their Conceptual Foundations of Business pointed out:

We have moved, in short, from the idea of property as real assets, such as land, gold, or cattle, to the idea of property as promises: securities, mortgages, bonds, bankbooks, and paper money. All these are symbols of ownership; they do not connote actual possession.23

Probably the most important criterion of ownership, legally, is title. The owner of a property is said to have title thereto. The commitment of assets to a corporation passes legal title to those assets to the corporation. The corporation, as an entity, has the right to sell, transfer, use and otherwise effect changes in the control and/or situs of title in any particular asset. According to one legal view, a mortgage is actually a suspended deed, a deed which does not become effective, however, unless the mortgagor fails to fulfill the terms of the mortgage. In this case, the mortgage bondholder has a stronger title position with respect to particular corporate assets than does the shareholder. Paton's view with respect to legal title is apropos:

On the basis of legal title, accordingly, it is not possible to draw a clear-cut distinction between proprietorship and liabilities as these

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terms are used in accounting. Vestiges of title may appear under either form, may attach to the creditor's equity as well as to the proprietors.24

The right to ultimate management and the possession of legal title is embodied in the corporate organization. From a legal standpoint, both the creditors and stockholders have claims against only the organization for the resources committed to the firm by them, and each equity class has some restricted rights which may influence the choice of management personnel and indirectly the use of the resources.

If a clear-cut distinction between the owner and creditor is not to be found in legal relationships, then the distinction between the two classes must arise because of economic relationships. The function of capital in the land, labor, capital agents of production as postulated by economists must perform two principal functions: (1) risk and responsibility taking—entrepreneurship, and (2) pure capital service—the capitalist proper. The line traditionally drawn in accounting between the proprietary and creditor classes is an attempt to correspond to this economic division. In one sense, a creditor may be viewed as a latent owner, for, in the case of a default, the creditors may exercise their rights and after expelling the shareholders acquire the proprietary interest. It is only in rare cases, however, that the affairs of a corporation in default are actually terminated and the property distributed to the

24Paton, Accounting Theory, p. 59.
mortgage bondholder. The usual case involves a reorganization with new and different security interests accruing to the bondholders. "The position of a first mortgage bondholder is quite different from that of a holder of an individual real estate mortgage, who can foreclose directly and with relatively simple legal action come into possession of the mortgaged property."25

Just as the creditor interest has some aspects of a proprietary interest, the proprietary class also has an aspect of the creditor interest— that of providing some "pure capital service." One author explained this similarity as follows:

Every commitment of capital involves some risk of loss of the capital, and for this reason no security is absolutely safe. Safety in a security is relative and not absolute. Securities differ from one another not in the presence or absence of risk but rather in the degree of risk incurred. One security has a lower degree of risk and hence a higher degree of safety than another security.26

Paton summarized the equity relationships of creditors and stockholders very nicely:

Property ownership connotes such attributes as control, title, risk-taking, and capital furnishing. No one of these elements attaches exclusively to what the accountant labels "proprietorship" as opposed to liabilities.


Consequently we can conclude that ownership or equities constitutes a class rationally comprehending both of these divisions.\(^2\)

This relationship does not imply that equity interests cannot be differentiated, but rather that both the proprietary and creditor interest are part of a larger classification—equities. It is akin to the proposition that both inventories and equipment are assets but can be differentiated into the classifications of "current" and "fixed" assets. If all existing types of corporate securities were arranged in a series it would become a continuum ranging from unsecured open accounts, to bonds varying in degree of security, to convertible debentures, to preferred stocks varying in cumulative and participating features, to convertible preferred stocks, and finally to common stocks. Thus the equity side of the balance sheet would become an unbroken piece of string that could not be segregated into types of capital except by an arbitrary cutting of the string. The connecting thread that runs throughout the string is that all of these security interests represent an equity in the assets committed to an enterprise. The only significant differentiation between them is the variation in the lien-power and the method of computing compensation to the type of security.

The lessor in certain types of long-term leases which pass all or most of the usual ownership risks or rewards to the lessee takes on many of the characteristics of an equity

\(^2\)Paton, Accounting Theory, p. 57.
holder. The lessor is commonly viewed as the owner, yet, for all practical purposes, all of the aspects of ownership except title has passed to the lessee. In these cases, "it is not unreasonable to view the long-term lease as in some respects the equivalent of an outright sale." In particular cases such as this, the lessor should be regarded as an equity holder. The claim against the corporation by such a lessor does not differ significantly from the claims of creditors or stockholders.

Private property rights in the United States are limited by and generally subordinate to the residual and active powers of the state. The state through its power of taxation and eminent domain has an interest in and is able to exercise control over the activities of business enterprises. The state, in a sense, has a latent property right in every asset within its jurisdiction which it may exercise in the name of the public good. The expropriation activities of many Latin and South American governments bears witness to this power. As Paton explained:

The state, then might be said to have an interest in and control of, the affairs of the private enterprise. The state's authority, however, gives rise to an expressible value equity in property only in connection with the tax power. In so far as the state can coerce payments from income or principal as taxes it clearly has an accounting equity.

28 Ibid., p. 57.
29 Ibid., p. 40.
Some taxes are a payment for specific services rendered to a firm. Licenses, improvement assessments and similar charges are examples of this type of tax. The income tax, however, is a coerced levy by the government on net earnings of the firm. The income tax is in no respect a payment for specific services, nor is it negotiable or payable at will, but rather it is the dollar and cents expression of the state's right to exercise its latent equity in business enterprises. The government, through the taxing power, has a claim which it can exercise at will against individual economic units. In this regard, the state would be considered to be an equity holder.

The proper determination of equity relationships is vitally important in answering the question posed earlier of "who are the beneficiaries of net income?" The concept of the corporation, as viewed by the entity theory, is that it is "a separate and distinct entity existing and operating for the benefit of all long-term equity holders."[30]

Net Income Beneficiaries

Net income cannot be defined without reference to the beneficiaries of net income. This fact is aptly demonstrated in the 1957 statement of the American Accounting Association (AAA) where it was pointed out that "interest charges, income

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taxes, and true profit sharing distributions are not determinants of enterprise net income." The enterprise theory expressed by the AAA is a broader concept than the entity theory ("it may be thought of as a social theory of accounting"). However, when compared with their statement on the determination of net income to shareholders which was, "in determining net income to shareholders, however, interest charges, income taxes, and profit sharing distributions . . . are properly included," it demonstrates the importance of properly identifying the beneficiaries of the corporation in the income determination process.

Any distribution made to the equity holders (as defined in the previous section) as a result of their equity position must, under the entity theory, be shown as a distribution of income and not as an expense. Net income, under the entity theory, consists of revenues less the costs and expenses incurred for goods and services consumed in generating the revenues. The resulting net income would be distributed to the equity holders as follows:

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32 Hendriksen, Accounting Theory, p. 400.

33 Committee on Accounting Concepts and Standards, "1957 Revision," p. 5.
Shareholders - Dividends paid or accrued and the change in retained earnings (the residual interest)

Creditors - Interest paid or accrued for the period

Lessors - Implicit interest included in lease payments for leases which are substantially a sale

Governments - Taxes incurred by reference to net income.

This concept of net income was summarized by Paton and Littleton, as follows:

After properly assignable costs have been compared with revenue the amount of net revenue or income, if the balance is favorable, or of net loss if the balance is unfavorable is disclosed. The figure of income, in turn, expresses the amount of resources which may be drawn upon (if in disposable form) to meet interest charges, income taxes, and dividend appropriations without impairment of capital and surplus as of the beginning of the period. 34

Hendriksen corroborated the advantages of this concept when he pointed out:

This concept of net income has an advantage from the point of view of separating the financial aspects of the corporation from the operating. The net income to the enterprise is an operating concept of net income. Interest to debt holders and earnings to stockholders are financial in nature. Income taxes are neither financial nor strictly operating; and their exclusion from the computation of enterprise net income has some merit, because they do not represent controllable imput costs. 35

The Entity Theory and Comparability

The following statement illustrates the relationship


35 Hendriksen, Accounting Theory, p. 151.
of the entity theory to the comparability problem under investigation in this study.

Suppose that two enterprises, A and B, are organized at the same time to operate in identical lines. Each company, it will be assumed, starts with a capital of $5,000,000 and each has exactly the same opportunities for success as the other. But in the case of A all funds are secured through stock issues while B issues $2,000,000 in bonds carrying a 6 per cent rate of return. If in this situation the doctrine that interest charges are an operating expense be accepted we are forced to the ridiculous conclusion that the expense of B each year exceeds that of enterprise A by $120,000.36

A difference in net income would also be reported if one firm financed through bonds and/or stocks while the other utilized long-term leases. Differences could also arise if the firms adopted differing tax policies that caused a difference in tax liabilities for the year. Donald Rappaport in commenting on "The Dilemma of Comparability in Financial Statements," stated that he felt the greatest problem in comparing financial statements lies in the obscuring of discretionary decisions.37 Financing and tax decisions of the modern corporation are arbitrary and discretionary, subject in large degree to the whim and caprice of management.

An income statement prepared according to the entity theory has two main parts (see Exhibit I) which correspond

36Paton, Accounting Theory, p. 268.

<table>
<thead>
<tr>
<th></th>
<th>1969</th>
<th>1968</th>
</tr>
</thead>
<tbody>
<tr>
<td>REVENUE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and other operating revenue</td>
<td>$15,474</td>
<td>$14,409</td>
</tr>
<tr>
<td>Dividends, interest, and other revenue</td>
<td>399</td>
<td>375</td>
</tr>
<tr>
<td></td>
<td>$15,873</td>
<td>$14,784</td>
</tr>
<tr>
<td>COSTS AND OTHER DEDUCTIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil, products, materials, and services</td>
<td>$6,669</td>
<td>$6,305</td>
</tr>
<tr>
<td>Wages, salaries, and employee benefits</td>
<td>1,246</td>
<td>1,186</td>
</tr>
<tr>
<td>Depreciation and depletion</td>
<td>849</td>
<td>763</td>
</tr>
<tr>
<td>Excise and other operating taxes</td>
<td>4,580</td>
<td>4,285</td>
</tr>
<tr>
<td></td>
<td>13,344</td>
<td>12,539</td>
</tr>
<tr>
<td>NET INCOME TO ALL EQUITIES</td>
<td>$2,529</td>
<td>$2,245</td>
</tr>
<tr>
<td>DISTRIBUTION OF NET INCOME:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest on debentures and notes</td>
<td>$178</td>
<td>$118</td>
</tr>
<tr>
<td>Federal and state income taxes</td>
<td>946</td>
<td>841</td>
</tr>
<tr>
<td>Preferred stock dividends</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Income to minority interests</td>
<td>47</td>
<td>41</td>
</tr>
<tr>
<td>Common stock dividends</td>
<td>785</td>
<td>743</td>
</tr>
<tr>
<td>Retained income</td>
<td>323</td>
<td>252</td>
</tr>
<tr>
<td>NET INCOME TO ALL EQUITIES</td>
<td>$2,529</td>
<td>$2,245</td>
</tr>
</tbody>
</table>
with the notions of business risk and financial risk. The top part of the statement, ending with the caption "net income to all equities," reflects the performance of the company relative to business risk. This section presents information indicating how well competition was met, provides a basis for measuring managerial efficiency, and, because of the inclusion of extraordinary losses and gains, adequately fulfills the fiduciary function of accounting.

If discretionary charges such as interest and income taxes were removed from the computation of net income of firms, the resulting net income figure would probably exhibit a higher degree of correlation with the industry average, and the dispersion between firms would tend to be the result of differing actions taken by the firms in meeting the conditions in the industry.\(^3\) As a result, the net incomes of the firms would be more directly comparable and the differences that did exist would tend to be more the result of management's actions in meeting business risk than is currently the case. In addition, the entity net income figure when used as the numerator in computing the rate-of-return on total assets would provide a better measure of the efficiency of the utilization of those assets than the rate-of-return computations currently used.

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\(^3\)This was found true for similar income measures reported by Philip Brown and Ray Ball, "Some Preliminary Findings on the Association Between the Earnings of a Firm, Its Industry, and the Economy," *Empirical Research In Accounting: Selected Studies*, 1967, 55-77.
The calculation of net income under the entity theory is similar to that measurement utilized by investment analysts in computing bond interest coverage and preferred dividend coverage. An accepted computation of bond interest coverage is as follows:

\[
\frac{E + t + i}{1}
\]

Also an accepted ratio for computing preferred dividend coverage is: 39

\[
\frac{E + t + i}{1 + \frac{Dp}{1-r}}
\]

where 

- \( E \) = Net earnings
- \( t \) = Income taxes
- \( i \) = Interest
- \( Dp \) = Preferred dividend rate
- \( r \) = Tax rate

Both of these coverage formulas calculate in reverse order a net income figure that is the same as net income as defined in the entity theory. This net income figure is of great importance to an investor who is considering the purchase of corporate bonds as investments since "the best protection a bondholder can have is adequate interest coverage." 40


The entity theory would not only remove income taxes from the computation of net income, but would also eliminate the problem areas of inter-period tax allocations, investment tax credits, and tax-loss carry-forwards. Since income taxes, according to the entity theory, are a distribution of income, the only tax figure that has meaning is the current tax liability. The presumption would be that management is rational and desirous of minimizing the long-run tax effect of operating decisions. As a result, the taxes payable for the current year represent the distributive share of the current year's income that has accrued to the state under existing statutory law. Investors would recognize that taxes vary with policy changes just as dividends vary with policy changes. "Income taxes do reduce income but whether they are accounting expenses--i.e., true costs of earning revenue--is a matter of theory deserving much more realistic attention than professional accountants and academicians have been willing to give it to date."\(^4\) The attitude toward income taxes implied by the entity theory agrees with the concept that income taxes follow rather than precede revenue generation.

The removal of interest and income taxes from the computation of net income has the added advantage of allowing the firm to be viewed in its entirety and be evaluated in a manner similar to the discounted cash-flow techniques used in capital budgeting. In looking at an investment project,

\(^4\)Hayes, *Appraisal*, p. 79.
Miller and Modigliani stated that "the type of instrument used to finance an investment is irrelevant to the question of whether or not the investment is worthwhile." Similarly, the capital structure of a firm is irrelevant as to whether or not the firm is adequately meeting business risk. Capital structure irrelevance does not mean that the managers of a firm may not have logical grounds for preferring one type of financing over another; nor does it mean that an investor will not prefer one type of security over another in effecting his investment decision. Certainly the problems involved in choosing the optimum investment security strategy are by no means trivial to the investor; they should, however, have no bearing on the basic decision as to whether or not a firm is a worthwhile investment prospect.

The Other Comparability Problems

Although the use of the entity theory in accounting would offer only a partial solution to the non-comparability enigma, it is a step in the right direction. Other comparability problems, such as alternative practices for pension costs, research and development, business combinations, depreciation methods, and inventory valuation methods, would not be directly solved by use of the entity theory. However,

indirectly more uniformity might be achieved through a more clearly defined frame of reference for accounting theory.

Other means must provide the final solution to these problems. One possibility would be to find industry norms as was done in a study by Ray C. Hunt, Jr. Another would be through the continued efforts of the Accounting Principles Board to reduce accounting alternatives through published opinions.

**Summary**

The purpose of this chapter has been to demonstrate on logical grounds that income as determined according to the entity theory is more comparable between firms than income as determined under contemporary generally accepted accounting principles, and that the entity theory is sound theoretically.

Chapter four contains a summary of an empirical test designed to determine whether the professional groups that prepare and use financial information support the propositions that are inherently contained in the entity theory.

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CHAPTER IV

A TEST FOR PROFESSIONAL SUPPORT OF THE ENTITY THEORY

Accounting literature abounds with the notion that accounting must be useful; i.e., it must meet the needs of the users of accounting information. To this end, an empirical test, through the use of a mailed questionnaire, was conducted among the preparers and users of financial statements to determine whether or not support exists for the propositions inherently contained in the entity theory.

Method of Research

A recent conference of 35 prominent Certified Public Accountants, representing 21 major accounting firms, recommended that the American Institute of Certified Public Accountants (AICPA) study ways to improve the delineation of financial reporting standards. The conference suggested that the study groups should obtain comments from preparers and users of financial statements. It was recommended that these comments as well as the deliberations of the study groups be made part of the public record. Since accounting does not exist in the abstract, it cannot be developed in the abstract.

The viewpoints of preparers and users of accounting statements are of great importance in insuring that financial statements pass the test of pragmatism.

The empirical portion of this study is in keeping with the objectives and methodology espoused by the above mentioned conference. As in most cases of empirical research, the population of actual and potential preparers and users of accounting information is too large to poll all members. In-depth interviews and the duplication of real-life situations within a controlled laboratory setting were considered to be impractical from both an economic and time standpoint. For these reasons, probability sampling procedures were used to select a sample to which a questionnaire was mailed and from which conclusions were drawn.

The following outline was used as a guide in constructing the test.²

1. State the objectives of the sampling test.
2. Define and delineate the population from which the sample is to be drawn.
3. Define the sample unit.
4. Determine the proper sample size.
5. Select the sample.
6. Analyze the sample and interpret and summarize the sampling process.

Objectives

The intent of the research was to answer two basic questions:

1. What proportion of the two populations (preparers and users) accept the propositions contained in the entity theory;

2. Does a significant difference exist in the accept/reject rate of the propositions by the two populations?

These objectives necessitated the use of sampling for attributes, and results of attribute sampling are normally expressed as a percent of the type of event specified.\(^3\)

A test for a statistically significant difference in the two populations was also planned.

Population

Conceptually, the population of preparers and users of financial statements would include all persons who would prepare such statements for any third party and all persons who ultimately would be interested in using the statements. A population, defined in this manner, is not sufficiently determinate to be of practical use. For this reason, the decision was made to restrict the population for sampling

purposes to a sub-group of the larger total possible population.

In the search for a sub-group, the following decision rule was adopted. The group from which the sample was to be drawn must meet the following four conditions:

1. Representative. The sampling population must be representative of the major group who actually prepare and use the financial statements.

2. Knowledgeable. The members of the sub-group must be knowledgeable—both in training and experience—in the preparation and use of financial statements.

3. Interested. The members of the sub-group must exhibit an interest in the subject matter sufficient to presume that reasonable care would be exercised in answering the questionnaire.

4. Determinate. The sub-group chosen must have a determinate size and be sufficiently defined to allow contact via the mail system.

Preparers

The group chosen as the population for the preparers were Certified Public Accountants (CPAs) who were members of the American Institute of Certified Public Accountants (AICPA) as evidenced by the 1967 directory.

Since most financial statements of publicly held corporations are prepared by trained accountants, it was
felt that this group would be reasonably representative of the larger group of accountants who prepare the financial statements. The membership of the AICPA includes accountants employed by private industry as well as accountants engaged in public practice who perform the attest function.

The CPA group meets the criterion for knowledgeability since all states require that CPAs pass a uniform examination and have some actual accounting experience. Membership in the AICPA indicates that these CPAs have a continuing interest in accounting and have maintained employment in the accounting field.

Membership in the AICPA was judged to be prima facie evidence that these CPAs are interested in the development of the profession and thus would be interested enough to exercise reasonable care in responding to the questionnaire.

The members of the AICPA are determinate. Directories of the membership are published at infrequent intervals which include both names and addresses. An added advantage of using the AICPA members was that geographical biases would not be present. A sample drawn from the AICPA directory on a random basis would give any member CPA, anywhere in the country, the same probability of being selected.

**Users**

The users of financial statements are less capable of precise definition than are the preparers. As has been established in prior chapters, published data are primarily
for the use of investors. The search for a sub-group for the investor population resulted in the choice of security analysts for the sample population.

While security analysts may not resemble the average investor in training, education, experience, or on any other psychological basis, they do exercise a considerable influence on the actions of investors. H. T. Rockwell concluded in his research that "professionals, such as security analysts, influence 92% of all security transactions." Similarly, Charles T. Horngren has concluded that:

Professional security analysts represent, dollarwise, probably a very large percentage of existing investment capital. That is why reports should be oriented toward fairly sophisticated investors—they are the real users of the information.

For sampling purposes, the security analyst population was more narrowly defined to include only those designated as Chartered Financial Analysts (CFA). The 1970 directory of the Institute of Chartered Financial Analysts (ICFA) was used as the universe from which the sample was taken.

Since financial statements are used primarily by professionals, it was felt that the CFA group would be reasonably representative of the larger group of analysts who regularly use the published financial statements. The

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fact that an analyst has acquired the CFA designation is prima facie evidence of an active interest in the analysis and interpretation of financial statements.

An analyst can acquire the CFA designation only by passing a battery of tests and meeting experience requirements as established by the ICFA. As a result of the examination and experience requirements, the CFA group is presumed to meet the criterion for knowledgeability as it applies to the users of financial statements. A breakdown by occupation, as given in the directory, indicated that 93% of the CFAs were actively engaged in security analysis directly and the remaining 7% were engaged in related or complimentary fields.

As in the case of the AICPA members, the possession of a CFA certificate and membership in the ICFA was taken to be evidence that these CFAs are interested in the development of the profession and would be interested enough in the development of financial reporting to exercise reasonable care in answering the questionnaire.

The size of the population of CFAs can be determined by reference to the directory of membership which is published annually. The directory included all CFAs regardless of location and allowed a random sample to be drawn that would be free of any geographical bias, as in the AICPA group.

Summary

The choice of CPAs and CFAs resulted in the test being geared toward determining the level of professional support
for the propositions contained in the entity theory and
toward determining whether there was a significant difference
in the acceptance of those propositions by these professional
preparers and users. Any reliability lost through a lack of
representativeness of the larger population of potential users
and preparers should have been more than compensated for by
the gains in knowledgeability and interest in the subject
matter resulting from the usage of these two groups.

In both sample populations, members outside the United
States were eliminated.

**Sample Unit**

A sample unit for this test was an individual CPA or
CFA as evidenced by the listings in the respective directories.
A questionnaire was mailed to each individual CPA or CFA
chosen for the sample.

**Sample Size**

The size of the samples was determined by reference
to the following formula and in consultation with a capable
statistician.

\[
n = \frac{P(1-P)}{(se)^2 + \frac{P(1-P)}{N}}
\]

Where:
- \( n \) = sample size
- \( P \) = hypothesized acceptance rate
- \( se \) = desired sample precision
- \( t \) = confidence level factor
- \( N \) = population size
The degree of precision and the confidence level are judgmental factors which must be specified by the researcher. Consultation with the statistician led to the conclusion that an error rate of \( \pm 5\% \) and a confidence level of 95\% would be satisfactory for this type of test.

Although the questionnaire had been pretested, the decision was made to use a 50\% probability of acceptance. This decision assumed no prior knowledge of test results but assumed that sample size would be adequate to meet the precision requirements.

The formula was applied to each of the populations and resulted in a sample size of 38\( \frac{4}{4} \) from each group. This number was rounded up and 400 questionnaires were mailed to each of the CFA and CPA groups.

**Sample Selection**

A significant potential source of bias in any sampling test is the method of selecting the respondents. A primary objective of the sample selection process was to attain the highest degree of sample reliability possible in the circumstances. Bias in the sample selection process must be kept to a minimum if sample reliability—the degree to which the population is represented by the sample—is to be kept high. Since "randomization is the primary control factor in all sampling to reduce bias to a minimum," the decision was

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made to select a random sample from the CFA and the CPA populations.

Individuals in both directories were assigned numbers and the sample was selected by computer through a random number generator program. The computer program automatically eliminated duplicated numbers.

Individuals chosen for the sample who had foreign addresses were eliminated and replaced. Questionnaires returned for bad addresses or because of refusals to cooperate were replaced by new sampling units. Returns for these reasons were less than five percent of the total for each sample.

**Questionnaire Design**

To define and offer the entity theory as an alternative to currently accepted accounting practices would probably introduce a bias for the status quo from the respondents; for, in one sense, everyone resists change. Costello and Zalkind, both professors of psychology, have pointed out that:

> To give up well-established and, therefore, easy habits, to spend time to acquire new knowledge, or to experience the possible threat of new conditions of work, all upset the even tenor of our adjustment. Unless there is more to be gained than lost and unless the gain is made apparent, we naturally resist having to change ... In addition, training for change disrupts the regular work of the individual causing him to fall behind and lose the satisfaction of getting done.7

Even if the benefits of the change had been well delineated in the questionnaire there would still have been some degree of resistance and therefore bias in the results. From the standpoint of the individual from whom the change is being elicited, "the hazards of change are likely to appear early in the process, the positive outcomes much later."  

Because of the inherent resistance to change believed to exist on the part of both the preparers and users in the populations, the decision was made to search for the way in which the underlying concepts were perceived by the respondents rather than to challenge the status quo.

The approach of searching for underlying concepts is consonant with a sound methodology of developing an accounting theory. Hendriksen, in his Accounting Theory, explained:

The "facts" being explained by accounting theory are not independently measurable and verifiable and, therefore, are not really facts. Rather they are the economic relationships in the business world and concepts that may appear differently to various observers. The choice of a most appropriate theory depends on how well it supports the development of procedures and techniques that best fulfill the objectives of accounting. 9

The major emphasis of this study has been to base accounting theory on the objectives of reporting to stockholders, investors, creditors, and other outside interests. 

8Ibid., p. 195.

The questionnaire, presented in its entirety in Appendix A, consisted of six sets of definitions, a question regarding rate-of-return, and pro-forma income statements from which the respondent was asked to choose the definition or condition with which he agreed most. In each of the eight situations, one choice reflected the underlying concept or economic relationship from the point of view of the entity theory; the other choice(s) reflected currently accepted accounting principles or other alternative theories.

All of the definitions were paraphrased from the works of leading authors. In many cases, the definition was a compilation of the thoughts expressed by various authors. The following tabulation describes the origin of the eight queries.

1. **Income Taxes.** The definitions used for expressing the concept of income taxes were taken principally from Eldon S. Hendriksen's *Accounting Theory* \(^{10}\) and William A. Paton's *Accounting Theory* \(^{11}\) Part B contained the entity theory response.

2. **Interest.** The definitions for interest were taken from W. A. Paton and A. C. Littleton's *An Introduction to Corporate Accounting Standards* \(^{12}\)

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\(^{10}\) Ibid., p. 464.


and the dissertation written by W. G. Dafashy, "An Analysis of the Entity Theory of Business Enterprise."\(^{13}\) Response B reflected the entity theory viewpoint.

3. **Income Statement Purpose.** The statements expressing the purpose of the income statement were compiled from *Accounting Theory* by Hendriksen,\(^ {14}\) *Changing Concepts of Business Income*,\(^ {15}\) and Dafashy's dissertation.\(^ {16}\) Statement A included the entity theory concept.

4. **Assets.** Assets were defined by reference to *Advanced Accounting Principles* by Newlove and Garner\(^ {17}\) and Dafashy's dissertation.\(^ {18}\) Definition A contained the entity theory response.

5. **Liabilities.** Liabilities were defined by paraphrasing the words of Eldon S. Hendriksen


\(^{16}\) Dafashy, "Entity Theory," p. 50.


\(^{18}\) Dafashy, "Entity Theory," p. 56.
6. Rate-of-return. The rate-of-return question was an original construction. Response A reflected agreement with the entity theory.

7. Concept of Corporation. The question that asked the respondent to choose his concept of the corporation was taken directly from an article by Robert T. Sprouse, "The Significance of the Concept of the Corporation in Accounting Analysis." Concept B expressed the corporation from the entity theory point of view.

8. Statement Choice. Income Statement A was a single-step income statement taken directly from the annual report of Standard Oil Company (New Jersey) for 1968. Statement B utilized the same data but was prepared according to the entity theory. The name of the company was changed for inclusion on the questionnaire.

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A cover letter was included with each questionnaire which contained an appeal for cooperation as well as instructions for completing the questionnaire. The recipients were "locked-in", i.e., were requested to choose only from the responses available. Since one of the responses reflected current practice, it was felt that at least one of the available responses would be at least minimally acceptable. In addition, the "locked-in" response would facilitate the analysis of the returns.

An addressed, stamped postal card which had an answer sheet printed upon it was used for the return form. This return form was utilized to reduce the time needed by respondents in effecting their replies.

Prior to mailing, the questionnaire and the research design were reviewed in detail with a psychology professor. The purpose of the review was primarily to determine whether there were any weaknesses in the study from a psychological standpoint, that is, to determine whether or not there were psychological biases hidden in the questionnaire or in the manner in which it was to be presented to the respondents. The conclusion was that the study was designed properly, included no biases that could be detected, and should obtain the results which were sought. It was also agreed that an expression of acceptance/rejection rates in terms of percentages or proportions and a chi-square test for a significant difference between the two populations would be a proper evaluation of the sample.
The cover letters were personalized only to the extent that the respondent's name was typed onto a pre-printed letter and each letter was manually signed. Further personalization was not attempted since a study by Martin and McConnell indicated that complete personalization of cover letters does not add significantly to the response rate. Their study also concluded that regular postage on the return vehicle (as was used in this study) was superior to business franking. The conclusion was that respondents apparently feel that franked mail is "junk" mail.

Pre-Test Procedure

The questionnaire was tested five times prior to mailing to the intended sample group. The first four tests were conducted using students (upperclassmen and graduate) at the University of Arkansas. The fifth test was conducted with the Northwest Arkansas Chapter of Certified Public Accountants at a regular meeting with thirty in attendance. The questionnaire was modified in many respects after these pre-tests. Questions 1, 2, 3, 4, 5, and 8 survived with some modifications until the final mailing. Questions 6 and 7 were added after the first two pre-tests. The first two tests had a question requiring the ranking in descending order of the primary problem areas of non-comparability in financial

statements. The question was dropped upon concluding that the ranking would vary widely among respondents depending upon their knowledge and experience with various industry problems.23

After each test, the questionnaire results were reviewed for consistency of answer patterns, for biases resulting from the placement of answer choices, and biases resulting from particular words that would prejudice the group toward a particular answer. For instance, the presence of the word "expense" in defining interest was found to bias the answer patterns away from the entity theory. Seeing interest defined in the more conventional description as an expense naturally elicited that response as being the preferred definition. In addition, several of the pre-test respondents were interviewed in depth to determine why they chose particular answers. These interviews also helped in finding words and phrases that tended to elicit biased responses.

The test groups were as follows: group one was a class in investments (senior level); group two was a class in accounting problems (senior level); group three was a class in investments (senior level); group four was a class in accounting theory (graduate level); group five was the

Northwest Arkansas Chapter of Certified Public Accountants.

The questions as indicated in the following paragraphs correspond to the questions on the final questionnaire.

Analysis of Results

Response Rate

Four hundred questionnaires were mailed to each group. Of the questionnaires mailed, 239 were returned by the CPA group (59.75%) and 229 were returned by the CFA group (57.25%). Questionnaires returned for bad addresses included 23 for the CPA group and 7 for the CFA group. Questionnaires returned with refusals to cooperate were 4 and 3 for CPAs and CFAs respectively. All of the sampling units for whom unused questionnaires were returned for either reason were replaced in the sample.

Because of the high return rate of usable questionnaires, follow up letters were not used in an attempt to elicit additional responses. The relatively high return rate increases the validity of the sample.

Statistical Evaluation Procedure

The proportion of the sample respondents in each population are presented in terms of those accepting or rejecting the entity theory propositions. In addition, the control limits for inferring the proportion of the populations accepting the entity theory are presented in terms of a range within which the population proportions would be
expected to fall. These control limits were interpolated from tables prepared by Herbert Arkin\textsuperscript{24} which were adapted for the finite case from tables prepared by Fisher and Yates.\textsuperscript{25} The formula utilized by Fisher and Yates was as follows:

\begin{equation*}
\sum \left[ \frac{n!}{r!(n-r)!} p^{2(1-p)^{n-r}} \right]
\end{equation*}

Where \( n \) = sample size
\( p \) = rate of occurrence in population
\( r \) = specified number of occurrences in sample

The principle of the formula was summarized by Fisher and Yates as follows:

If an event is observed to occur \( a \) times out of \( N \), a lower limit \( \pi_1 \) can be assigned to the probability of this event such that if the probability were actually \( \pi_1 \), then an observed number of occurrences as great or greater than \( a \) out of \( N \) trials would only occur by chance with a frequency of \( p_1 \). Similarly an upper limit \( \pi_2 \) can be assigned such that if the probability were actually \( \pi_2 \), an observed number of occurrences as small or smaller than \( a \) would occur with frequency \( p_2 \).\textsuperscript{26}

As stated above, the tables were interpolated to obtain the control limits for the samples utilized in this study. This interpolation introduced a degree of inexactness which, however, was found to be very small.

Since the research data consists of frequencies in discrete categories, the chi-square test was used to determine

\textsuperscript{24}Herbert Arkin, \textit{Handbook of Sampling}, pp. 425-505.


\textsuperscript{26}\textit{Ibid.}, p. 6.
the significance of the difference between the two independent groups. The formula used in determining the chi-square ($\chi^2$) values was as follows:  

$$\chi^2 = \sum_{i=1}^{r} \sum_{j=1}^{k} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Where $O_{ij} =$ observed number of cases categorized in $i$th row of $j$th column  
$E_{ij} =$ number of cases expected under the null hypothesis to be categorized in $i$th row of $j$th column

The values of $\chi^2$ yielded by this formula are distributed approximately as chi-square with degrees of freedom $= (r-1)(k-1)$, where $r =$ the number of rows and $k =$ the number of columns in the contingency table.

The contingency table utilized in this test consisted of two rows and two columns which resulted in one degree of freedom. The chi-square value for a two-tailed test of significance at the 95% confidence level is 3.84, according to Siegel. A chi-square value equal to or greater than 3.84, computed from the samples, would indicate that a statistically significant difference does exist at the 95% level.

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The null hypothesis ($H_0$) was stated as follows: there is no difference between the two groups (CFAs and CPAs) in the proportion of respondents who accept the entity theory.

Since the combined samples were greater than 40, the Yates correction for continuity was incorporated into the formula which had the effect of producing the following right-hand member of the equation:

$$\frac{(0_{ij} - E_{ij} - n/2)^2}{E_{ij}}$$

For this test, $n$ is equal to the combined samples, 468.

Mail Survey Results

The questionnaire recipients were instructed to choose one of the two definitions which most closely paralleled their own for questions one through five. Questions six through eight contained specific instructions for each situation. The recipients were also instructed to assume the corporate form of organization in considering each area. The corporate form is consonant with the type of organization which concerns most investors. An evaluation of the results of the mail survey by each area of interest follows.

1. INCOME TAXES

   A. Income taxes represent the expiration of assets used in producing revenue and are therefore a reduction in owners' equity that should be allocated when necessary and practicable to income and other accounts.

   29 Ibid.
B. Income taxes in general constitute a coerced levy on net earnings made possible by a latent prior equity in business properties held by the state. Accordingly, income taxes are a distribution of income to the state and are similar in nature to the dividend distributions paid to stockholders.

Of the CPAs responding, 129(54%) accepted the entity theory proposition (B) while 110(46%) rejected the proposition. The proportion of the CPA population expected to accept the entity theory proposition regarding income taxes would lie between 47.6% and 60.4%. The CFA group responded 166(72%) for the entity theory proposition and 63(28%) against. The CFA population proportion would be expected to lie between 67.5% and 77.9% in favor of the entity theory viewpoint. The chi-square value for area one was 18.009 which is greater than 3.84. This indicates a rejection of the null hypothesis and leads to the conclusion that a significant difference between the two groups does exist.

The results of the study indicated that the entity theory definition of income taxes does agree with the concept of income taxes held by a large proportion of both groups and that the entity definition agrees more with the CFAs than the CPAs.

2. INTEREST

A. Interest is a payment made for the use of funds which have been converted into various assets which have been utilized by the enterprise in revenue generating processes. Interest should, therefore, be treated as a deduction from revenue in income determination.
B. Interest is a payment to bondholders and other creditors who are suppliers of funds to the business entity just as are the stockholders. As a result, the payment of interest to creditors represents the distribution of their share of enterprise net income and is similar in nature to the payment of dividends to stockholders.

The entity definition of interest (B) was accepted by 22(9%) and rejected by 217(91%) of the CPAs responding. The proportion of the CPA population that could be expected to accept the entity definition would be from 5.9% to 13.3%. Similar results were obtained from the CPAs where 34(15%) accepted the entity definition while 195(85%) rejected it. An inference of the CFA population agreeing with the entity theory would be between 11.1% and 19.7%. The chi-square value for the two groups was computed to be 1.849, which is less than 3.84, and indicates the null hypothesis should be accepted, i.e., there is no difference between the two groups.

The study indicated that both groups, by a wide margin, do not accept the notion that interest is a distribution of income as postulated by the entity theory.

3. INCOME STATEMENT

A major purpose of the income statement, in addition to providing a measure of managerial efficiency, assisting in the investment decision, and providing a historical basis for predicting the future course of the business is:

A. To express the amount of current income allocable to the beneficiaries of the corporation as interest charges, income taxes and dividend appropriations.
B. To reflect the increase or decrease in net worth resulting from current operations that accrues to the owners of the corporation.

The CPA sample group responded to area three with 28(12%) accepting (A) and 211(88%) rejecting the idea that a major purpose of the income statement is to express the amount of current income allocable to the beneficiaries of the corporation. The CFA group followed the same general pattern with 55(24%) accepting and 174(76%) rejecting the avowed purpose of the income statement according to the entity theory. Based on these response rates, the range should be 8.3% to 16.6% for the CPA population and 19.1% to 29.5% for the CFA population.

The chi-square value computed for area three was 8.133, again greater than 3.84, which indicates a significant difference between the two groups.

The samples indicated that both groups reject the purpose of the income statement as expressed by the entity theory, with the CPA group rejecting it more strongly. Both groups apparently agree that the income statement should be constructed primarily for the stockholder.

4. ASSETS

A. Assets are the property of the corporate entity and the shareholders, bondholders, and other creditors have only claims against them. Assets are viewed as outlays made by the business enterprise for productive reasons the benefits of which are expected in the future.
B. Assets are things of value, notably objects or realizable claims owned by the proprietors which are awaiting sale or other disposition. Assets are essentially debt-paying media owned by the proprietors.

Both CPAs and CFAs accepted strongly the entity definition of assets (A). The CPA group responded with 214(90%) accepting and 25(10%) rejecting the entity definition. Of the CFA respondents, 207(90%) accepted and 22(10%) rejected the entity definition. As was to be expected, the chi-square value was very low, .0823, for these results and indicated no significant difference. For both groups, the population proportion would lie between 86.3% and 92.9%.

The results of this query indicated that both groups are in strong agreement with the entity theory. This result was hardly surprising since the entity viewpoint with regard to assets has been taught in accounting textbooks for several years.

5. LIABILITIES

A. Liabilities are obligations to a special class of security holders who have no ownership interest and provide only funds for a fee. In a strict sense, a liability is a negative asset.

B. Liabilities represent claims against the enterprise accruing to various classes of security holders other than stockholders who differ from stockholders only by a variation in the lien-power and the method of computing compensation to the type of security.

The sample group of CPAs responded with 105(44%) accepting (B) and 134(56%) rejecting the entity definition.
An estimate of the population proportion for the CPA group would lie between 37.9% and 50.3%. The CFA respondents reflected that 86(38%) agreed and 143(62%) disagreed with the entity definition. The proportion of the CFA population accepting the entity viewpoint would be within the range of 32.3% to 44.0%.

The results of the sample for this area reflected that both groups reject the entity definition of liabilities—but not by a large margin. The chi-square value of 1.777 indicated no significant difference in the responses.

6. Which of the following two rate-of-return concepts do you feel is most appropriate for comparing the operating results of two or more companies?

A. Rate-of-return based on total assets.

B. Rate-of-return based on stockholders' equity.

The CPA group indicated that most (174-73%) felt that return on stockholders' equity was a better evaluation ratio than return on total assets (65-27%). The entity viewpoint would reflect return on total assets. The proportion of the CPA population agreeing with this concept would vary from 21.8% to 32.8%. The CFA group, on the other hand, indicated that the entity concept was preferred by a margin of 131(57%) to 98(43%). An estimate of the CFA population agreeing with the entity concept would be from 51.0% to 62.9%. As would be expected, a very high chi-square value was obtained for this area, 46.496, indicating a very significant difference.
The results of the survey on area six indicated little agreement between the two groups with regard to the rate-of-return concepts.

7. Which of the following concepts of the corporate form of business organization most nearly reflects your concept of the corporation:

A. The corporation is an association of common shareholders who are the owners of the corporate assets and the obligors of the corporate debts.

B. The corporation is a separate and distinct entity existing and operating for the benefit of all long-term equity holders.

C. The corporation is a social institution operated for the benefit of many groups, including stockholders, creditors, employers, customers, governments, and the general public.

D. The corporation is merely a legal term indicating a prescribed set of legal relations under which a business unit operates.

The two groups chose the concept of the corporation in the following proportions:

<table>
<thead>
<tr>
<th>Concept</th>
<th>CPA</th>
<th>CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Proprietary theory</td>
<td>44</td>
<td>18 %</td>
</tr>
<tr>
<td>B. Entity theory</td>
<td>88</td>
<td>37</td>
</tr>
<tr>
<td>C. Social theory</td>
<td>37</td>
<td>16</td>
</tr>
<tr>
<td>D. Legal theory</td>
<td>70</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td><strong>239</strong></td>
<td><strong>100 %</strong></td>
</tr>
</tbody>
</table>

The concept of the corporation chosen by the largest percentage of both groups was that of the entity theory. An estimate of the population proportions that would accept the
entity theory concept would vary from 31.1% to 43.2% for the CPA group and 28.5% to 39.9% for the CFA group. A chi-square value of 0.385 leads to acceptance of the null hypothesis with the conclusion that there is very little difference with respect to the entity theory acceptance rate of the two groups.

8. Which of the two following income statements do you feel would be most beneficial to investors for comparing the operating results of various firms?

Of the CPAs responding, 111 (46%) favored the entity theory income statement while 128 (54%) favored the conventional format. The proportion of the CPA population expected to prefer the entity statement would lie between 39.7 and 51.4%. The CFA group responded 124 (54%) in favor of the entity statement and 105 (46%) in favor of the more conventional form. The true proportion of the population should fall between 48.0% and 60.0% in favor of the entity statement. The chi-square value of 3.319 falls very close to the critical value of 3.84 but allows acceptance of the null hypothesis that there is no significant difference in the response proportions.

The study reflected a nearly even division in both groups as to the preferred income statement format. The lack of a significant difference indicates that neither group accepts the entity statement more strongly than the other group.
Table I presents a summary of the results of the questionnaires returned from the mail survey.

Some Explanatory Comments

Two apparent inconsistencies in answer patterns can be noted from Table I. First, both the CPA and CFA groups rejected the entity definition of interest by a wide margin and rejected the entity definition of liabilities by a much narrower margin. This apparent inconsistency might be explained by the observation that interest has traditionally been considered to be an expense (a proprietary concept) while liabilities have been defined in accordance with the entity theory in many accounting textbooks in recent years. Thus, an inconsistency from the entity point of view, which has been taught in the literature of accounting may have preconditioned the respondents to answer in this manner.

Second, the purpose of the income statement as expressed by the entity theory (area 3) was rejected by both groups while both groups were almost evenly split on the choice of income statement formats (area 8). The income statement has traditionally been prepared from the proprietary point of view which might explain a bias toward rejecting the entity notion in area 3 on the part of both groups. The apparent reversal of attitude noted in area 8 might be the result of perceived new information emanating from the entity theory statement. This hypothesized explanation of increased communication through new information seems to be borne out by the
Table I

ABSOLUTE AND RELATIVE FREQUENCY OF RESPONSES IN TWO SAMPLES BY AREA OF INTEREST, CLASSIFIED BY RESPONSE CHOICE OF ENTITY AND OTHER

<table>
<thead>
<tr>
<th>Area of Interest</th>
<th>CPA Sample</th>
<th></th>
<th></th>
<th>CFA Sample</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>1 Income Taxes (Definition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>129</td>
<td>54 %</td>
<td></td>
<td>166</td>
<td>72 %</td>
</tr>
<tr>
<td>Other</td>
<td>110</td>
<td>46</td>
<td></td>
<td>63</td>
<td>28</td>
</tr>
<tr>
<td>2 Interest (Definition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>22</td>
<td>9</td>
<td></td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>Other</td>
<td>217</td>
<td>91</td>
<td></td>
<td>195</td>
<td>85</td>
</tr>
<tr>
<td>3 Income Statement (Purpose)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>28</td>
<td>12</td>
<td></td>
<td>55</td>
<td>24</td>
</tr>
<tr>
<td>Other</td>
<td>211</td>
<td>88</td>
<td></td>
<td>174</td>
<td>76</td>
</tr>
<tr>
<td>4 Assets (Definition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>214</td>
<td>90</td>
<td></td>
<td>207</td>
<td>90</td>
</tr>
<tr>
<td>Other</td>
<td>25</td>
<td>10</td>
<td></td>
<td>22</td>
<td>10</td>
</tr>
<tr>
<td>5 Liabilities (Definition)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>105</td>
<td>44</td>
<td></td>
<td>86</td>
<td>38</td>
</tr>
<tr>
<td>Other</td>
<td>134</td>
<td>56</td>
<td></td>
<td>143</td>
<td>62</td>
</tr>
<tr>
<td>6 Rate-of-return (Choice)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>65</td>
<td>27</td>
<td></td>
<td>131</td>
<td>57</td>
</tr>
<tr>
<td>Other</td>
<td>174</td>
<td>73</td>
<td></td>
<td>98</td>
<td>43</td>
</tr>
<tr>
<td>7 Corporation Concepts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>88</td>
<td>37</td>
<td></td>
<td>77</td>
<td>34</td>
</tr>
<tr>
<td>Other</td>
<td>151</td>
<td>63</td>
<td></td>
<td>152</td>
<td>66</td>
</tr>
<tr>
<td>8 Income Statement (Choice)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entity</td>
<td>111</td>
<td>46</td>
<td></td>
<td>124</td>
<td>54</td>
</tr>
<tr>
<td>Other</td>
<td>128</td>
<td>54</td>
<td></td>
<td>105</td>
<td>46</td>
</tr>
</tbody>
</table>

Total number in sample 239 229
observation that the CFA group—the communicatees—apparently recognized the value of new information more quickly than did the CPA group—the communicators.

Another result of the survey worth particular mention was the fact that the entity theory concept of the corporation was accepted over the other three concepts by the largest number of respondents in both groups. Although this was not a majority vote, the entity concept was the preferred concept of the four.

**Respondent's Entity Score**

An entity score for each respondent was computed in an effort to determine whether the acceptance of the entity theory propositions was the result of a sub-group within the sample that held strictly with the entity theory or whether the acceptance rates were a result of partial acceptances on the part of all respondents. The entity score was computed by assigning, for each respondent, a value of "1" for each response favoring the entity theory and a score of "0" for each response rejecting the entity theory notion. The results of this measurement are portrayed in Figures I and II and Table II. As can be seen from Figures I and II the CFA group outnumbered the CPA group in each score classification in terms of the acceptance of the entity theory. Therefore, the conclusion can be drawn that the CFA group, on the whole, is more receptive to the entity theory than is the CPA group.

As can be noted from Table II, 131 of 229 CFAs (57%) responding
FIGURE I
FREQUENCY DISTRIBUTION
OF ENTITY SCORES - CPA SAMPLE

FIGURE II
FREQUENCY DISTRIBUTION
OF ENTITY SCORES - CPA SAMPLE
## TABLE II

### ABSOLUTE AND CUMULATIVE FREQUENCY DISTRIBUTIONS OF ENTITY SCORES FOR CPA AND CFA SAMPLES

<table>
<thead>
<tr>
<th>Entity Score</th>
<th>Frequency</th>
<th>Cumulative* Frequency</th>
<th>CPA Frequency</th>
<th>Cumulative* Frequency</th>
<th>CFA Frequency</th>
<th>Cumulative* Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
<td>239</td>
<td>2</td>
<td>229</td>
<td>2</td>
<td>229</td>
</tr>
<tr>
<td>1</td>
<td>26</td>
<td>237</td>
<td>5</td>
<td>227</td>
<td>5</td>
<td>227</td>
</tr>
<tr>
<td>2</td>
<td>45</td>
<td>211</td>
<td>32</td>
<td>222</td>
<td>32</td>
<td>222</td>
</tr>
<tr>
<td>3</td>
<td>75</td>
<td>166</td>
<td>59</td>
<td>190</td>
<td>59</td>
<td>190</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>91</td>
<td>62</td>
<td>131</td>
<td>62</td>
<td>131</td>
</tr>
<tr>
<td>5</td>
<td>22</td>
<td>38</td>
<td>39</td>
<td>69</td>
<td>39</td>
<td>69</td>
</tr>
<tr>
<td>6</td>
<td>13</td>
<td>16</td>
<td>21</td>
<td>30</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>9</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

* Indicates cumulative frequency for indicated score or more.
agreed with 50% or more of the entity theory responses, while only 91 of 239 CPAs (38%) agreed with 50% or more of the areas as viewed by the entity theory. It also seems significant that only two respondents from each group completely denied the validity of the entity theory in all of the areas of interest.

To test the proposition that the CFA group is, on the whole, more receptive to the entity theory two additional statistical tests were performed. The first test was the median test, which is a procedure that will give information as to whether it is likely that the two groups come from populations having the same median (computed from the entity scores above) and whether the median of one population is higher than the other.\textsuperscript{30} The null hypothesis used was that the two groups are from populations having the same median, and the alternative hypothesis was that the CFA median was higher than the CPA median. The application of the median test resulted in rejecting the null hypothesis and concluding that the CFA group has a median higher than that of the CPA group.

The second test utilized was the Kolmogorov-Smirnov two-sample test.\textsuperscript{31} A one-tailed test was used to determine whether or not the scores of the CFA group are stochastically higher than the scores of the CPA group. The two-tailed test

\begin{footnotesize}
\textsuperscript{30}\textit{Ibid.}, p. 111.
\textsuperscript{31}\textit{Ibid.}, p. 127.
\end{footnotesize}
was performed to determine whether differences exist in the distributions of the two samples (differences in central tendency, dispersion, skewness, and similar factors). Results of the Kolmogorov-Smirnov test indicated that the distributions are different and that the entity scores of the CFA group are higher than the entity scores of the CPA group.\(^\text{32}\)

**Conclusions**

The mail survey was inconclusive in the sense that it did not establish that the entity theory is currently the unit of outlook from which economic relationships pertinent to accounting theory are viewed by the majority of preparers and users of accounting information. The survey did indicate that the entity theory is already accepted or reasonably near acceptance by both groups with the exception of two areas, which, as explained above, might have been the result of pre-conditioning in the educational backgrounds of the respondents. As a result, the conclusion is drawn that an educational program, presenting the entity theory viewpoint and explaining the expected gains in the interfirm comparability of income statements that would result from the complete adoption of the entity theory, would probably be well received by the majority of both the preparers and users of accounting information.

Another important conclusion from the study is that it

\(^{32}\)For computations utilized in the median test and the Kolmogorov-Smirnov two-sample test, see Appendix B.
indicated, through the tests of significance in each of the areas of interest, that the communication process is not being completed effectively in all areas. The tests of significance indicated that the preparers and users of the statements are significantly different, i.e., from different populations, with respect to the areas of (a) income taxes, (b) income statement purpose and (c) rate-of-return measurements. Generally, however, both communicator and communicatee operate from the same basic concepts.

Inspection of Figures I and II and application of the median test and the Kolmorov-Smirnov test indicated that the CFA group is more receptive to the entity theory unit of outlook than is the CPA group. Since the differences in central tendency and distribution were significant in the above mentioned tests, it is recommended that all future pronouncements of the Accounting Principles Board of the AICPA should be issued only after the users as well as the preparers of accounting information have been polled.

In summary, the mail survey indicated that professional support does exist in varying degrees for the propositions inherently contained in the entity theory and that the professional users of accounting information exhibit more receptivity to the entity theory than the preparers.
CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

The purpose of this study has been to evaluate on deductive grounds the proposition that income as determined according to the entity theory would be more comparable among firms than income as determined under contemporary generally accepted accounting principles, and to investigate whether or not empirical support exists among two professional groups for the propositions inherently contained in the entity theory.

Non-comparability

The primary areas causing the non-comparability problems in income statement analysis were presented in context with the need for comparable statements on the part of investors, the primary users of financial statements. The problem areas were reduced to those which resulted from accounting differences and were discussed from three standpoints: (1) the alternative methods available, (2) the effect of the alternative methods on comparability, (3) the position taken by the Accounting Principles Board of the American Institute of Certified Public Accountants on the alternative methods.
Each of the problem areas were evaluated in terms of their relevance to each of Goldberg's four basic premises:

1. The Unit of Activity
2. The Unit of Outlook
3. The Unit of Measurement
4. The Unit of Record.

Emphasis was placed on those areas which seemed to have as the root cause of the problem an inadequate or improper definition of the Unit of Outlook. The Unit of Outlook was expressed as the point of view from which accounting procedures are performed. The viewpoint from which an event is seen determines how the event is to be expressed in the communication process. The problem areas determined to be a result of a misapplication of the Unit of Outlook were the investment credit, tax-loss carry-forwards, tax allocations, and hybrid securities and other rather arbitrary financing decisions.

The Entity Theory

The entity theory was defined as the theory which views equities as the complete group of claims against the assets, rather than the claim of one ownership interest, and does not require that the functions of ownership and management be embodied in the same claimant.

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The entity theory was placed in proper perspective by examining the entity theory position on the following two questions:²

(1) Who are the beneficiaries of net income?
(2) How should the equity relationships be shown in the financial statements?

The conclusion was drawn that the beneficiaries of net income, under the entity theory, are the shareholders, creditors, lessors, and governments. The equity relationships should be shown by reflecting the claims of the beneficiaries as equity claims and the earnings of the equity holders as distributions of net income.

The examination of the entity theory on deductive grounds resulted in the conclusion that through it the firm can be better evaluated and compared with other firms since the effects of the rather arbitrary tax and financing policies are eliminated.

The Empirical Test

The empirical test consisted of a questionnaire mailed to two professional groups—Certified Public Accountants and Chartered Financial Analysts. The two groups were chosen as surrogates for the broader population of preparers and users of financial information on the bases of representativeness, knowledgeability, interest and determinateness.

The questionnaire was designed to answer the two following questions:

1. What proportion of the two populations accept the propositions contained in the entity theory?

2. Does a significant difference exist in the accept/reject rate of the propositions by the two populations?

The following tabulation summarizes the acceptance rates of the entity theory propositions for the two sample groups:

<table>
<thead>
<tr>
<th>Proposition</th>
<th>CPA</th>
<th>CFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Taxes</td>
<td>54 %</td>
<td>72 %</td>
</tr>
<tr>
<td>Interest</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Income Statement Purpose</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>Assets</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Liabilities</td>
<td>44</td>
<td>38</td>
</tr>
<tr>
<td>Rate-of-return</td>
<td>27</td>
<td>57</td>
</tr>
<tr>
<td>Corporation Concept</td>
<td>37</td>
<td>34</td>
</tr>
<tr>
<td>Income Statement Type</td>
<td>46</td>
<td>54</td>
</tr>
</tbody>
</table>

Statistically significant differences (chi-square) existed for the acceptance rates for the income tax definition, the income statement purpose, and the rate-of-return concept.

An entity score was computed for each respondent in each sample to allow measurement of differences in distribution within each sample group. The score was computed by
assigning a value of "one" to each entity response and a value of "zero" to each non-entity choice. Frequency distributions and "or more" ogives were plotted for the two sample groups. The Median test and the Kolmogorov-Smirnov two-sample test were applied to the entity scores and indicated a statistically significant difference in the distributions of the entity scores of the two groups.

Conclusions

The mail survey indicated that the entity theory is already acceptable by a fifty percent or more majority, or reasonably near that level of acceptance, in all areas except the definition of interest, and the statement of purpose for the income statement. The low level of acceptance for these two areas may have been the result of preconditioning in the educational background of the respondents.

The tests of significance indicated that the preparers and users of financial statements, as defined in this study, agree generally on the same basic concepts. The two groups indicated a statistically significant difference with regard to their viewpoints of income taxes, the purpose of the income statement, and rate-of-return concepts.

The evaluation of the entity scores revealed that the CFA group is generally more receptive to the entity theory unit of outlook than the CPA group, although not greatly so. The higher receptivity rate on the part of the CFA group reinforces the notion that the users of information in the
communication process are quicker to recognize the value of new information than are the preparers.

To summarize, the empirical test indicated that support does exist, within both professional groups, in varying degrees for the propositions inherently contained in the entity theory and that the professional users of accounting information exhibit more receptivity to the entity theory than the professional preparers.

Recommendations

The results of the question regarding the underlying concept of the corporation indicated that the entity theory concept was accepted over the other three concepts by the largest number of respondents. The plurality in favor of the entity theory indicates that it should be adopted as the basic concept from which accounting principles for publicly held corporations are derived.

The acceptance rates of all the questions, by both groups, indicate that an educational program, promulgated by the Accounting Principles Board of the American Institute of Certified Public Accountants, which presents the expected gains in interfirm comparability of income statements that would result from the adoption of the entity theory would probably be well received by the majority of both the preparers and users of financial information.

A liason committee should be established to encourage greater cooperation and participation of both professional
preparers and users of financial information. Exposure drafts of new APB opinions should be distributed to professional analysts and comments from this group should be solicited. This cooperation could be sponsored by the American Institute of Certified Public Accountants and the Institute of Chartered Financial Analysts as parent organizations and could be effected through local organizations. This cooperative effort would have the effect of producing financial statements which are more useful and better understood by the recipients, and would thus better complete the business communication process.

Additional research should be done to further refine and define the basic concepts and assumptions which are the basis of accounting principles. An agreement by both preparers and users as to the basic purpose of the various statements would be an important step in the improvement of financial information. Agreement on the degree of desired uniformity in accounting principles among industries and among all businesses would improve corporate financial reporting. General agreement on these points would allow the derivation and application of generally accepted accounting principles on the basis of logical reasoning which should result in improved reporting of financial information.
APPENDICES
I need your help in a research project designed to determine the general nature of various items that are of importance in the preparation of income statements.

You may help by completing the enclosed questionnaire. An answer sheet in the form of an addressed postal card has been enclosed to reduce the time needed for your reply. Pre-testing procedures on the questionnaire have indicated that it will require about ten minutes of your time.

In each case, please choose the response with which you most agree. If you agree with none of the choices then please choose the one that is least undesirable. The results of the questionnaire will be the basis for the major part of my dissertation for the Ph.D. in Business Administration.

Your name was chosen statistically and a high rate of return is very important so that statistical conclusions may be drawn.

Your cooperation will be of great value to the project, and I hope will contribute to the improvement of financial information.

Sincerely,

L. L. Schmidt, Jr., MBA, CPA
In each of cases 1 through 5, choose one of the two definitions which most closely parallels your own. Assume the corporate form of organization.

1. INCOME TAXES
   A. Income taxes represent the expiration of assets used in producing revenue and are therefore a reduction in owners' equity that should be allocated when necessary and practicable to income and other accounts.
   B. Income taxes in general constitute a coerced levy on net earnings made possible by a latent prior equity in business properties held by the state. Accordingly, income taxes are a distribution of income to the state and similar in nature to the dividend distributions paid to stockholders.

2. INTEREST
   A. Interest is a payment made for the use of funds which have been converted into various assets which have been utilized by the enterprise in revenue generating processes. Interest should, therefore, be treated as a deduction from revenue in income determination.
   B. Interest is a payment to bondholders and other creditors who are suppliers of funds to the business entity just as are the stockholders. As a result, the payment of interest to creditors represents the distribution of their share of enterprise net income and is similar in nature to the payment of dividends to stockholders.

3. INCOME STATEMENT
   A major purpose of the income statement, in addition to providing a measure of managerial efficiency, assisting in the investment decision, and providing a historical basis for predicting the future course of the business is:
   A. To express the amount of current income allocable to the beneficiaries of the corporation as interest charges, income taxes and dividend appropriations.
   B. To reflect the increase or decrease in net worth resulting from current operations that accrues to the owners of the corporation.
4. **ASSETS**

A. Assets are the property of the corporate entity and the shareholders, bondholders, and other creditors have only claims against them. Assets are viewed as outlays made by the business enterprise for productive reasons the benefits of which are expected in the future.

B. Assets are things of value, notably objects or realizable claims owned by the proprietors which are awaiting sale or other disposition. Assets are essentially debt-paying media owned by the proprietors.

5. **LIABILITIES**

A. Liabilities are obligations to a special class of security holders who have no ownership interest and provide only funds for a fee. In a strict sense, a liability is a negative asset.

B. Liabilities represent claims against the enterprise accruing to various classes of security holders other than stockholders who differ from stockholders only by a variation in the lien-power and the method of computing compensation to the type of security.

6. Which of the following two rate-of-return concepts do you feel is most appropriate for comparing the operating results of two or more companies?

A. Rate-of-return based on total assets.

B. Rate-of-return based on stockholders' equity.

7. Which of the following concepts of the corporate form of business organization most nearly reflects your concept of the corporation:

A. The corporation is an association of common shareholders who are the owners of the corporate assets and the obligors of the corporate debts.

B. The corporation is a separate and distinct entity existing and operating for the benefit of all long-term equity holders.

C. The corporation is a social institution operated for the benefit of many groups, including stockholders, creditors, employees, customers, governments, and the general public.
D. The corporation is merely a legal term indicating a prescribed set of legal relations under which a business unit operates.

8. Which of the two following income statements do you feel would be most beneficial to investors for comparing the operating results of various firms?

A. See Page 3.
B. 


The Deep-Hole Oil Company
Consolidated statement of income for the years 1969 and 1968

<table>
<thead>
<tr>
<th></th>
<th>1969</th>
<th>1968</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REVENUE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales and other operating revenue</td>
<td>$15,474</td>
<td>$14,409</td>
</tr>
<tr>
<td>Dividends, interest, and other revenue</td>
<td>399</td>
<td>375</td>
</tr>
<tr>
<td><strong>COSTS AND OTHER DEDUCTIONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude oil, products, materials, and services</td>
<td>$6,669</td>
<td>$6,305</td>
</tr>
<tr>
<td>Taxes and other payments to governments</td>
<td>5,607</td>
<td>5,177</td>
</tr>
<tr>
<td>Wages, salaries, and employee benefits</td>
<td>1,246</td>
<td>1,186</td>
</tr>
<tr>
<td>Depreciation and depletion</td>
<td>849</td>
<td>763</td>
</tr>
<tr>
<td>Interest and other financial charges</td>
<td>178</td>
<td>118</td>
</tr>
<tr>
<td>Income applicable to minority interests</td>
<td>47</td>
<td>41</td>
</tr>
<tr>
<td><strong>NET INCOME</strong></td>
<td>$14,596</td>
<td>$13,590</td>
</tr>
<tr>
<td></td>
<td>1,277</td>
<td>1,194</td>
</tr>
</tbody>
</table>

The Deep-Hole Oil Company
Consolidated statement of income for the years 1969 and 1968

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<td>763</td>
</tr>
<tr>
<td><strong>NET INCOME TO ALL EQUITIES</strong></td>
<td>$2,529</td>
<td>$2,245</td>
</tr>
</tbody>
</table>

**DISTRIBUTION OF NET INCOME:**

<table>
<thead>
<tr>
<th></th>
<th>1969</th>
<th>1968</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest on debentures and notes</td>
<td>$178</td>
<td>$118</td>
</tr>
<tr>
<td>Federal and state income taxes</td>
<td>946</td>
<td>841</td>
</tr>
<tr>
<td>Preferred stock dividends</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Income to minority interests</td>
<td>47</td>
<td>41</td>
</tr>
<tr>
<td>Common Stock dividends</td>
<td>785</td>
<td>743</td>
</tr>
<tr>
<td>Retained income</td>
<td>323</td>
<td>252</td>
</tr>
<tr>
<td><strong>NET INCOME TO ALL EQUITIES</strong></td>
<td>$2,529</td>
<td>$2,245</td>
</tr>
</tbody>
</table>
APPENDIX B

STATISTICAL COMPUTATIONS

1. THE MEDIAN TEST

The following contingency table was constructed for use in applying the median test:

<table>
<thead>
<tr>
<th></th>
<th>CPA</th>
<th>CFA</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above median</td>
<td>91 (A)</td>
<td>131 (B)</td>
<td>222</td>
</tr>
<tr>
<td>Below median</td>
<td>148 (C)</td>
<td>98 (D)</td>
<td>246</td>
</tr>
<tr>
<td>Totals</td>
<td>239</td>
<td>229</td>
<td>468</td>
</tr>
</tbody>
</table>

Basic formula:

\[ x^2 = \frac{n(|AD-BC|-n/2)^2}{(A+B)(C+D)(A+C)(B+D)} \]

Substituting:

\[ x^2 = \frac{468(|8,918-19,388|-\frac{468}{2})}{(222)(246)(239)(229)} \]

\[ x^2 = 16.41 \]

The chi-square value at the .05 level with degrees of freedom = 1 is 3.84.

\[ 16.41 > 3.84 \]
Therefore, the conclusion was drawn that the medians are significantly different.

2. KOLMOGOROV - SMIRNOV TWO-SAMPLE TEST

The following contingency table was constructed for the test. The value in each cell represents the cumulative proportions of the respondents having the indicated entity score or less. Scores of seven and eight were combined into one cell because of the small number of respondents having those scores.

<table>
<thead>
<tr>
<th>Entity Scores</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPA</td>
<td>.117</td>
<td>.305</td>
<td>.619</td>
<td>.841</td>
<td>.933</td>
<td>.987</td>
<td>1.0</td>
</tr>
<tr>
<td>CFA</td>
<td>.031</td>
<td>.170</td>
<td>.428</td>
<td>.699</td>
<td>.869</td>
<td>.961</td>
<td>1.0</td>
</tr>
<tr>
<td>Difference</td>
<td>.079</td>
<td>.135</td>
<td>.191</td>
<td>.142</td>
<td>.064</td>
<td>.026</td>
<td>0</td>
</tr>
</tbody>
</table>

Basic formula:

\[ x^2 = 4D^2 \frac{n_1 n_2}{n_1 + n_2} \]

Where: \( D = \text{largest difference, .191} \)
\( n_1 = \text{CPA sample, 239} \)
\( n_2 = \text{CFA sample, 229} \)

Substituting:

\[ x^2 = 4(.191)^2 \frac{(239)(229)}{239+229} \]

\[ x^2 = 17.064 \]
The above formula produces results which approximate degrees of freedom = 2. The chi-square value, df = 2, is 4.60, at the .05 level, using a one-tailed test. The one-tailed test predicts the direction of the difference between the two groups.

\[17.064 > 4.60\]

Therefore the conclusion was drawn that the two samples were different and that the CFA group exhibited more receptivity to the entity theory than the CPA group.

An ogive depicting cumulative "or more" relationships for the two sample groups is presented on the following page.

Note: The basic formulas and the chi-square values for both tests were taken from: Sidney Siegel, Nonparametric Statistics for the Behavioral Sciences, New York: McGraw-Hill Book Company, Inc., 1956.
FIGURE III
OGIVE DEPICTING "OR MORE" RELATIONSHIPS OF CPA AND CFA SAMPLE RESPONDENTS IN TERMS OF ENTITY SCORES

Number of respondents

Entity score
BIBLIOGRAPHY
SELECTED BIBLIOGRAPHY

BOOKS


Periodicals


Unpublished Materials


AN EVALUATION OF THE ENTITY THEORY
AS A PARTIAL SOLUTION TO THE
NON-COMPARABILITY ENIGMA OF
INTER-FIRM INCOME STATEMENT ANALYSIS

Abstract of dissertation submitted in partial
fulfillment of the requirements
for the degree of
Doctor of Philosophy

By

LESTER LEE SCHMIDT, JR.
B.S.B.A., University of Arkansas, 1962
M.B.A., Texas Tech University, 1963

1971
The University of Arkansas
This abstract is approved by:

Doris M. Cook
Dr. Doris M. Cook
ABSTRACT

AN EVALUATION OF THE ENTITY THEORY
AS A PARTIAL SOLUTION TO THE
NON-COMPARABILITY ENIGMA OF
INTER-FIRM INCOME STATEMENT ANALYSIS

The accounting profession has been criticized for many years because of the lack of comparability of financial information among firms. The American Institute of Certified Public Accountants has demonstrated its concern over the lack of comparability and has issued or has in process pronouncements intended to resolve or mitigate the comparability problems arising in some of the areas of difficulty. One important reason for the concern over comparability is the expectation that published income statements should allow the investor to evaluate the financial progress of the firm and to make meaningful comparisons of the results of two or more firms.

The purposes of this study were to evaluate deductively the proposition that income as determined under the entity theory is more comparable among firms than income as determined under contemporary generally accepted accounting principles and to investigate whether or not empirical support exists for the propositions inherently contained in the entity theory.
Income as determined under the entity theory is an expression of events from the point of view of all equity holders. As a result, the entity theory viewpoint offers a partial answer to the non-comparability enigma of current financial statements by providing information that is not influenced by discretionary financial and income tax policies.

An empirical test, consisting of an opinion type questionnaire, was conducted using two professional groups, Certified Public Accountants and Chartered Financial Analysts, as surrogates for the larger populations of preparers and users of financial statements.

The questionnaire asked the respondents to choose from different definitions the ones that most closely paralleled their own concerning income taxes, interest, assets, liabilities, and the purpose of the income statement. In addition, the respondents were asked to choose between various corporation concepts, rate-of-return concepts, and income statement formats. One of the choices was based on the entity theory in each case.

The questionnaire was evaluated by determining the proportion of the respondents in each group who accepted the entity theory proposition and by inferring the population proportions. A chi-square test of significance was applied to each question.

In general, the empirical test indicated that professional support does exist in varying degrees for the propositions
inherently contained in the entity theory and significant differences exist in the way in which the two sample groups viewed three of the questions.

Additional tests were conducted utilizing an "entity score" for each respondent to test for differences in the distributions of the two sample groups. These tests indicated that the distributions were different and that Chartered Financial Analysts exhibit more receptivity to the entity theory than the Certified Public Accountants.

The following recommendations resulted from the study:

1. The entity theory should be adopted as the basic concept from which accounting principles for publicly held corporations are derived.

2. An education program, conducted by the American Institute of Certified Public Accountants, should be conducted to acquaint the preparers and users of financial statements with the benefits to be obtained through adoption of the entity theory.

3. Users of financial statements should be encouraged to read and comment on pronouncements from the AICPA through a special liaison committee.

4. Additional research should be undertaken to further define and refine the basic concepts which are the basis for the development of generally accepted accounting principles.

Acceptance and implementation of the above recommendations would allow generally accepted accounting principles to be logically derived from a sound base and should improve the quality and usefulness of financial reporting.