A METHOD FOR REPORTING ALL ASSETS AND THE RESULTING ACCOUNTING AND ECONOMIC IMPLICATIONS

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THESIS

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ABSTRACT

A METHOD FOR REPORTING ALL ASSETS AND THE RESULTING ACCOUNTING AND ECONOMIC IMPLICATIONS

by Roger H. Hermanson

Professors Robert T. Sprouse and Maurice Moonitz, in their recent monograph -- A Tentative Set of Broad Accounting Principles for Business Enterprises (New York: American Institute of Certified Public Accountants, 1962), recommended a substantial change in accounting theory. Included in their recommendations was that all assets and asset changes should be reported for a particular entity. Human resources are includable as assets under the concept of assets they have used. No method for recording and reporting the value of human resources, however, has been given by Professors Sprouse and Moonitz.

The purpose of this study was to search for a method of accomplishing this task and to investigate the implications of reporting human resources as assets.

The method chosen for determining the value of human resources involves a capitalization of superior or inferior earnings on non-human resources. The capitalization rate is

the average rate of earnings on non-human resources controlled by all corporations in the economy. Although only the most recent year's performance is used in the computation, investors would be informed of prior year's valuations so that trends could be identified.

The method chosen for reporting the value of human resources involves a change in financial statement construction. The use of two separate position statements is recommended. Under the plan, the balance sheet becomes an appendage to the accounting income statement. Its function would be to serve as a resting place for charges and credits awaiting assignment to the income stream. A separate statement, called the statement of financial condition, would be prepared to show the worth of the entity to the absentee stockholder from the going-concern point of view. Since deferred charges are not resources in their present form they would be excluded from the statement, as would be the portion of retained earnings pertaining to these charges. The value of human resources and the equity change resulting from their recognition would, however, be included.

The study also shows how two successive statements of financial condition could be used to report entity economic income (in the Hicksian sense). This aspect does not,

however, form part of the basic proposal for a change in accounting theory.

Specific benefits from generally adopting the proposal are discussed. They include--increased comparability and completeness of financial statements leading to a more efficient allocation of funds in the economy, a rejuvenation of the position statements, a closer tie-in between financial statements, and an aid to the analysis of firms for internal purposes.

There are at least two other contributions which the study makes. One of these is a more precise definition and interpretation of assets.

Another rather incidental contribution is a closer relationship between "related" disciplines. By showing the economic implications and especially how accounting statements can be used to arrive at economic income, these two disciplines are drawn closer together. Accounting and finance are brought closer together by showing that the accounting "model" (for evaluating firms in the economy) is analogous to a capital expenditure decision model (for evaluating capital projects in finance). Accounting and management are drawn closer together by including human resources in the

statements, thereby making the accounting representation of the firm conform more closely to the management concept.

The study should be viewed as an extention of the recommendations made by Professors Moonitz and Sprouse. It accepts their recommendations with only slight revision, and then proposes further changes to accounting theory. It is hoped this study will make a contribution to the long-term betterment of accounting as a discipline and as a profession.

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By

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This work is dedicated to my wife, Dianne. Without her encouragement and aid, this dissertation may never have existed.

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CHAPTER I

INTRODUCTION

Nature of the Problem

In 1961, Maurice Moonitz, Director of Accounting Research for the American Institute of Certified Public Accountants, authored a monograph entitled, The Basic Postulates of Accounting.[1] The next year, 1962, Professor Moonitz and Robert T. Sprouse co-authored a monograph entitled, A Tentative Set of Broad Accounting Principles for Business Enterprises.[2] Moonitz and Sprouse in the "Principles" monograph stated that:

> . . . The principle task of accounting is to measure the history of the resources held by economic entities, to measure all of the resources and all of the changes. . . .[3]

They went on to state:

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[1]Maurice Moonitz, The Basic Postulates of Accounting (New York, N. Y.: American Institute of Certified Public Accountants, 1961).

[2]Robert T. Sprouse and Maurice Moonitz, A Tentative Set of Broad Accounting Principles for Business Enterprises (New York, N. Y.: American Institute of Certified Public Accountants, 1962).

[3]Ibid., pp. 11-12.

> In accordance with the emphasis in the postulates study, this study of broad principles takes the position that ideally all assets (and liabilities) should be recognized, as well as all changes that can be objectively determined. . . .[4]

A few paragraphs later they stated:

> All assets of the enterprise, whether obtained by investments of owners or of creditors, or by other means, should be recorded in the accounts and reported in the financial statements. The existence of an asset is independent of the means by which it was acquired.[5]

In October, 1962, Professor Moonitz spoke to a group composed of faculty and graduate students on the campus of Michigan State University, East Lansing, Michigan. He discussed the monographs in detail. Later that evening the same group met informally at the home of Professor Herbert E. Miller to further discuss the topic.

The author mentioned to Professor Moonitz the fact that many resources which conceivably could be included as assets to a given firm are not now recorded. Professor Moonitz agreed that, while the monographs state all assets should be recorded, more investigation is needed to show ways in which the idea might be implemented. The author suggested the best method for recording these resources

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[4] Ibid., p. 53.

[5] Ibid., p. 55.

might be to capitalize superior or inferior earning power (as compared with other firms in the economy). Professor Moonitz agreed that this may be the best way of accomplishing this task and inferred further investigation of this matter might be a worthwhile dissertation topic.

The main purpose of this dissertation is to devise a logically defensible and meaningful method of recording all assets of a firm somewhere in its financial statements. If this were the only accomplishment of the thesis, the effort involved would not have been wasted. The author, however, intends to go beyond the initial task by investigating the benefits which may derive from the recording of all assets and thinks that by doing so he may contribute some significant ideas to making financial statements more useful.

Reasons for Searching for an Answer

The question might be raised -- Why record all assets? The value of quantifying data was recognized by Moonitz when he stated:

> Quantitative data are helpful in making rational economic decisions, i.e., in making choices among alternatives so that actions are correctly related to consequences.[6]

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[6]Moonitz, op. cit., p. 21.

The recent emphasis in our schools of business upon the use of quantitative methods in decision-making is a result of the realization that explicit reasoning leads to better decisions than does implicit reasoning.

The anticipated specific benefits that may derive by adopting the proposal for quantifying the value of all assets are many. Each of them is briefly summarized below.

Closer Tie-in Between Financial Statements

The need for a close relationship between the financial statements was pointed out by Moonitz as follows:

> The fact that accounting statements articulate with each other distinguishes them from most other types of statistical exhibits. Accounting statements constitute a design that is readily apprehended; they depend on each other in a systematic manner.[7]

The proposal contained in this dissertation will provide for a much closer relationship than now exists between these statements. In fact, the relationship will be so close that one will be able to approximately determine a given year's income by looking only at the statement of financial condition prepared at the end of that specific year. The author refers to the statement of financial

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[7] Ibid., p. 27.

condition rather than to the balance sheet because he intends to differentiate between the two and assign different usages to each.

It is believed that this close unity of financial statements will indicate to the statement reader that all the assets have been recorded, at least in total.

Rejuvenation of the Position Statement(s)

In recent years the conventional balance sheet, which at one time purported to be a statement of financial condition, has been looked upon as nothing more than a post-closing trial balance. The proposals made by Moonitz and Sprouse, if adopted, would serve to greatly increase the usefulness of the conventional balance sheet.

Moonitz and Sprouse recommended the following method of correcting valuations for assets which now usually appear on the books:

> We observe that it is technically feasible to reflect changes in some assets in a more timely fashion, and thereby give more current information in the balance sheet. In this connection we propose to use a classification that distinguishes amoung (a) the amount attributable to changes in the dollar (price-level changes), (b) the amount attributable to the acquisition of goods and services prior to their utilization, and (c) the amount attributable to sales in a current market. The horizon of accounting for the results of operations can be expanded in this manner beyond the

> limits now imposed. At the same time it will continue to be based on objective, verifiable evidence. Its usefulness to management, to investors, and to others can accordingly be greatly increased.[8]

Arthur M. Cannon, a member of the AICPA committee on accounting principles would even go further. His suggestions on the valuation of assets might also contribute to the rejuvenation for certain purposes. He stated:

> I am particularly pleased with the proposal to price inventories at current values, realizable value when readily available and otherwise replacement cost. I would go further in the same direction in the areas of fixed assets, though I recognize the distinction between current assets as those held for relatively prompt liquidation and fixed assets as those held for productive use over a long period. Since I am familiar with real estate, I would not find it difficult to accept a current value principle for valuation of land and buildings based on expert and independent appraisal reviewed by the accountant. That kind of evidence is just as good and, in some cases, better than evidence we are using already in other areas. I am sure that persons familiar with machinery and equipment would find it equally easy to accept the notion of reappraisal thereof to current value from time to time.[9]

The proposals of these men are significant ones. Until <u>all</u> assets are recorded, however, the position statement(s) will remain subordinate to the income statement.

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[8] Sprouse and Moonitz, <u>op. cit.</u>, p. 17.

[9] <u>Ibid.</u>, p. 63.

The importance of rejuvenation of the position statement(s) has been given recognition by the American Institute of Certified Public Accountants as is evidenced by the following:

> . . . With the increasing importance of the income statement there has been a tendency to regard the balance sheet as the connecting link between successive income statements; however, this concept should not obscure the fact that the balance sheet has significant uses of its own.[10]

Moonitz and Sprouse also commented on this problem by stating:

> Both experience and abstract analysis tell us in unmistakable terms that any attempt in accounting to emphasize either the balance sheet or the income statement to the virtual exclusion of the other is bound to give disappointing results. Neither lives in isolation from the other. Both must be considered in an integrated attack on the problems of financial reporting.[11]

It is hoped that the ideas contained in this dissertation might aid in the task of making the income statement and position statement(s) of more equal value to readers of financial statements.

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[10] Restatement and Revision of Accounting Research Bulletins (New York, N. Y.: American Institute of Certified Public Accountants, 1953), p. 7.

[11] Sprouse and Moonitz, op. cit., p. 5.

More Efficient Allocation of Funds

In some of the more recent literature on capital expenditure decision-making for the individual firm, one of the most important concepts is that the company should receive feedback information so that estimates of net benefits to be derived from future projects will be more realistic. For certain uncompleted projects management may even choose to halt work after an analysis of the feedback information.

There is an analogy to be drawn here when one looks at investment decisions as faced by potential investors in our economy. Investors should be encouraged to make funds available to those firms which can earn the highest rate of return. This would encourage an optimum allocation of resources within the economy, as well as help to enable investors to earn a high rate of return on their investments. In order to determine how firms have performed in the past in relation to other firms in the economy, it is presently necessary to rely quite heavily on investment counsellors and on others who make this analysis a full-time pursuit. Much of their advice seems to be contradictory and the scope of the inter-firm comparisons made by these experts may be too limited.

One of the expected benefits of the proposal contained herein is that a potential investor by looking only at the financial statements of one firm can tell whether it earned a higher than average rate of return on its identified assets. While it is realized by the author that past or present returns are not necessarily indicative of future returns, it is argued that the public has a right to know how well the firms have performed in the past. If an investor then chooses to ignore the past and bet on the future of a particular firm he may still do so.

It is thought the proposal, by informing the public as to the relative performances of firms in the past, may also affect the cost of capital to the firms. Firms that have done well in the past may find their cost of capital falling, while those who have performed poorly may find their cost of capital increasing. While this undoubtedly occurs under present methods of financial reporting, the author would argue that his proposal may help to speed the action. Analysts would still be free, however, to attempt to convince the public it should ignore past performance and make funds readily available to certain firms because of their future potential.

Aid in Financial Anaylsis for Internal Purposes

Persons engaged in financial analysis have long argued the accountant does not give information that is relevant for many decisions the firm must make. Leonard Spacek told of the opinion of a man he calls "one of the foremost financial men of our country" concerning the usefulness of financial statements for management decision-making. He quoted the man as saying:

> Now yesterday's witness . . . suggested that somehow these (accounting) systems have one more important use -- that they are valuable for managerial decision making. This isn't so. I cannot think of a single major decision that we make by going back to the books of account. . . .[12]

The improvements in the valuation of assets recommended by Moonitz and Sprouse should satisfy many of these objections, assuming their proposals are adopted. It is hoped the recording of unidentified assets, as proposed in this dissertation, will also make a contribution to the usefulness of financial statements for internal (to the firm) purposes.

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[12]Leonard Spacek, "The Need for an Accounting Court," The Accounting Review, XXXIII (July, 1958), pp. 369-370.

Implementation of Economic Theory

Robert K. Mautz, in an address before the Eighth Annual Institute on Accounting held in Denver, Colorado, in October of 1961, had this to say:

> I think the profession must, from time to time, take a good look at what it is doing and question whether substantial improvement is not possible. Improvement comes from serious introspection. Only by seeking out our weaknesses and searching for a remedy, can we attain real progress. Financial statement presentation is, in my judgment, one of those weaknesses.[13]

He went on to state:

> . . . We have not yet begun to realize the full potential of accounting or of financial statements. There is no valid reason why we should not report much more information than we do in a considerably greater variety of ways. And although conservatism is undoubtedly a virtue of peculiar importance to accountants, progress demands a certain amount of innovation, even from conservative accountants.[14]

Speaking of the need for more innovation he commented:

> . . . we cannot but be impressed by the magnitude and complexity of our task -- to present to those who have a right to [it] pertinent, financial information about business enterprises in such a way that it will meet their needs and assist them as fully as possible to

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[13] Proceedings of the Eighth Annual Institute of Accounting (Boulder, Colo.: University of Colorado, 1961), p. 31.

[14] Ibid., p. 37.

> discharge their responsibilities. Business grows ever more complex; the interests in business have many and diverse needs; adequate reporting is thus a challenging task indeed. Secondly, we must be impressed also by the relatively unexplored opportunities that lie before us. There are many possibilities for service that we have not yet even attempted, much less exhausted; there is much room for research and innovation.[15]

Professor Mautz made another statement which is pertinent to this dissertation when he stated:

> . . . . we are not concerned with all possible kinds of economic information -- at least, not as public accountants. It may be that some great day in the furture, accountants may truly measure and communicate all economic data, but frankly, I don't expect to see it. . . .[16]

It is believed the accountant will be called on in the future to communicate an increasing amount of economic information to the individual firms and to the public. The wide gulf which now exists between the economic and accounting concepts of business income may have been substantially narrowed by the Moonitz - Sprouse recommendations on the valuation of assets. It appears that the methods of valuation they have proposed are much closer to the economic concept than is the historical-cost method now used in accounting practice in the United States. If the gulf is to

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[15] Ibid., p. 38.

[16] Ibid., p. 33.

be completely eliminated, changes may be necessary in the thinking of both groups.

The author hopes he might further contribute in some way to needed changes on the accounting side of the problem. In this way, he might help accounting practice to take a step in the direction of that "great day in the future" of which Professor Mautz spoke but does not expect to see.

Approach to the Problem

Source data for this study includes literature from accounting periodicals, textbooks, and publications of accounting professional organizations. Appropriate literature from the fields of economics and finance has also been investigated.

It is important to understand the scope of the study. It shall not be the purpose of this dissertation to evaluate and pass judgment on the Moonitz - Sprouse monographs. While the nature of assets and their valuation must be further dealt with, even though the Moonitz - Sprouse monographs discussed these topics, the central task of the dissertation is to devise a meaningful and logically consistent way of recording usually unrecorded assets. This dissertation should, therefore, be viewed as an appendage to the

work contained in the above-mentioned monographs.

The scope of the dissertation is limited to a discussion of the nature of assets, how generally unrecorded assets might be recorded, and a discussion of the expected benefits to be derived from doing this.

Following this introductory chapter, there are six additional chapters. Chapter II reviews the literature on definitions of assets and settles on a definition the author will be committed to for the remainder of the thesis. His interpretation of the definition is as crucial to the proposal itself as is the definition chosen.

Chapters III and IV contain the basic proposal of the dissertation. The proposal itself entails a priori reasoning and is intended to be an extension of accounting theory. Problems concerned with the application of the method selected are discussed.

An investigation and analysis of some of the anticipated benefits from adopting the proposal is the subject matter of Chapter V. A model is described for making capital expenditure decisions for an individual firm. An analogy is drawn from this model for the situation facing the public in allocating funds to firms within the economy as a whole. The chapter also includes a discussion of how

some of the other benefits might derive.

The discussion of the relevance of the proposal to an implementation of economic theory is reserved for Chapter VI. The special attention the author wishes to give to this topic is the reason why he has dedicated an entire chapter to it.

Chapter VII summarizes the entire study. It restates the argument contained in the preceding chapters and emphasizes the most important benefits which would result from an adoption of the proposal. Other contributions of the thesis are also discussed.

The author sincerely hopes this study will contribute significantly to the formulation of a more meaningful body of accounting theory.

CHAPTER II

THE NATURE OF ASSETS

General

It was quite surprising, in gathering and reviewing definitions of assets, to note the lack of preciseness in most of the attempts.

Still more surprising was the fact that many books on accounting, although discussing assets at great length, either felt it unnecessary to define the term or felt unable to do so. A partial list of these books, with the author and date of publication of each is given in Appendix A.[1]

In 1929, Professor John B. Canning wrote about his efforts in searching the accounting literature for adequate definitions of assets. He became so disappointed with the definitions existing in the literature that he decided the effort was not worth the scissor-work.[2] He then constructed a definition by observing how various items were treated by

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[1]The books appearing in Appendix A have not been included in the bibliography.

[2]John B. Canning, The Economics of Accountancy (New York, N. Y.: The Ronald Press Company, 1929), p. 13.

practicing accountants of the day.

The definition he formulated was as follows:

> . . . "An asset is any future service in money or any future service convertible into money (except those services arising from contracts the two sides of which are proportionately unperformed) the beneficial interest in which is legally or equitably secured to some person or set of persons. Such a service is an asset only to that person or set of persons to whom it runs."[3]

He concluded that not all items with the characteristics of assets are commonly included on the balance sheet, and that some items do appear which are not really assets.[4] This conclusion is also one of the major points made in this thesis.

It shall be the purpose of the next section to review the nature of commonly used definitions existing in the accounting literature since only then can recommendations be made for an improved definition. The succeeding section is devoted to an analysis of the economic concept of assets to determine if it can contribute to the improvement. Finally, a synthesized concept is presented.

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[3] Ibid., p. 22.

[4] Ibid., p. 45.

The Accountants' Commonly Used Definitions of Assets

The author chooses to divide the commonly used definitions into two categories. Under the first category assets are viewed as "things of value owned," while under the second category assets are viewed as "deferred charges" awaiting assignment to the income stream.

Assets as Things of Value Owned

Webster's New Collegiate Dictionary was probably not the source for many of the authors in this group although it defines an asset as "any thing of value owned."[5]

Most of the definitions that were substantially similar to the dictionary definition were contained either in textbooks for beginning students in accounting or in books written for non-accounting students. It is interesting to note that definitions of this nature were found in books written over a fifty-year time period.[6]

Certain other sources believed it necessary to immediately add a phrase to indicate that amounts owning to the entity should also be included as assets.[7] It

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[5] Webster's New Collegiate Dictionary (Springfield, Mass.: GTC Merriam Co., 1949), p. 53.

[6] For a listing of sources see Appendix B.

[7] For a listing of sources see Appendix B.

seems this phrase, however, does not substantially alter the initial definition since accounts receivable and other claims could be viewed as "things" of value owned.

There was another group of sources which did not specifically mention that assets must be owned.[8] They referred to assets as being property of value to the business. Even though they did not specifically mention ownership as being required, it is believed that ownership was implied.

Many of these sources gave one sentence definitions of assets and did not choose to interpret or qualify the definitions further at that point in their writing. A possible reason for this method of presentation is the authors believed that, because they were writing for persons not familiar with the field of accounting, a technically precise understanding of the term need not be conveyed.

There were some authors, however, who chose to define the term through interpretation of it. Those sources which contained "interpretative" definitions went beyond a simple one sentence definition to immediately explain

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[8]For a listing of sources see Appendix B.

precisely what was meant. For example, one author after defining the term went on to say that the asset need not be legally owned by the enterprise, but need only be under the control of the enterprise.[9] This was his way of indicating that such things as machinery purchased under a conditional sales contract, or real estate subject to a trust deed should be included as assets. He would not, however, include consigned goods as assets since the consignee only controls the property through delegated authority.

Other authors also contrasted legal and constructive ownership.[10] They argued constructive ownership is all that is required to record an asset. For instance, Arnold W. Johnson stated that in purchases on the installment plan the reservation of title by the seller is merely a protection device and therefore constructive ownership rests with the buyer.[11]

The actual source of many of these writers may have been the works of Professor William A. Paton. His writings

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[9]Myron M. Strain, Industrial Balance Sheets (New York, N.Y.: Harper & Brothers Publishers, 1929), p. 2.

[10]For a listing of sources see Appendix B.

[11]Arnold W. Johnson, Elementary Accounting (New York, N.Y.: Rinehart & Company, Inc., 1946), p. 9.

have been commonly referred to by many "students" of accounting. In 1922, Paton and Stevenson defined assets as ". . . any consideration . . . owned by a specific business enterprise and of value to that enterprise."[12] In 1949, Paton's definition of assets was substantially the same.[13]

Assets as Deferred Charges

In 1957, Professors Paton and Littleton co-authored a monograph for the American Accounting Association. They described assets as ". . . factors acquired for production which have not yet reached the point in the business process where they may be appropriately treated as 'cost of sales' or 'expenses.'"[14] It is not certain that this represents a change in Paton's concept of assets, but he has certainly described them from a different viewpoint.

One writer specifically mentioned this shift in viewpoint as to the nature of assets by stating, "Now this idea

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[12]William A. Paton and Russell A. Stevenson, Principles of Accounting (New York, N.Y.: The Macmillan Company, 1922), p. 18.

[13]William A. Paton, Essentials of Accounting (New York, N.Y.: The Macmillan Company, 1949), p. 15.

[14]William A. Paton and A. C. Littleton, An Introduction to Corporate Accounting Standards (Ann Arbor, Mich.: American Accounting Association, 1957), p. 25.

of assets as "deferred charges" is much nearer to the one which I am proposing. It is based on a "going-concern" view of costs-already-incurred-thus-relieving-the-business-of-some-future-costs-against-future-revenue, rather than the "winding up" view of realizable values for some material assets and "fixed-capital sunk" view for some other material assets."[15]

The Committee on Terminology of the American Institute of Accountants, as it was known in 1953, chose to define assets from the "deferred charge" point of view. It gave the following all-inclusive definition:

> Something represented by a debit balance that is or would be properly carried forward upon a closing of books of account according to the rules or principles of accounting (provided such debit balance is not in effect a negative balance applicable to a liability), on the basis that it represents either a property right or value acquired, or an expenditure made which has created a property right or is properly applicable to the future. Thus, plant, accounts receivable, inventory, and a deferred charge are all assets in balance-sheet classification.[16]

The Committee also admitted that deferred charges really are not assets in the popular sense, but because they

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[15]Harry Norris, Accounting Theory (London, Eng.: Sir Isaac Pitman and Sons Ltd., 1946), p. 47.

[16]American Institute of Certified Public Accountants, Accounting Terminology Bulletins, No. 1, Review and Résumé (New York, N.Y.: American Institute of Certified Public Accountants, 1953), p. 13.

may be carried forward as proper charges against future income, they are assets in a balance-sheet classification.

The Committee on Terminology of the Institute blamed the difficulty in arriving at a proper definition of assets partially on the double-entry bookkeeping system and admitted that defining assets as those items on the balance sheet with debit balances may not be an adequate statement of assets.[17]

Professor Canning commented on the weakness of definitions of assets which include all items with debit balances by stating, "Perhaps the most difficult task of all will be to show the nature of those items often listed under the general caption of assets in the accountant's reports that are not generally considered by accountants to be assets at all."[18]

General Comments

The definitions contained in this section are thought by some to be quite inadequate attempts. Probably the most vocal of the critics of the so-called "simple" definitions was Professor Canning. He attributed the lack of an adequate definition of assets (as of 1929) to the incompetence of writers in the area of accounting.[19] It is almost certain

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[17] Ibid., pp. 11-12.

[18] Canning, op. cit., p. 12.

[19] Ibid., pp. 8-9.

that if Professor Canning were to perform an investigation of the literature existing in 1963, he would again be disappointed with most of the attempts to define assets. It does seem that the possible uses which can be made of accounting statements are somewhat limited by the use of these "simplified" and divergent definitions.

One might tend to think there has been an improving evolutionary trend in the concept of assets. However, it instead appears that such things as the sophistication of the expected reader and opinions as to the function of the balance sheet have greatly influenced the definitions given by each of the many writers.

Mr. Leo A. Schmidt, writing in 1937, came to the aid of these writers by claiming the simpler definitions are only meant to be working definitions and need to be further refined by "scientific" thinking before the term can really be understood.[20] Until a technically precise definition is agreed upon, the users of the financial statements are bound to remain confused. The "deferred charge" definition in treating assets as unexpired costs conflicts with the commonly held view that assets are things of value, while the

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[20]Leo A. Schmidt, Theory and Mechanics of Accounting (New York, N.Y.: Prentice-Hall, Inc., 1937), p. 10.

"things of value owned" definition excludes resources which are controlled (but not owned) by the entity and which, therefore, have economic value to it.

One of the main reasons for the divergent views of assets, within the commonly used definitions, then, seems to stem from the fact that the conventional balance sheet has been asked to serve both as a post-closing trial balance and as a statement of financial condition. The proposal which follows in Chapters III and IV will attempt to remedy this situation.

Professor Charles E. Sprague, in his "classic" book originally written in 1907, pointed out the various ways in which assets may be considered. In his words:

> . . . the assets comprising the debit side of a balance sheet may be considered in one or more of the following ways:
>
> 1. As things possessed, directly or indirectly, or physical assets.
> 2. As rights over things and persons, for use, for services, or for exchange.
> 3. As incomplete contracts, whereof our part has been performed in whole or in part; or contractual assets.
> 4. As the result of services previously given, or cost.
> 5. As the present worth of expected services to be received.
> 6. As investment in the hands of another who uses it as capital.[21]

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[21] Charles E. Sprague, The Philosophy of Accounts (New York, N.Y.: The Ronald Press Company, 1922), pp. 47-48.

His categories are quite inclusive with the possible exception that he did not specifically include the "deferred charge" concept. The probable reason for not including that concept is Professor Sprague viewed the balance sheet as the most significant of the financial statements. The "deferred charge" concept, in contrast, implies that the income statement is to be emphasized. Professor Sprague included the economic concept, however, which is discussed in the next section.

The Economists' Concept of Assets

Professor Canning was careful to point out that an asset is a future service (rather than a source), in money or convertible into money, the beneficial interest in which is legally or equitably secured to the entity. Another writer, Edward G. Nelson, writing in 1942, chose to alter Professor Canning's definition by stating that the service or services need not be legally or equitably secured to the entity to be an asset to it.[22]

The major point which Mr. Nelson made, however, was concerned with the difference between assets and agents. He stated:

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[22]Edward G. Nelson, "The Relation Between the Balance Sheet and the Profit-and-Loss Statement," The Accounting Review, XVII (April, 1942), p. 136.

> The elements of all assets are not listed on all balance sheets. Some are implied. If the enterprise is a "going concern," it may be reasonable to expect future labor services, for example. However only the relatively minor item, Prepaid Wages, is generally exhibited. The rest is left to the imagination.
>
> Buildings, Machinery, Equipment, and Inventories are commonly listed as assets. These instruments are, in themselves, useless. A building cannot provide shelter for very long without a janitor. Someone must press the button to provide a pleasant atmosphere for customers. When the instruments are listed as assets, the future services associated with their use are implied. Labor, power, heat, light, repairs, and maintenance must be had or the instruments are useless and the proprietor has no assets.
>
> We must distinguish between the agent and the asset. The former is merely an instrument which will render a service. The latter is the future service or services. A delivery truck, for example, is an agent. Future transportation is the asset. . . .[23]

His argument is in line with the economic view of assets. It seems clear from the above that economists equate assets with services. It is also a fact that economists equate "factors of production" with resources.[24] To show that economists equate factors of production with services as well, Kenneth Boulding stated:

> The prices which form the subject matter of the theory of functional distribution are the prices of

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[23] Ibid., pp. 136-137.

[24] See A. C. Pigou, The Economics of Welfare (London, Eng.: Macmillan and Co., Limited, 1952), p. 134; or Abba P. Lerner, The Economics of Control (New York, N.Y.: The Macmillan Company, 1959), p. 324.

> services of property, not of the property itself from which the services are derived. These services are usually called the "factors of production" although this term is sometimes carelessly used to mean the property from which the service is derived.[25]

From an economist's point of view it would seem, therefore, that assets, resources, expected future services, and factors of production are identical concepts.

A Synthesis of Views

It is evident from the study of balance sheets, accounting textbooks, and other accounting literature that the accountant uses a different concept of resources (and, therefore, of assets) than does the economist. The accounting usage seems to conform to one of the definitions given by The American College Dictionary to the effect that resources represent money, or any property which can be converted into money.[26]

There is little doubt that by listing such things as buildings and equipment on balance sheets as assets, the accountant has the "agent" concept in mind. The system of attaching values to agents is so traditional in accounting

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[25] Kenneth E. Boulding, Economic Analysis (New York, N.Y.: Harper and Brothers Publishers, 1941), p. 219.

[26] The American College Dictionary (New York, N.Y.: Random House, 1958), p. 1033.

that any attempt to change this method of grouping and reporting the value of future services would detract from, rather than add to, the proposal of this thesis.

A synthesis of the two concepts is possible, however. The method of grouping values and labeling them according to the agent which will provide the future services can be retained from accounting. The amount of valuation to place on total assets could be determined by taking the economic concept of expected future services into account.

The economic concept can also be used to identify assets which have not been recorded by the accountant. It is already evident that the economic "factor of production," labor, has not been given asset recognition by accountants. That some businessmen realize this error is evidenced by statements such as the one made by Kenneth Stiles, Vice President of General Dynamics Corporation, to the effect that "by resources, I am thinking not just in terms of equipment and materials but also of our most valuable assets, the skill and brainpower of our people."[27]

Probably as a result of an increasing interest by

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[27]Kenneth Stiles, "What's Wrong with Financial Reporting - Accounting for Research and Development," The Journal of Accountancy, CXII (August, 1961), p. 31.

accountants in the area of economics, some of the more recent attempts to define assets have incorporated economic terminology. The definition given by the Committee on Concepts and Standards Underlying Corporate Financial Statements of the American Accounting Association, for instance, defined assets as "economic resources devoted to business purposes within a specific entity; they are aggregates of service - potentials available for or beneficial to expected operations."[28]

The most notable recent attempt to incorporate the economic concept of assets was made by Professors Moonitz and Sprouse. They stated that "assets represent expected future economic benefits, rights to which have been acquired by the enterprise as a result of some current or past transaction."[29] From the wording of this definition it, at first, seems that they intend the asset to be the future service rather than the agent which will provide the future services. They later stated, however, that "the apparent ability to

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[28]American Accounting Association, Accounting and Reporting Standards for Corporate Financial Statements (Columbus, Ohio: American Accounting Association, 1957), p. 3.

[29]Robert T. Sprouse and Maurice Moonitz, A Tentative Set of Broad Accounting Principles for Business Enterprises (New York, N.Y.: American Institute of Certified Public Accountants, 1962), p. 8.

render future economic benefits is the attribute which makes resources valuable; that which is incapable of rendering future benefits under any set of assumptions has no value and is therefore not an asset."[30] A further clarification of their concept can be obtained from another comment they made to the effect that:

> . . . the asset status of a resource is usually temporary. Most assets are capable of providing only a limited quantity of economic services. When those services have been dissipated or the time has elapsed, the asset status expires.[31]

From this latter statement it seems apparent that Moonitz and Sprouse are using the term, resources, to describe agents which render future services or benefits. To the extent that this interpretation is correct, Moonitz and Sprouse have chosen to retain the traditional accounting method of grouping values by agents rather than by services. It is evident, however, from reading the remainder of their monograph that they rely heavily upon economics for the valuation of assets in their proposal.

Moonitz and Sprouse erected some parameters to their definition by stating that the scarce resources must be attachable to the entity, must be capable of transfer, and must be expressible in terms of money.[32]

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[30] Ibid., p. 21. [31] Ibid. [32] Ibid., p. 19.

The Definition of Assets To Be Used in the Thesis

The author chooses to restate the Moonitz and Sprouse definition as follows: Assets are scarce resources (defined as agents rather than services), assignable to the entity, capable of being transferred, and expressible in terms of money; which have been acquired as a result of some current or past transaction, and which have the apparent ability to render future economic benefits.

This definition will be adopted for purposes of the dissertation. It is believed the definition incorporates the "best of both worlds." It retains the traditional approach in accounting of grouping values by agent (such as buildings and equipment) rather than by service (such as future shelter and future extrusion services). It also, however, allows for the incorporation of economic concepts of valuation and of identification of additional assets (i.e., human resources or agents).

There is a further necessary interpretation which must be made concerning the term, transaction, in the definition. Professor Paton described an accounting transaction as "any happening, process, or circumstance which affects the status of property or equity items in the business

enterprise."[33] In this dissertation, an event such as the hiring of a trained sales force shall be considered as having an effect on the equity of the business enterprise and is, therefore, a transaction.

The assets will be classified into two major categories. The first will be entitled "Identified Assets" and will include all scarce resources, legally or constructively owned by the entity, which have a market value and, therefore, could conceivably be directly used or converted for the payment of its debts. The second category of assets will be entitled "Unidentified Assets" and will consist of all scarce resources under the control of the entity which, for one or more reasons, do not qualify as identified assets. An example of such an asset would be a highly trained sales force. It is neither legally owned (although an argument could be made that it is constructively owned), nor is it directly usable or convertible for the payment of entity debts.[34]

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[33]William A. Paton, Accounting Theory (Chicago, Ill.: Accounting Studies Press, Ltd., 1962), p. 138. (This work was was originally written in 1922 as a doctoral dissertation at the University of Michigan.)

[34]An analogous category to that of "Unidentified Assets" is one entitled "Unidentified Negative Assets." The latter category will be used, in the proposal which follows, to record the negative worth of such factors as a relatively inefficient and untrained sales force.

Neither of the above categories are intended to include items commonly referred to as deferred charges. Since these items are not resources in their present form (but only charges awaiting assignment to the income stream), they are not considered to be assets under the definition selected.[35]

In the next two chapters, the main proposal of this thesis is given and defended. The proposal not only concerns itself with how unidentified assets might be recorded, but also with a differentiation between the balance sheet and the statement of financial condition. It will then become more obvious to the reader why the above categories have been selected.

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[35]The reader may be comforted in knowing that these items will still be accorded a place in the balance sheet.

CHAPTER III

COMPUTATION AND ENTRIES TO RECORD UNIDENTIFIED ASSETS

General

The recording of unidentified assets is analogous to the problem of estimating the amount of goodwill which exists as an economic fact for an entity but is not recognized in its books of account. A differentiation is made between "goodwill" and "unidentified assets" later in this chapter. However, much of the literature on goodwill was found to be applicable to the problem dealt with in this thesis.

Instances in which some attempt must usually be made to place a value on previously unpurchased goodwill include the transferring of an entire business from one owner to another, the transferring of a share in a business from one interest to another, and the assessing of an estate duty tax on capital.[1] It may be helpful to know how the amount of goodwill is estimated in instances such as these.

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[1]Kenneth S. Most, "Valuation of Commercial Goodwill," The Accountant, CXXXVIII (March 1, 1958), p. 248.

One source[2] listed six methods. They include valuation by an arbitrary assessment, an assessment based on turnover (gross fees), totaling the net income for a certain number of years in the past, totaling the super-profits for a certain number of years in the past, capitalizing expected future net income, and an annuity method. Another author[3] mentioned two additional methods; the use of a sliding-scale valuation of super-profits, and valuing goodwill as the difference between the average value of tangible assets and the capitalized value of the yield.

There seem to be disadvantages to the use of each of the methods. An arbitrary assessment of the amount would lack in uniformity of application among firms. The optimist would place a higher value on goodwill than would the pessimist.

Those methods which value goodwill at some number of years' purchase of annual net income, super-profits, or

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[2]R. K. Yorston, E. B. Smyth, and S. R. Brown, Advanced Accounting (Sydney, Austral.: The Law Book Co. of Australasia Pty. Ltd., 1950), p. 65. The original contributor of the methods could not be located by the author of this thesis. The summary contained in this source, however, seems to be quite useful.

[3]Arthur J. Little, "Valuation of Goodwill," The Canadian Chartered Accountant, LXXIV (February, 1959), p. 110.

gross fees seem to beg the logic of the problem. For instance, it is not of much satisfaction to be told that, traditionally, goodwill is worth from one to five years' purchase of past net income in a trading business, and from one to four years' purchase of net income in a manufacturing concern.[4] Two firms may have equal net income totals but different amounts of investment in tangible assets, yet, under these methods, the goodwill of the two would be the same.

Methods which require a prediction of future net income are subject to a wide range of errors. It is likely that "even with the exercise of the greatest care and skill maintainable future profits must necessarily be an estimate, subject . . . to a material margin of error, since no one can foretell the future."[5]

The sliding-scale method uses different multipliers for different layers of super-profit.[6] The advocates of this system believe that the greater the super-profit the more likely is the business to attract competition. Therefore, the upper layers of super-profit are valued at a lower

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[4] H. E. Seed, Goodwill as a Business Asset (London, Eng.: Gee and Co., Limited, 1937), p. 147.

[5] Ibid., pp. 149-150.

[6] Ibid., p. 151.

rate than are lower levels. Since one of the intentions of the proposal presented in this thesis is to affect the flow of capital, it does not seem desirable to minimize the value of unidentified assets before the capital has been reallocated.

The method which establishes the value as the difference between the average value of tangible assets and the capitalized value of the yield seems to be managable (assuming past yields, rather than future ones, are selected as a basis for capitalization). The problem still remains, however, of selecting a capitalization rate and of determining the number of prior years' income performance to be used in the computation.

Another conceivable method of valuation would be to take the market value of shares of stock times the number of shares outstanding as the total value of the entity rather than capitalizing net income. The major difficulty with this procedure is that the market quotations apply to purchases at the margin rather than to the price which would be paid either for the total entity or the controlling interest in the entity.[7] Commenting on the use of this method Couchman

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[7]Charles B. Couchman, "Limitations of the Present Balance Sheet," The Journal of Accountancy, XLVI (October, 1928), p. 267.

stated, "Such a procedure would, among other things, be a reversal of the order of cause and effect. . . . Under the present conditions governing bids and offers of stock on the market, a limited group might raise or lower the price of stock of a particular corporation to almost any degree desired, regardless of the fact that the actual values in the corporation remained constant during the period. . . ."[8]

In 1912, George May was called to testify in the matter of the estate of E. P. Hatch on the computation of goodwill. He chose to use past earnings as an indication of future earnings. In his words:

> The value of the goodwill was a very difficult problem indeed. In the first place, I adopted the method that has been used in numerous cases which have come to my notice in the sale of goodwill, of determining the value solely on the basis of the earning capacity or of the past earnings. . . . I worked out the value of the goodwill . . . on the basis of deducting from the earnings interest on the investment [in] tangible assets, and then capitalizing the excess on the basis of five years' profits. . . .[9]

The method used by Mr. May is quite similar to the one which will be suggested in this thesis.

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[8] Ibid., pp. 266-267.

[9] George O. May, Twenty-five Years of Accounting Responsibility (New York, N.Y.: American Institute Publishing Company, Inc., 1936), p. 237.

As evidenced by the methods cited above, it can be seen that no method of recording goodwill is both absolutely correct in theory and practicable. Some compromise will have to be made. Future net income streams, while theoretically correct to use, are subject to wide ranges of error. The use of past earnings as a basis for capitalization is manageable but not theoretically correct. As Mr. Stodder once wrote, "I do not know of any combination of formulae which would . . . produce an exact answer; there is only reasonable knowledge and judgment."[10]

However inaccurate is the method selected to record the value of unidentified assets, the effort will provide more accurate statements than does the present practice of leaving them off the position statement entirely. As Professor Emeritus A. C. Littleton once stated, "A good approximation is more truthful than the omission of a fact."[11]

It is possible that if a method for the calculation of unidentified assets could be agreed upon by members of the accounting profession, the practice of valuing them

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[10] John W. Stodder, "Some Methods of Valuation of a Going Concern," The Illinois Certified Public Accountant, XXI (Summer, 1959), p. 17.

[11] A. C. Littleton, Structures of Accounting Theory (Urbana, Ill.: American Accounting Association, 1953), p. 10.

annually and including the amount in the statement of financial condition might become general.

The proposal is presented in two major parts. The first is the method for calculating the amount of unidentified assets or unidentified negative assets and the entries to record them. The remainder of this chapter is concerned with this problem. The second part of the proposal is concerned with the presentation of the data in the financial statements and is dealt with in the next chapter.

The Mechanical Process

Computation of Amounts

For the sake of simplicity, it will be assumed that there are only four firms in the total business sector of the economy of a given nation. They are all corporations with a separation of ownership and management.[12] Table 1 gives the average value of identified assets and the net income of each of the firms for the previous year.

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[12]This is a necessary condition for some later arguments on the nature of unidentified assets. Management will be considered a resource under the control of the owners.

TABLE 1.--Assumed data

(Dollar Signs Omitted)

	Firm				
	W	X	Y	Z	Total
Average Value of Identified Assets[i]	100,000	50,000	200,000	150,000	500,000
Net Income After Taxes[ii]	15,000	5,000	25,000	5,000	50,000
Rate of Net Income on Average Identified Assets	15%	10%	12.5%	3.3%	10%

i - The average value of identified assets ideally would represent the arithmetic average of the daily value of identified assets which were under the control of the entity throughout the year. From a practical viewpoint a monthly, quarterly, or annual average may have to suffice.

ii - Net income after taxes was selected since the point of view adopted in this proposal is that of the absentee owner.

It can be seen from Table 1 that the rate of net income on identified assets for the total economy is 10% for the given year. The rates for the individual firms vary from 3.3% for Firm Z, to 15% for Firm W. Table 2 shows the computation of the amounts at which the unidentified factors should be recognized.

TABLE 2.--Computation of the value of the unidentified resources to each of the firms in the economy

(Dollar Signs Omitted)

	Firm			
	W	X	Y	Z
Average Value of Identified Assets	100,000	50,000	200,000	150,000
Normal Net Income (at 10%)	10,000	5,000	20,000	15,000
Actual Net Income	15,000	5,000	25,000	5,000
Divergence from Normal	5,000	-0-	5,000	(10,000)
Unidentified Assets (Capitalized at 10%)	50,000	-0-	50,000	
Unidentified Negative Assets (Capitalized at 10%)				100,000

Since the tangible or identified assets laying idle would earn nothing, the differences in rates of earning can be ultimately traced to the efforts of human resources. From Table 2 it can be seen that the human resources working with the identified assets in Firms W and Y were more efficient than average and therefore deserve to be capitalized and shown as assets on the books of these companies. The human resources in Firm X were only average in efficiency and, therefore, do not warrant capitalization into the records.

The inferior performance of Firm Z must mean that the human resources manipulating the other resources in that firm are performing submarginally as a group and, therefore, have a relatively negative economic effect.

For valuation purposes the effect of unidentified assets has been converted into an equivalence of identified assets. Thus, based on its identified assets, it would be expected that Firm W would earn $10,000 for the year. The actual earnings for Firm W, however, were $15,000. To earn this amount with assets which were only normally productive, it would be expected that total assets should have been $150,000. Since identified assets were $100,000, there must have been $50,000 worth of other assets at work during that year. These are recognized as unidentified assets. For Firm Z, it is as if it only had $50,000 of identified assets being manipulated in a way which resulted in average productivity.

Proposed Journal Entries

The journal entries to record unidentified assets and negative assets on the books of the various firms are as follows:

Firms W and Y

12/31/__	Unidentified Assets	50,000	
	Equity Increase - Superior Earning Power on Identified Assets		50,000
	To record the existence of unidentified assets. Superior earnings on identified assets were capitalized at the normal earnings rate in the economy of 10%. (5,000) (10%)		

Firm X

No entry

Firm Z

12/31/__	Equity Decrease - Inferior Earning Power on Identified Assets	100,000	
	Unidentified Negative Assets		100,000
	To record the existence of unidentified negative assets. Inferior earnings on identified assets were capitalized at the normal earnings rate in the economy of 10%. (10,000) (10%)		

At the end of each accounting year a fresh computation is made concerning the existence of unidentified assets or negative assets. The concept is one of net valuation so that both categories should not exist on the financial statements of a given firm for the same year. If a firm switches from a

position of recording unidentified assets one year to recording unidentified negative assets the next year (or vice versa), it is necessary that the entry made for the previous year be reversed.

Discussion

Why Only Deviations from Normal Are Given Recognition

Professor Paton, in discussing the existence of unpurchased goodwill, mentioned a method of valuation which is quite similar to the one given above. He stated, "It should be emphasized that none of these rights, conditions or favorable circumstances can reasonably be said to contribute to goodwill or any other value except as they give the particular business an advantage over the basic representative concern."[13] At another point he referred to goodwill as being "the capitalized value of the excess income which a particular enterprise is able to earn over the income of a representative competitor -- a "normal" business . . . the rate used in capitalizing being the rate by the

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[13]William A. Paton, Accounting Theory (Chicago, Ill.: Accounting Studies Press, Ltd., 1962), p. 316. (This work was originally written in 1922 as a doctoral dissertation at the University of Michigan.)

representative firm."[14]

Mr. Leake also emphasized that only the divergences from normal should be capitalized. His argument was that there were always opportunities free for the employment of capital at normal rates of interest.[15] It seems logical to assert, then, that the only positive (or negative) valuation that should be placed on human factors is the amount above (or below) normal by which they affect the productivity of non-human resources.

Comparable Valuations for Identified Assets

It is important to the proposal that identified assets among the various firms be valued on a comparable basis. The presently used method of valuing assets on a historical-cost basis results in non-comparability of values. For instance, one firm might be carrying fixed assets at the cost to it in 1930, while another firm may be carrying similar assets at the price it paid in 1960.

The valuation methods recommended by Professors Moonitz and Sprouse eliminate this problem. For money or

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[14] Ibid., p. 313.

[15] P. D. Leake, "Commercial Goodwill," The Accountant, LXVII (November 11, 1922), p. 700.

claims to money they recommended valuation at their discounted future exchange prices.[16] Presumably this would also represent their current market value assuming the discount rate used is the going rate in the economy for the degree of risk involved. For other assets they generally recommended that current market prices be used where they exist and are determinable.[17] Where this is not possible, they recommended the use of index numbers or independent appraisals.[18]

For specific items, however, their thinking deviates from current market prices in several instances. For inventories they recommended valuation at net realizable value where determinable.[19] If for some reason this cannot be determined they recommended the use of current replacement cost.[20] The use of either of these methods eliminates noncomparability resulting from such alternative practices as one firm using LIFO while another uses FIFO.

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[16]Robert T. Sprouse and Maurice Moonitz, A Tentative Set of Broad Accounting Principles for Business Enterprises (New York, N.Y.: American Institute of Certified Public Accountants, 1962), p. 24.

[17]Ibid., p. 26.

[18]Ibid., p. 27.

[19]Ibid.

[20]Ibid., p. 29.

They believe that "in the external reports, plant and equipment should be restated in terms of current replacement costs whenever some significant event occurs, such as a reorganization of the business entity or its merger with another entity or when it becomes a subsidiary of a parent company."[21] They also stated that in any event the accounts should be restated at certain intervals of perhaps five years.

According to Moonitz and Sprouse, land should also be restated in current terms whenever a significant event occurs or at reasonable intervals of perhaps five years.[22]

The author of this thesis chooses to value identified assets by the general method which Moonitz and Sprouse first mentioned. He would recommend the use of current market values, or the best approximation of current market values, as a basis of valuation for all identified assets. To the extent that this is accomplished properly, the valuations of identified assets would be on a completely comparable basis.[23] Arthur M. Cannon concurred with the selected basis of valuation when he commented, "I would not find it difficult to accept a current value principle for valuation of land and

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[21] Ibid., p. 34.

[22] Ibid., p. 36.

[23] This is true only if economy-wide market prices are assumed.

buildings based on expert and independent appraisal reviewed by the accountant."[24]

Why has the author chosen market values? The main reason, as was stated above, is that it makes valuations of identified assets among firms more comparable. There is a conflict here, however, which must be mentioned. Market value is equivalent to the economic concept of opportunity cost. The market value shows the cost to the user of not selling the asset. It also is an indication of the maximum value of future services which the asset could render to an alternative user should he gain control of the asset. One might then argue that, since the absentee stockholder's point of view has been selected in this thesis, should not the assets be carried at the value of future services to him. This objection is valid. However, to the extent that the identified assets are more productive to the present user than they are to alternative users and have indicated this fact by causing the firm to earn a higher rate of return than normal, this difference has been capitalized and included in unidentified assets.

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[24]Arthur M. Cannon, "Comments of Arthur M. Cannon," in Sprouse and Moonitz, op. cit., p. 63.

Comparable Computations of Net Income

If market values are used for identified assets, many of the difficulties of non-comparability involving the determinations of net income may be eliminated. For instance, if depreciation were to be regarded as the difference between the market value of the asset at the beginning of the period and at the end of the period, the alternative methods of straight-line, declining-balance, sum-of-the-digits, and other methods could not be used for financial reporting purposes. As mentioned previously, differences in inventory valuation which ultimately affect net income also would be eliminated.

The nasty problems concerning the elimination of "extraneous" losses and gains would also be avoided because these changes are recognized when they occur, rather than when the assets are disposed of. It is recommended that all gains and losses be recognized in the income statement because they are the result of some decision made by a human resource in the entity.

In computing accounting net income, however, differences among firms may still exist. Items generally includable in the category of "deferred charges," which have

no market value (and therefore are not identified assets), may be treated differently by the various firms. One firm may capitalize research and development costs as a deferred charge, while others may "expense" these costs immediately -- even when the economic facts are similar. The chief threat to comparability of data, then, under the system presented in this thesis, is the fact that some firms will treat certain expenditures as deferred charges while others will treat similar expenditures as expenses of the period. The effect of this would be that differences in the amounts of unidentified assets shown on the statements of financial condition may be partially due to differences in the accounting treatment given to identical economic facts.

Leonard Spacek has had much to say on the problem of non-comparability of financial statements. He has written, "A reader . . . has the right to make comparisons among companies without having to assume the difficult, if not impossible, responsibility of making mental proforma adjustment to make the figures comparable."[25] He believes that public accountants infer comparability to the reader when stating that generally accepted accounting principles were

[25]Leonard Spacek, "The Need for an Accounting Court," The Accounting Review, XXXIII (July, 1958), p. 370.

used.[26] He then appealed for an "authoritative determination of accounting principles and for forthright standards of reporting which will produce sounder, more uniform results that can be understood and relied on."[27] The method he recommended for doing this was to establish an accounting court to authoritatively determine the accounting practice to use in various economic situations.[28] It would seem, however, that if the profession could accomplish this same end without actually setting up a court, much "red-tape" would be eliminated. In either case, it seems that the auditor, if given a code to follow, could ensure that the net income he was reviewing would be computed in a manner comparable to that of all other firms.

Arthur Cannon has stated that "the very significance of what is reported rests on an assumption of consistency and comparability, just as the significance of any statistical data rests on the comparison with some standard, not on the absolute data."[29]

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[26]Leonard Spacek, "The Challenge to Public Accounting," The Harvard Business Review, XXXVI (May-June, 1958), p. 116.

[27]Ibid., p. 117.

[28]Spacek, "The Need for an Accounting Court," op. cit., p. 376.

[29]Arthur M. Cannon, "What's Wrong with Financial Reporting -- The Investor's View" (A Symposium), The Journal of Accountancy, CXII (August, 1961), p. 33.

Even if this uniformity of computation is not accomplished, however, the statements prepared by use of the method presented in this thesis would not suffer from as severe criticism for non-comparability as do statements prepared under current practice.

Support of the Net Income Base Selected

At the beginning of this chapter there were several methods cited for estimating the amount of goodwill existing for a particular entity. Each of these methods used the income or gross sales data for more than one year in the capitalization process. Why then has the author selected a method which uses only the net income of the current year?

From a strictly theoretical point of view, the valuation of unidentified assets should be equal to the present value of the future services these resources can provide. This would necessitate an estimate of future net income in order to identify the portion attributable to unidentified assets. As was pointed out previously, however, any method which involves an estimate of future income is necessarily open to manipulation and to such wide differences of opinion among firms that comparability of financial statements recording unidentified assets would be lacking.

Ruling out any method which required the prophesizing of future net income left the author with only past "objectively" verifiable net income figures to work with. Professor Moonitz agreed that an objectively verifiable method is desirable when he wrote, "Changes in assets and liabilities, and the related effects . . . should not be given formal recognition in the accounts earlier than the point of time at which they can be measured in objective terms."[30] Leonard Spacek also supported this idea when he wrote that "when the public accountant fails . . . to report the facts objectively, the accounting statements may become tools of propaganda for the use of anyone who is able to influence them."[31]

Left with past "objective" net income figures with which to work in attempting to arrive at a valuation for unidentified assets, it was decided that only the income figure for the current year should be used in the computation itself. It is believed that the best evidence available of the present existence of unidentified resources is the

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[30]Maurice Moonitz, The Basic Postulates of Accounting (New York, N.Y.: American Institute of Certified Public Accountants, 1961), p. 14.

[31]Spacek, "The Challenge to Public Accounting," op. cit., p. 115.

fact that a given firm earned a higher than normal rate of income for the most recent year. If the results of several years were included in the computation, there is a possibility that unidentified resources affecting income results of several prior years would be included although no longer of any economic consequence to the firm. In an attempt, therefore, to provide the best evidence of the current existence of unidentified resources only the current year's income performance was used in the computation.

It is not inferred that the absentee stockholder (or prospective stockholder) should refrain from examining past performance or estimating (at least implicitly) the future net income of a given firm. These would provide further information as to the worth of the entity. The author chooses, however, not to incorporate these into his computation of unidentified assets.

The method selected indicates that the amount included under the caption "Unidentified Assets" includes the value of those unidentified resources which had economic significance to the entity during the most recent year. The inference is that this amount is the best "objective" evidence that these same resources are more than likely to continue to have economic significance in the immediate

future. Professor Paton once wrote, "An assumption that the current favorable situation will be maintained from two to five years is common."[32]

Professor Canning supported the indirect method of valuation used in this thesis by stating, "Some valuations must of necessity be indirect in the sense that no separable realized income . . . in terms of money receipts, can ever be found for some types of assets."[33]

The method selected for valuing unidentified assets is indirect and is called the residual method by persons engaged in real estate appraising. As one writer stated, "The residual techniques used in capitalization processes are mathematical methods for revealing unknown factors of value by means of the use or consideration of known factors."[34]

The Nature of Unidentified Assets and Negative Assets

The conceptualization of unidentified resources in this thesis is different than the usual meanings given to

[32] Paton, op. cit., p. 324.

[33] John B. Canning, The Economics of Accountancy (New York, N.Y.: The Ronald Press Company, 1929), pp. 206-207.

[34] Clifford W. Hollebaugh, "Income Approach to Value," in Encyclopedia of Real Estate Appraising, Edith J. Friedman (ed.), (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1959), p. 79.

goodwill. In order to illustrate this point a brief review of various meanings attached to goodwill is necessary.

Eric Kohler defined goodwill as the present value of the expected future income in excess of a normal return on the investment in tangible assets.[35] This definition defines goodwill by telling how it should ideally be valued.

Another source mentioned three different kinds of goodwill.[36] The first, commercial goodwill, includes favorable attitudes or reactions of customers toward certain aspects of the firm. The second, industrial goodwill, represents the willingness of employees to work for the present employer instead of competing employers. The last, financial goodwill, represents the favorable attitudes of investors and credit institutions toward a particular firm.

Economists have traditionally viewed goodwill as an external economy resulting from the reputation or public esteem which an enterprise holds in the eyes of the public.[37]

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[35]Eric L. Kohler, A Dictionary for Accountants (New York, N.Y.: Prentice-Hall, Inc., 1952), p. 238.

[36]William A. Paton (ed.), Accountants' Handbook (2nd ed.; New York, N.Y.: The Ronald Press Company, 1934), p. 801.

[37]C. J. Foreman, "Economics and Profits of Goodwill," The American Economic Review, XIII (June, 1923), p. 209.

Jurists have seemed unable to agree as to the nature of goodwill.[38] Some have interpreted it as an advantage of the productive process while others have viewed it as wholly an element of demand. One writer stated, however, that "all the legal definitions indicate very clearly that the thought in the mind of the court was the essential identity of goodwill with reputation, commercial standing, location and all other favorable conditions leading customers to deal with a business."[39]

Sprague while writing on the causes of differences between book value and market value of shares of stocks, attributed the divergence to the fact that in some cases assets are not handled with the success which will earn the average rate of return, while for other firms the management may be so successful that its earning power is greater than the average.[40]

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[38] Ibid.

[39] Herbert C. Freeman, "Some Considerations Involved in the Valuation of Goodwill," The Journal of Accountancy, XXXII (October, 1921), p. 252.

[40] Charles E. Sprague, The Philosophy of Accounts (New York, N.Y.: The Ronald Press Company, 1922), p. 41. It is important to realize that if a historical-cost valuation were used for identified assets, some of the amount included as unidentified assets would actually represent adjustments of these values to a more realistic current

Professor Paton also wrote about causes of the various rates of return. He stated:

> . . . The amount of capital invested in any case is only one of the elements determining the amount of periodic net revenue. Managerial ability, methods and processes, territorial location, trade-name -- these and numerous other factors may contribute to financial success. Further, purely external and fortuitous circumstances over which the particular management has no control whatever may be the dominant conditions, for a time at least, in the determination of profit and loss.[41]

Factors, conditions, and circumstances which Paton believes contribute to goodwill include special skill and knowledge, high managerial ability, exceptional selling capacity, personal credit, social and business connections, general reputation, attractive personality, patents, trademarks, copyrights, trade-names, established clientele, location, established staff, and favorable trade developments.[42] He went on to state that "in the business enterprise a well-organized and loyal personnel may be a much more important 'asset' than a stock of merchandise."[43]

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basis. As Little [Little, op. cit., p. 111] has stated, "It is essential to arrive at a realistic value of the tangibles, by formal appraisal if necessary, before the amount attributable to goodwill, if any, can be determined."

[41] Paton, Accounting Theory, op. cit., p. 313.

[42] Ibid., pp. 315-316.

[43] Ibid., pp. 486-487.

The concept of unidentified assets in this thesis includes many of these descriptions of goodwill. Unidentified assets are all those resources under the control of a firm which have a positive economic significance to a given firm (in comparison to other firms), but are not expressible separately in terms of their market value (either because they have none or they are not owned by the firm). The unidentified assets are conceptualized as human resources which still have economic significance to the firm as a result of some past action or decision. A very broad interpretation is intended. For instance, besides the obvious elements which would be included such as a trained sales force and efficient factory laborers, it is contended that the effect of patents, trade-marks, favorable location, and similar items are also properly included as human resources. The reason for their inclusion is because these favorable conditions are the direct result of a decision or action taken by a human resource. Even the fortuitous external circumstances of which Professor Paton writes can be ultimately traced to a decision to enter, or remain in, the "lucky" industry at some time in the past. The presumption implicit in the reasoning is that a management which has been more than normally successful in the past (in hiring

a trained sales force, acquiring favorable patents, or being in the right industry at the right time) will more than likely be able to continue this performance in the future.

The term, unidentified assets, is really not very distinct from some of the broad meanings given to goodwill. The conceptual difference is mainly one of grouping. While conventional accounting chooses to record only purchased goodwill and to list patents, organization expense, and similar items separately; a proposal of this thesis is to combine these items and to include all generally unrecorded assets with them -- even when they have not been purchased. To say that the proposal is to record "unpurchased goodwill" would be quite accurate, assuming a broad definition were assigned to goodwill. The term, unidentified negative assets, is conceptually similar to unrecorded negative goodwill. It results from having relatively ineffective human resources manipulating the identified assets of the firm.

Segregation of the Equity Changes

George Walker, in 1938, speculated as to what account might be credited if non-purchased goodwill were to be recognized on the books of account.[44] He believed

[44]George T. Walker, "Goodwill on Financial Statements," The Accounting Review, XIII (June, 1938), p. 182.

goodwill to be a fixed asset. Since a committee of the American Institute of Accountants had previously defined a revaluation surplus as - the appreciation recognized as arising from the appraisal of fixed assets, he believed that the "revaluation surplus account" should be credited.

Another writer, in 1928, had stated that practically all textbooks and published courses in accounting existing at that time advocated a credit to some account such as, "surplus - appraisal valuation."[45]

The account titles chosen in this thesis, "Equity Increase - Superior Earning Power on Identified Assets" and "Equity Decrease - Inferior Earning Power on Identified Assets," were chosen to conform to the idea that the recognition of these assets should be shown separately in the equity section, and also to avoid the use of the word "Surplus" which has fallen into disfavor in accounting usage.

This chapter has dealt with the computation of amounts and the entries required to recognize the value of unidentified assets in the financial records. The next chapter is concerned with the second, and possibly more significant, part of the proposal - the reporting of financial information in the external statements.

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[45]George E. Bennett, "Treatment of Appreciation," The Journal of Accountancy, XLV (June, 1928), pp. 430-431.

CHAPTER IV

PRESENTATION OF DATA IN THE POSITION STATEMENTS

General

Before getting into the mechanics of reporting the presence of unidentified resources in the position statements it is necessary to discuss a problem which exists in current reporting practice.

There has been a tendency in recent years to emphasize the income statement to the extent that the balance sheet has lost its significance as a statement of financial condition. Some persons have rebelled against this trend as is evidenced by statements such as, "I might comment that the tendency of accountants to strongly emphasize the income statement and de-emphasize the balance sheet is not, in my judgment, entirely shared by investment analysts. We find the financial position of great importance."[1]

The opinion that the conventional balance sheet does

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[1]Arthur M. Cannon, "What's Wrong with Financial Reporting -- The Investor's View" (A Symposium), The Journal of Accountancy, CXII (August, 1961), p. 32.

not report financial condition[2] is held by many. Stewart wrote, "In describing the balance sheet, some venturesome souls use 'Statement of Financial Position' and other meaningful phrases which might suggest its purpose; but others still adhere to the technical term 'balance sheet' which is ideal to cover an increasing awareness of its limitations."[3] Professor Paton also wrote, "The balance sheet, as a true statement of financial condition, should not be taken too seriously; it has very definite limitations under the most favorable circumstances."[4]

Couchman wrote of some of the various changes that have been suggested for improving the usefulness of the balance sheet as a statement of financial condition when he stated:

> Much criticism of balance-sheets as now generally prepared by public accountants has been voiced . . . . Some feel that the fixed assets should be valued on a

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[2]In this dissertation financial condition and financial position are used interchangeably.

[3]W. J. Stewart, "Problem of Valuation in Annual Financial Statements and the Relationship of the Auditor's Report," The Australian Accountant, XXX (August, 1960), p. 396.

[4]William A. Paton, Accounting Theory (Chicago, Ill.: Accounting Studies Press, Ltd., 1962), p. 486. (This work was originally written in 1922 as a doctoral dissertation at the University of Michigan.)

> sound reproductive basis rather than at depreciated cost; others that the valuation should be based on the efficiency of the plant as a whole; still others that the valuation in the balance-sheet should bear a direct relation to the earnings; and yet another group is demanding that the price offered for the capital stock on the stock market should be the determining factor of the worth of the business and should be reflected in the the financial statements. . . .[5]

It might be well, before attempting to resolve the dilemma, to find out exactly what "financial condition or position" will be taken to mean in this thesis. A Dictionary for Accountants is of little aid since it defines financial position or condition as "the assets and liabilities of an organization as displayed on a balance sheet, following customary practices in its preparation."[6] Strict use of the meaning of the term would indicate that the balance sheet and the statement of financial condition are one and the same. The accountant's opinion paragraph would then say in effect, "The accompanying balance sheet . . . fairly presents the balance sheet of the Blank Company."

One of the most useful sources in gaining an understanding of the term mentioned three different points of

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[5]Charles B. Couchman, "Limitations of the Present Balance Sheet," The Journal of Accountancy, XLVI (October, 1928), p. 254.

[6]Eric L. Kohler, A Dictionary for Accountants (New York, N.Y.: Prentice-Hall, Inc., 1952), p. 208.

view which could be taken. The three viewpoints were that of the financial manager, the general management, and the absentee owner. Professor Kollaritsch stated that, to financial management, the term "financial position" is synonymous with the firm's debt-paying ability as a going concern.[7] This includes the ability to meet all cash obligations which arise. He recommended that for financial management purposes assets must be listed according to their availability as to time and amount. It would seem, however, that, to meet the needs of financial management, a funds statement and a cash forecast would be more useful than some radical modification of the balance sheet.[8]

From the general management point of view, Kollaritsch stated that "no one concept of financial position can be developed . . . due to the many specialized interests within this group, nor could all the necessary information possibly be recorded in one balance sheet."[9]

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[7]Felix P. Kollaritsch, "Can the Balance Sheet Reveal Financial Position?," The Accounting Review, XXXV (July, 1960), p. 487.

[8]In support of this contention see: Gordon Donaldson, "New Framework for Corporate Debt Policy," The Harvard Business Review, XL (March-April, 1962), pp. 117-131.

[9]Kollaritsch, op. cit., p. 487.

Since the absentee owner's point of view has been adopted in this thesis, that is the meaning of financial position or condition that shall be used. Kollaritsch stated, "To summarize the absentee owner's concept of financial position, it can be generalized that the worth of the enterprise should be shown on any financial statement prepared for them, and that the concept of unity should be accepted for valuation purposes with the inclusion of certain intangible assets not shown on the balance sheet at the present time."[10]

He gave further evidence of his views by commenting as follows:

> If the worth of the owner's investment is to be shown on a balance sheet, it must be decided which assets are to be included. The tangible assets are obviously important and are already included in the balance sheet, but many times the intangible assets have been omitted, particularly the group classified under goodwill. For example, a well-trained, loyal labor force should be included as an intangible asset, as should a good managerial staff, or a certain advantageous arrangement of machinery. So far, these intangibles have been included only under the term "goodwill," and since goodwill is only added to the balance sheet under certain circumstances, the result is generally an understatement of values.[11]

Kollaritsch also mentioned that the absentee owner's point of view would be appropriate for a creditor with a substantial interest in the company.[12] His point was that

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[10] Ibid., p. 486. [11] Ibid., p. 485. [12] Ibid., p. 484.

such a creditor needs to be concerned with more than merely the cash position. He needs to be concerned that the firm can survive in the long-run as well as the short-run.[13]

One of the most crucial points to this thesis made by Kollaritsch was that the basic weakness of the balance sheet as a statement of financial condition is that certain intangibles are excluded. P. D. Leake supported this view by stating:

> It should be particularly noted that although the value of goodwill forms part of the present value of every profit-seeking undertaking expected to yield future super-profit, yet such value only takes recorded and visible form, and becomes a practical financial question, if and when the goodwill of the undertaking has been purchased. . . . It is probable, therefore, that the bulk of the value actually existing in the form of goodwill is not recorded in any financial books or accounts. . . .[14]

Professor Paton commenting on this point stated:

> Until some scheme is found by which these imponderables of the business enterprise may be assayed and given definite statistical expression, the accountant must continue to prepare the balance sheet as he has been doing. At present there seems to be no way of measuring such factors in terms of the dollar; hence,

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[13]The concepts given by many other writers on the meaning of financial position or condition can be assigned to one of the points of view discussed by Professor Kollaritsch. Therefore, nothing new would be added by mentioning their views.

[14]P. D. Leake, "Commercial Goodwill," The Accountant, LXVII (November 11, 1922), p. 700.

> they cannot be recognized as specific economic assets. But let us, accordingly, admit the serious limitations of the conventional balance sheet as a statement of financial condition.[15]

It cannot be denied that the balance sheet as currently prepared has an important function. It serves as a resting place for charges and credits awaiting eventual assignment to the income stream. Likewise, there is a need for a statement which will show the financial condition of the firm. It is quite apparent that the conventional balance sheet does not serve this need. The proposal which follows is intended to solve the dilemma by serving both needs.

The Mechanics of Presenting Unidentified Resources

Table 3 contains a summary of the balance sheets of each of the four firms which are assumed to comprise the total business sector of the economy of a given nation. They are the same firms which were assumed in the previous chapter, Firms W, X, Y and Z. The balance sheets, of course, would be presented individually by each of the firms and would be prepared in accordance with acceptable format. The oversimplified format chosen for Table 3 is intended to focus

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[15] Paton, op. cit., p. 487.

TABLE 3.--The Balance Sheet

THE _____ CORPORATION

BALANCE SHEET

As of December 31, 19__

	Firm			
	W	X	Y	Z
Identified Assets				
Cash	$ 5,000	$ 1,000	$ 10,000	$ 15,000
Accounts Receivable	10,000	4,000	15,000	20,000
Equipment	15,000	5,000	30,000	50,000
Buildings	80,000	15,000	125,000	60,000
Land	10,000	5,000	25,000	25,000
Total Identified Assets	$120,000	$30,000	$205,000	$170,000
Deferred Charges[i]				
Goodwill (purchased)			10,000	
Organization Expense	5,000	5,000	5,000	5,000
Patents	5,000		5,000	
Research Costs			5,000	
Total Identified Assets and Deferred Charges	$130,000	$35,000	$230,000	$175,000

	Firm			
	W	X	Y	Z
Liabilities				
Accounts Payable	$ 4,000	$ 5,000	$ 30,000	$ 15,000
Loan Payable	6,000	5,000	10,000	35,000
Bonds Payable			30,000	55,000
Rent Received in Advance	5,000			
Total Liabilities	$ 15,000	$10,000	$ 70,000	$105,000
Stockholders' Equity				
Common Stock	75,000	20,000	100,000	100,000
Retained Earnings Free from Deferred Charges	30,000	-	35,000	(35,000)
Subject to Deferred Charges	10,000	5,000	25,000	5,000
Total Liabilities and Stockholders' Equity (net of value of unidentified resources)	$130,000	$35,000	$230,000	$175,000

i - The assumption is made that these items are being charged to retained earnings over time.

The average value of Identified Assets for the year ended December 31, 19__ was as follows:
Firm W - $100,000 Firm X - $50,000 Firm Y - $200,000 Firm Z - $150,000.

on those categories which are different in the thesis from those commonly used in practice.

There are several differences from conventional balance sheets which have already been discussed. These include the valuation of identified assets at market value and the exclusion of deferred charges from the asset category.

There are other differences, however, which need to be given special attention at this point. For instance, each firm would be asked to report the <u>average</u> amount of identified assets held during the year on a basis comparable with the calculation made by the other firms. This information is necessary in order to compute an economy-wide rate of earnings on identified assets.

Another significant difference is that the amount of retained earnings reported is divided into a portion that is free from the effects of the subsequent charging off of deferred charges, and a portion that is not free from this effect. The reason this is necessary is that the resources given up to create the deferred charges are no longer under the control of the firm. Since the subsequent charging of the expense to the income stream will reduce the amount of retained earnings, the author chooses to segregate that amount in the balance sheet. The portion shown as pertaining

to deferred charges will not be carried over to the statement of financial condition, since the deferred charges, themselves, are not carried to that statement.

As an incidental point, it should also be noticed that no deferred credit category is used. "Rent Received in Advance," which would normally be carried as a deferred credit, is listed as a liability. Professor Paton recently pointed out that the term "Deferred Income" or "Deferred Credit" is a misnomer.[16] He maintained that items usually included under this caption are really loans and should, therefore, be included as liabilities. His opinion as to the nature of these items is adopted in this thesis.

The balance sheet, as illustrated, is to be considered as an appendage to the income statement. Its main function is to inform readers of the income statement as to the amounts of deferred charges that are eligible to be charged against income in the future. The deferred charges listed might also be used to gain an understanding of ways in which the human resources are attempting to affect future income. For instance, Firms W and Y have patents which they apparently feel will benefit future income, while Firm Y

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[16]William A. Paton, "'Deferred Income' -- A Misnomer," The Journal of Accountancy, CXII (September, 1961), p. 40.

feels that $5,000 of its research costs will benefit future income. Another function of the balance sheet is to report the average value of identified assets under the control of each of the firms.

Professor Kollaritsch made a comment which pertains to the function of the balance sheet as presented in this thesis when he wrote:

> . . . [the purpose of] the general balance sheet . . . is not to reveal the financial position, but rather it is to show the deferred charges and the unconsumed or unapportioned values for future operations and their financing. This statement would then be used as a certification of the verification and control of these values and not as an analytical tool. . . .[17]

He went on to suggest that the name of the statement be changed to one such as "Statement of Deferred Charges and Their Financing."[18] This suggestion, while logical, has not been incorporated into this thesis.[19]

Table 4 is a summary of the individual statements of financial condition that would be reported by each of the firms.

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[17]Kollaritsch, op. cit., p. 488. [18]Ibid.

[19]It should be pointed out that a statement showing the deferred charges and their financing would not have to include all of the identified assets. For instance, cash, accounts receivable, and land are not awaiting assignment to the income stream and could, therefore, be excluded. If the statement were to balance, however, an adjustment of the right hand side of the statement would also have to be made.

TABLE 4. --The Statement of Financial Condition

THE_____CORPORATION

STATEMENT OF FINANCIAL CONDITION

As of December 31, 19__

	Firm					Firm			
	W	X	Y	Z		W	X	Y	Z
Identified Assets					Liabilities				
Cash	$ 5,000	$ 1,000	$ 10,000	$ 15,000	Accounts Payable	$ 4,000	$ 5,000	$ 30,000	$ 15,000
Accounts Receivable	10,000	4,000	15,000	20,000	Loan Payable	6,000	5,000	10,000	35,000
Equipment	15,000	5,000	30,000	50,000	Bonds Payable			30,000	55,000
Buildings	80,000	15,000	125,000	60,000	Rent Received in Advance	5,000			
Land	10,000	5,000	25,000	25,000	Total Liabilities	$ 15,000	$10,000	$ 70,000	$105,000
Total Identified Assets	$120,000	$30,000	$205,000	$170,000	Stockholders' Equity				
					Common Stock	75,000	20,000	100,000	100,000
					Retained Earnings -- Free from Deferred Charges	30,000	-	35,000	(35,000)
Unidentified Assets	50,000	-	50,000	(100,000)	Increase in Equity - Superior Earning Power on Identified Assets	50,000	-	50,000	(100,000)
Total Assets	$170,000	$30,000	$255,000	$ 70,000	Total Liabilities and Equity	$170,000	$30,000	$255,000	$ 70,000

The value of unidentified assets in the five preceeding years is shown on the following page of this statement.

TABLE 4. --(Continued)

Firm	The Value of Unidentified Assets				
	First Year Previous	Second Year Previous	Third Year Previous	Fourth Year Previous	Fifth Year Previous
W	$25,000	$20,000	$10,000	($25,000)	($50,000)
X	$ 5,000	$ 5,000	$15,000	$20,000	$30,000
Y	$25,000	$15,000	$40,000	$35,000	$30,000
Z	($55,000)	($40,000)	($65,000)	($30,000)	($10,000)

The major difference between the balance sheet and the statement of financial condition is that the latter does not show the deferred charges or the portion of retained earnings which pertains to them, but does include the value of unidentified assets (or negative assets) and the resulting change in equity.

The value of unidentified assets as computed in each of the five previous years has also been reported so that the reader of the statement might be better able to form an opinion as to the trend and consistency of the effectiveness of the unidentified resources. For instance, from Table 4 it might be inferred that the unidentified resources handling the identified assets in Firm W are becoming relatively more and more efficient. For Firm X the trend seems to be a downward one, which may indicate the firm will soon be operating at a subnormal level of performance. The performance of the unidentified resources in Firm Y seems to have been consistently superior to that of the other firms. Firm Z seems to be under the influence of some relatively ineffective unidentified resources.

Some fairly radical changes could be expected in the values shown from year to year since the concept is a relative one. The only resources given value are those which

are more efficient than the average. This means that if the absolute performance of a certain group of human resources in one firm remains constant, while the human resources in other firms become more effective, the valuation given the unidentified assets in the initial firm can change radically.

One problem which can arise in the mechanics of preparing the statements is that, given the method of computation, any firm showing a net loss for the year would show total assets at a negative amount. The reason for this is that the amount of unidentified negative assets would be larger than the amount of positive identified assets.

The author chooses, however, to set a lower limit of zero on the value of total assets since he believes a negative figure to be conceptually misleading in this situation. The statement of financial condition is designed to show the worth of the entity as a going concern from the absentee stockholder's point of view. Since the absentee stockholder has limited liability, and can only lose what he has invested, his share of the worth would be not less than zero. (The only exception being in certain cases where stock was originally issued at a discount.)

The argument could also be made that, if the loss situation could not be corrected, the going-concern viewpoint itself would become irrelevant. A "winding-up" view might then be called for. Instead of a statement of financial condition in this situation, a statement of affairs would be appropriate.

Another problem which arises in the mechanics of preparing the statements is the fact that individual firms must know the rate of earnings in the economy before each can compute the amount of unidentified positive or negative assets it is to report. It, at first, appears that there must be a lag between the time when the income statement and balance sheet can be prepared, and when the statement of financial condition can be prepared. There are ways, however, to minimize or eliminate this time lag. One way would be to require firms to teletype information concerning the rate of earnings and the average value of identified assets to a central information agency as soon as the figures are determined. A random sampling of firms may be enough to establish the rate in the economy. When one realizes how accurately computers can predict the outcome of national elections on the basis of a very small percentage of returns, it is not difficult to envision the same type of system being sufficient for the problem at hand.

Discussion

Why Deferred Charges Are Not Listed on the Statement of Financial Condition

When Moonitz and Sprouse discussed the valuation which should be placed on "intangibles" such as patents, copyrights, research and development costs, and the like, they stated that "these items are notoriously difficult to evaluate and therefore should probably be carried at acquisition cost in the absence of compelling evidence that their value is markedly different."[20]

While the carrying of these intangibles at cost may be acceptable for balance sheet purposes, so that the cost can be spread over the useful life of the intangible; the author maintains that, on the statement of financial condition, carrying intangibles at cost is not acceptable. In this thesis, all "intangible" factors causing a firm to earn a higher than average rate of return have been lumped into one category called "unidentified assets." All of these factors are traced back to actions or decisions made by

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[20]Robert T. Sprouse and Maurice Moonitz, A Tentative Set of Broad Accounting Principles for Business Enterprises (New York, N.Y.: American Institute of Certified Public Accountants, 1962), p. 36.

human resources. It is argued that, for purposes of determining the worth of a firm to an absentee stockholder, a valuation of unidentified assets based on a capitalization process involving earnings is more appropriate than is a listing of the amounts which management has decided to spend in attempting to increase future earnings. The purpose is to measure the effectiveness of human resources in comparison to those of other firms in the recent past as best evidence of the market value of these resources. The resources given up in the creation of "deferred charges" are no longer under the control of the firm and, therefore, a partial listing of the amount of resources which have left the firm in their behalf is of little significance as an indication of financial condition. Any positive effect that these expenditures have had in the past in causing a particular firm to earn a higher than average rate of return are included in the valuation given to human resources in the above statements of financial condition.

Professor Paton once wrote, "Much stress . . . has been laid upon the conception of goodwill as the value of all income-producing factors which are independent of and in addition to the ordinary purchased assets."[21] This is the

[21]Paton, Accounting Theory, op. cit., p. 317.

concept which has been adopted in the statement of financial condition. Since this statement should ideally approach the market value of the firm as a going concern, and since "deferred charges" commonly have no market value, it is believed that the market value of the human resources can best be given value by the process described in this thesis.

When the decision was made to not include a listing of the deferred charges in the statement of financial condition, it was obvious that the amount of retained earnings pertaining to the deferred charges must also be deducted. One author came to this same conclusion (although his purpose was different) by stating, "It might be desirable for credit or other purposes to show the financial condition of an enterprise on the basis of tangible assets alone. If so, goodwill or the intangibles might appear on the balance sheet as deductions from the proprietary equity."[22]

Why Past Valuations Assigned to Unidentified Assets Are Given on the Statement of Financial Condition

The amount shown in the main body of the statement of financial condition for unidentified positive (or negative)

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[22]George T. Walker, "Goodwill on Financial Statements," The Accounting Review, XIII (June, 1938), p. 174.

assets represents a capitalization of the superior (or inferior) earning power based on the evidence of only the most recent year. The amounts computed for previous years, however, also have significance to an understanding of the value of these resources. Professor Canning agreed that these previous amounts have significance when he wrote:

> . . . it would be a very simple matter to attach to the . . . statements a schedule or table of the book value of assets at the end of each of, say, the last five periods together with the enterprise earnings . . . , and the percentage relation between earnings and book value of assets, would inevitably make the segregation of high profit earners from steady losers that single-year statements fail to make. Such a statement involves no responsibility for predicting future rates; it does suggest the need for wariness to the general reader.[23]

The reporting of unidentified assets (meaning either positive or negative) for the five previous years, as shown on the statement of financial condition in this thesis, provides the absentee stockholder with a knowledge of how well the firm in which he is interested has compared in performance to the average of all other firms in the economy during that period.

That future performance is related to past performance was stressed by Barlow when he stated, "In estimating

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[23]John B. Canning, The Economics of Accountancy (New York, N.Y.: The Ronald Press Company, 1929), pp. 246-247.

future performance the common technique is to rely upon the recent past record and presume that the future, within fairly broad limits, will be governed by the past . . . the estimate for a particular company tends to be tied to its own strengths and weaknesses as portrayed by past performance."[24]

It is believed that, if provided with the individual valuations of the past five years, the reader could judge for himself the significance of the trend in estimating the valuations which will occur in the future. If the amount to be reported in the main body of the report had been computed by using the earnings rates of several past years the trend would have been more difficult to determine.

The Effect of the Proposal on the Amount Which Is Available for Dividends

One might wonder about the effect of the changes made in the equity section of both statements on the legality of dividend payments.

Even though retained earnings in the balance sheet has been divided into two parts (one free from deferred charges, and the other subject to deferred charges), there is no intent to prevent either of the parts from being

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[24]Leonard E. Barlow, "Earnings Ratios in Valuing Companies," The Canadian Chartered Accountant, LXXV (October, 1959), p. 319.

available for dividends. The legality of dividends is determined outside the accounting system. The attitude of the legal authorities has been that directors should be able to pay dividends as long as they do not reduce the capital margin established for the protection of creditors.[25] Since all of the retained earnings apply to the stockholders' interests, it is all considered legally available for dividend purposes.

Neither is it intended that the recording of an equity increase (or decrease) from the recognition of superior (or inferior) earning power in the statement of financial condition should, in any way, affect the legality of dividends. For instance, the account "Increase in Equity-Superior Earning Power on Identified Assets" should not represent distributable earnings. The account represents the economic value of human resources which are essential to the continued operation of the firm at the reported level of income. While the worth of the enterprise is affected by changes in this account, payments of dividends based on the valuation would be analogous to paying dividends out of the capital investment.

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[25]A. C. Littleton, Essays on Accountancy (Urbana, Ill.: The University of Illinois Press, 1961), p. 267.

In order to determine the legality of dividend payments under current legal interpretation, it would still be necessary to use the balance sheet rather than the statement of financial condition.

Why Professor Paton Did Not Choose To Use This Concept in His Accounting Model

Professor W. A. Paton, in 1922, considered the idea of recording unidentified assets in the financial statements. He realized there were unrecorded resources under the control of the various firms which caused them to earn different rates of return on their tangible assets. He decided, however, to not attempt to recognize these in the formal statements. It should prove worthwhile to investigate and evaluate his reasons for arriving at this decision.

Paton's main objection was as follows:

> Goodwill, as has been indicated, expresses the value of an excess earning power. It represents the capitalization of the peculiar rights and advantages enjoyed by the supramarginal enterprise. Evidently, then, if goodwill were completely recognized as an asset in the accounts of all businesses . . . all unusual rates of return would be thereby annihilated . . . as far as net income rates were concerned all particularly successful businesses would be reduced essentially to the normal or representative level.[26]

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[26] Paton, Accounting Theory, op. cit., pp. 318-319.

He went on to state that the investor should be shown the actual rate of net income realized on the objective economic resources possessed by the firm. His conclusion was that any accounting procedure which equalized the rates realized by different competing enterprises, would be quite unreasonable.[27]

This objection has been met squarely in this thesis. The investor is informed on the balance sheet as to the rate of earnings on identified assets. The rate reported by the various firms would not be uniform as Paton feared. The reason his objection does not apply to the method proposed in this thesis is that he would calculate a rate of return after the unidentified assets have been capitalized, and the proposal only calculates a rate of return on assets before the capitalization has taken place.

While it at first seems that one must choose between reporting different rates of return and recording all assets, this is not so. The method of reporting used in this thesis is similar to "having your cake and eating it too." Different rates of return are shown for the various firms on their identified assets in the balance sheet while all assets are recorded in the statement of financial condition.

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[27] Ibid., p. 318.

The second objection that Professor Paton presented against the recognition of non-purchased "goodwill" really only applies to situations where there is no separation between ownership and management. In his words:

> . . . To recognize goodwill in this sense as a definite asset would mean . . . the accruing of the services and conditions furnished by the owners themselves as a property value on the books of their own enterprise. But, as has been urged repeatedly . . . the owners do not buy their own functions and services as they do other valuable considerations; hence to include the estimated value of such factors as properties would involve an absurd shifting of viewpoint.[28]

Other writers have also expressed this point of view. For instance, Charles Sprague once stated, "The balance sheet has limitations. The personality of the proprietor, his skill, his experience, though important elements of his capital, can never be brought into his balance sheet."[29] This line of argument is irrelevant to the use made of the method by the author. In this thesis the point of view of the absentee stockholder has been selected. Therefore, the viewpoints of the single proprietor, partner, and owner-

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[28] Ibid., p. 319.

[29] Charles E. Sprague, The Philosophy of Accounts (New York, N.Y.: The Ronald Press Company, 1922), p. 36.

manager of a corporation have been ruled out.[30]

Does the assumption of a separation of ownership and management exclude a significant share of the business sector of the United States? It seems doubtful that anyone would deny that a predominant portion of the business sector of the economy is made up of corporations, or that closely held corporations are the exception rather than the rule. Leonard Spacek has stated that "the great change in ownership of corporate securities in the last 25 years compels the profession to recognize its responsibility to produce meaningful [reports] . . . Whereas, a generation or two ago corporate ownership was concentrated in the hands of a relatively few, today we have mass ownership of corporate securities."[31] Possibly it is time, then, to take the absentee owner's point of view and to treat management (as well as the other human resources) as resources under the control of the firm.

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[30]It could be argued, however, that the method is appropriate even from the point of view of the owner-manager of a corporation since the person in that position really wears "two hats." As a human resource, he is selling his labor to the legal "being" called the corporation; and, as an investor, he is free to sell his shares and invest in a different entity.

[31]Leonard Spacek, "The Need for an Accounting Court," The Accounting Review, XXXIII (July, 1958), p. 371.

The final reason why Paton did not believe that unpurchased "goodwill" should be capitalized and reported as an asset was because the firm did not pay a price for it. In his words:

> . . . an enterprise, which is especially endowed . . . and because of these exceptional advantages earns a very high rate of return, is not justified in capitalizing a part of such income despite the fact that it might be possible to sell the business on a favorable basis because of these factors. But an enterprise which actually buys out the old business and voluntarily pays a price in excess of the sum of the values of the ordinary assets has thereby made a definite investment in goodwill -- has <u>purchased</u> goodwill -- and hence can properly recognize this asset in its accounts. . . .[32]

It seems that, while Professor Paton admits an asset exists, he is claiming it should not be recorded because no price was paid for it. Certainly, one would not contend that the process of paying for an asset creates that asset. The payment given for the purchase of goodwill represents only additional evidence that it exists. If one is willing to admit the asset exists, before formal recognition is given by payment, why not record the existence of the asset at the best estimate of its value? It would seem that this situation is quite analogous to the recording of donated assets at a fair value. Paton, himself, stated:

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[32]Paton, <u>Accounting Theory</u>, <u>op. cit.</u>, p. 322.

> An asset may occasionally be acquired by gift, accident, "strategy," etc. In such a case the accountant would usually admit that, if the asset were one which had a determinate purchase and sale value, the fair market value of the asset so acquired should be set up in the accounts; for otherwise the existence of a definite property would be concealed so far as the accounts were concerned. . . .[33]

While the unidentified assets may not have a "determinate purchase and sale value," attempting to place a reasonable value on them is certainly preferable to excluding them entirely from the statements. In a speech at the American Accounting Association Convention held at Michigan State University, East Lansing, Michigan, in August of 1962, Professor Paton stated that if the accountant is not in the business of determining values he may as well "close up shop." The author would construe this statement to include the value of human resources under the control of the firm which are generally not recorded because of the difficulties of valuation.

The expected benefits of recording all assets and reporting them as outlined above are the subject of the next two chapters.

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[33] Ibid., p. 490.

CHAPTER V

THE ANTICIPATED BENEFITS FROM ADOPTING THE PROPOSAL

General

Chapter I listed five specific benefits that are expected to derive from an adoption of the proposal which was presented in the prior two chapters. All those except the one concerning the implementation of economic theory are covered in this chapter.

The order in which the benefits are discussed is intended to emphasize the considerations which are not as evident as are some of the others. For instance, special attention is given to an analogy which can be drawn between the decisions facing the absentee stockholder in evaluating firms in which to invest in the economy, and those facing management personnel in allocating capital to its most efficient use within the firm. The reason for the disproportionate amount of space devoted to this topic is the uniqueness of the argument that funds would be allocated more efficiently rather than its importance over the other benefits. The grouping of the remainder of the benefits under the heading "Other Benefits" does not necessarily mean they

are less important. It merely results from the opinion that they are more obvious and, therefore, need not be stressed to the same extent as the above-mentioned one.

More Efficient Allocation of Funds

In an attempt to show that the model presented in this thesis will cause a more efficient allocation of funds in the economy, an analogy will be drawn to a model which is used internally by firms in making capital budgeting decisions. Mason Haire wrote of this technique of comparison as follows:

> . . . This use of models appears in a variety of forms. Sometimes it is a mathematical model with a relatively explicit definition of variables, and immense power to be gained from the generative capacity of the logical structure. At the other extreme are models which might be called "mere" analogy -- models in which a well-known physical structure, mechanical process, or biological organism is used as an example in the hope that it will be an aid to insight into a complex phenomenon. Between these two is a more legitimate use of analogical reasoning. There are cases in which one takes a model already developed in another science and hypothesizes that its characteristics fit [the problem at hand]. . . .[1]

The author is convinced that the model below, for making capital expenditure decisions, results in an optimum

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[1]Mason Haire (ed.), Modern Organization Theory (New York, N.Y.: John Wiley and Sons, Inc., 1959), pp. 13-14.

allocation of funds within the firm. If he can successfully show that the model described below is analogous to his own model for making investment decisions among alternative firms, he will have gained the support of its soundness for his own model. In order to prove that the two models are analogous, the differences between them must be shown to be based on sound reasoning. Similarities, differences, and the reasons for the differences are, therefore, pointed out.

The capital expenditure model presented below will be assumed to be that for a multi-division, large firm. This assumption is not essential, but it tends to liken the comparison to that of an investor facing a complex economy made up of many firms. The model is intended to incorporate the thinking of many of the writers in the field of capital expenditure decision-making.

A by-product of this section may be that it helps bring about a closer understanding of some of the differences existing between viewpoints of the accounting and finance disciplines. The author has heard persons engaged in teaching finance express the view that the accountant is too concerned with earnings and not enough with cash flows. Similarly, accountants sometimes feel that the "finance" approach to problems too often ignores the earnings data

and erroneously concentrates almost entirely on cash flows. By discussing the reasons for the different emphasis placed on these aspects, it is possible that finance and accounting in general can be drawn closer together.

A Capital Expenditure Model for a Firm[2]

It will be shown why the model described in this section is considered by the author to be both theoretically correct and practically applicable. Alternative methods and their weaknesses are also briefly mentioned.

It is necessary to give the assumptions and definitions which make the model more desirable than its alternatives.

There are two explicit assumptions which are made. The first is that money has time value. For example, a dollar today is worth more than a dollar tomorrow. The second is that management is attempting to maximize the present value of future cash flows to the present stockholders of the firm at any point in time.

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[2]The author is especially indebted to Dr. Robert W. Johnson, Professor of Finance at Michigan State University, for many of the ideas included in the model. While other sources were helpful also, none of them have been directly quoted or paraphrased to the extent that specific references are necessary. However, several of the general sources are included in the bibliography.

Two terms which need to be defined are incremental investment and annual cash benefits. The incremental investment shall be taken to mean the additional cash investment (net after taxes) necessitated by investing in a given project. Examples of "additions to" incremental investment include net invoice price, freight-in, increase in working capital, training expense, installation expense, and added taxes on the sale of old equipment. Examples of "deductions from" incremental investment include amounts realized from the scrap sale of old equipment, tax savings resulting from losses realized on the sale of the old equipment, and initial working capital decreases. Such costs of old machines being replaced should not be included as costs of the new investment since they represent "water over the dam." Current liquidation values of facilities that are being modernized should also be ignored unless going out of business is an alternative that is being seriously considered. To charge projects with "opportunity costs" of this nature, which may not be feasible alternatives, merely decreases the computed rate of return to the point where some desirable projects will appear to have a yield below the cost of capital.

Annual cash benefits shall be taken to mean the additional cash receipts (net after taxes) realized by investing in a given project. Examples of "additions to" net annual cash benefits include cash savings by reducing expenses, cash increases by increasing sales or other income categories, and terminal values (to be considered in the last year of the useful life of the project). Examples of "deductions from" net annual cash benefits include the increase in taxes resulting from the operations of the new project, increases in general overhead cash outflows resulting from acceptance of the project, and opportunity costs of foregone receipts which would have resulted from an alternative use of the facilities used by a given project (i.e., Because the firm went ahead with project Y it had to confiscate the space formerly used by activity X in producing Z amount of net annual cash benefits. Activity X had to be discontinued, therefore the annual opportunity cost is the amount Z.). To consider possible, but improbable, foregone receipts as reductions of net cash benefits is uncalled for. Only opportunity costs which would have been realized should be included in the computation.

Now that the assumptions and definitions upon which the model is based have been presented, the model itself can

be described. The proposed model is based on a "rate of return" method. The mathematical expression of the model is as follows:

$$\text{Present Value (of net annual cash benefits)} = \frac{A_1}{1+r} + \frac{A_2}{(1+r)^2} + \ldots + \frac{A_n}{(1+r)^n}$$

Where: A_1 = the net annual cash benefits in year 1.

A_n = the net annual cash benefits in the last year of the project.

r = the yield of the project.

The present value of the net annual cash benefits is set equal to the amount of incremental investment. The unknown to solve for is "r" and is called the yield.[3] Once the yield has been computed, it can be compared with the company-wide cost of capital to determine if the project meets the minimum return necessary.[4]

A firm may be using either a "financing budget" or a "rationing budget" for governing the amount it will spend on

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[3]Sometimes, when solving for "r," multiple yields or imaginary roots are obtained. In these special cases the "present value" method should be used. The formula is the same. However, under this method the cash outflows and cash benefits are brought back to their present value by discounting each stream at the cost of the capital rate. If the net present value is greater than zero, the project is acceptable from a present value point of view.

[4]Instead of using the mathematical formula to solve for "r," a present value table can be used.

capital projects. Those using a "financing budget" are willing to go ahead with all projects having a higher rate of return than the cost of capital, even if it means that new funds must be obtained from outside the firm. Those using a "rationing budget" set aside only a certain amount of funds for capital expenditures for any given year. Therefore, they will invest in all projects having a higher rate of return than the cost of capital, up to the maximum amount they have set aside for that year. A discussion on how the use of these two types of budgets affects the projects which should be selected is crucial to the understanding of the capital expenditure model being described. However, since this understanding is not necessary in order to contrast the model with the one proposed in Chapters III and IV for informing absentee stockholders of rates of return, the discussion is relegated to the appendix. (See Appendix C.)

There is no attempt to incorporate risk into the calculation of the basic rate of return. The consideration of risk is left to management to determine independently. Since the willingness to take risks varies with different groups of managements this treatment seems justified.

The computation of the "cost of capital" shall not be discussed in this thesis. This seems to be one of the

most nebulous concepts in capital budgeting.[5]

There are several alternative methods which are used in making capital expenditure decisions. The first one that is described here is "payback." Under payback, the original cost is divided by the average annual cash benefits to determine the time required to get back the original investment. The main criticism of the payback method described here is that it ignores the time value of money. In other words, it treats a dollar received next year as being equal in value to a dollar received this year. Also, cash benefits received after the recovery of the initial investment are not considered in evaluating projects when only payback is used. Another weakness of payback is that it is entirely conceivable that projects having a negative rate of return, when using the "rate of return" method, would be accepted when payback is the only criteria. For instance, a project which had an initial investment of $1,000 and would return $1,000 three years later would meet an arbitrary payback requirement

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[5]The author tends to agree with Ezra Solomon that the cost of capital changes with the capital structure. For an explanation of his views see: Ezra Solomon, The Management of Corporate Capital (Glencoe, Ill.: The Free Press, 1959), pp. 128-140.

of four years.[6]

Another alternative method is one called the "annual rate of return on investment" method. Under this method, the average cash benefits are divided by the original investment. The basic weakness of this method is that the duration of the proceeds is ignored. The method has a bias for short-lived projects with high cash proceeds. For instance, a 22% return project lasting two years might be accepted before a 20% return project lasting 25 years. When computed on a proper rate of return basis, the second project would have the highest yield (assuming the second project did not receive all its cash benefits in the last few years). This method also ignores the time value of money. One project might receive no cash benefits until the tenth year and then receive $100,000, while another project with the same initial outlay might receive $10,000 per year for the ten-year period. Each would be stated as having an average cash

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[6]There are circumstances under which the reciprocal of payback gives approximately the same answers as the "true" rate of return gives. The conditions under which this occurs are when the annual cash throw-off is reasonably constant, the scrap value is small or so far in the future that its present value is negligible, and the life of the project is greater than twice the payback period. See R. N. Anthony, "Some Fallacies in Figuring Return on Investment," The National Association of Accountants Bulletin, XLII (December, 1960), pp. 5-13.

benefit of $10,000, while if the time value of money were recognized the projects clearly would not be equally desirable.

The method originally proposed, the "rate of return" method, falls under a category of methods called, financial methods. Another method which falls under this category is sometimes referred to as the "present value" method. This method uses the same formula as was used under the "rate of return" method:

$$\text{Present Value (of net annual benefits)} = \frac{A_1}{1+r} + \frac{A_2}{(1+r)^2} + \ldots + \frac{A_n}{(1+r)^n}$$

Instead of solving for "r," however, the method involves solving for the present value of net annual cash benefits. The cost of capital is substituted for "r" in the formula and incremental cash investments and benefits are discounted back to their present value. Then a profitability index is computed by dividing the present value of the outlays into the present value of the benefits so that consideration is given not only to the net present value amount in ranking projects, but also to the gross amount of incremental investment. For example, two projects could each have a net present value of $1,000 and initially appear to be equally desirable. The profitability index, however, would show

the first to be more desirable as follows:

$$\text{Profitability Index} = \frac{\text{Present Value of Net Cash Benefits}}{\text{Present Value of Net Cash Outlays}}$$

	Project 1	Project 2
Profitability Index	$\frac{\$2,000}{\$1,000} = 2$	$\frac{\$101,000}{\$100,000} = 1.01$

The weakness of this method is that it uses the cost of capital in its basic calculations. As previously mentioned, the cost of capital is very difficult to determine. If the figure of 10% were originally assumed to be correct and the actual cost of capital was only 6%, the ranking of the projects would have been incorrect. It is possible that projects would be accepted which were inferior to those rejected merely because an incorrect cost of capital figure was assumed.

Under the "rate of return" method, however, the assumption of an incorrect cost of capital would not affect the ranking of projects, but only the cut-off point.

If one starts with the basic premise that money has time value and that the firm is trying to maximize the present value of future cash benefits to the present stockholders, there can be only two theoretically correct methods of evaluating projects. They are the "rate of return" (or yield) method, and the "present value" method. If great confidence could be placed in a computed cost of capital

figure, it seems that the second method (used in combination with the profitability index) should be used. The reason is that problems of multiple yields and/or imaginary roots are eliminated. Because the cost of capital figure is so difficult to determine, however, the "rate of return" method seems preferable.

Now that a model has been presented and defended, it can be compared with the one proposed for use by absentee stockholders (and prospective stockholders) in allocating capital among firms in the economy.

Comparison of the Two Models

The similarities of the models shall first be discussed. Both methods express desirability in terms of a rate of return -- the higher the rate of return the more desirable the project or firm. The intention of each of the methods is to allocate funds in such a way that they can be most efficiently used. The cost of capital concept for the individual firm evaluating projects is analogous to the rate of return in the economy for an investor evaluating firms. For instance, the rate in the economy <u>is</u> the cost to the investor of investing in any given firm, since there is a presumption that he can always invest in a firm that

is earning the average rate of return. Risk is treated similarly in each of the models, since neither attempts to incorporate risk into the basic calculation of the rate of return.

From a broad point of view, then, it seems that the two models are quite similar. However, several important differences can be identified. Each of these will be presented and discussed to see if the reasons for these differences are based on fallacious reasoning. If they are, possibly one of the models should be changed. On the other hand, there may be valid reasons for the differences which exist. If it can be shown that the model presented in Chapters III and IV of this thesis is comparable to the one which is generally acceptable to persons engaged in the area of finance, and that differences which exist are necessary ones, there is a distinct possibility the accounting and finance areas will be drawn closer together.

One difference is that a firm evaluating a capital project considers <u>incremental cost</u> as the base for computing the rate of return, while an investor viewing a firm considers the <u>market value</u> of identified assets as the base (according to this thesis). There is a logical reason why the rates of return are calculated on different bases.

Incremental cost is really nothing more than adjusted market value at the time of purchase. The adjustments are justified since all of the costs relating to a proposed project are to be incurred in the future and could thus be avoided by not going ahead with the project. The market value of identified assets of a firm being evaluated, however, need not be adjusted for associated costs, since the costs associated with acquisitions were incurred in the past and are therefore unavoidable.

In one very special case, market value and incremental cost are the same. If an owner of a firm is facing the future deciding whether to sell his assets or to continue operations, the market value of the identified assets <u>is</u> the incremental cost of continuing operations. This is so because the market value of these assets is the implicit cost (or amount immediately foregone) of not selling the assets.[7]

Another significant difference between the two models is that the one for evaluating projects utilizes estimates of <u>future returns</u>, while the one for evaluating firms uses <u>past superior returns</u> as a basis for determining

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[7]This assumes that costs of removing the assets are either negligible or are absorbed by the buyer, and that the assets are not sold under "forced" conditions which would reduce their selling prices.

the rate of return. Here, too, the difference has a rational explanation. The management of a firm, in evaluating projects, uses feedback information on previous projects to improve its estimates of future projects. The estimates it makes are not sent out to third parties to be relied upon by them. In the case of financial statements which are being prepared for third parties, however, estimates may tend to mislead. The financial statements in this latter case would actually be the feedback information upon which the third parties can base their own estimates of future returns. The decision-making system is the same under either case. The difference in the models in this respect is necessitated by a consideration of the part of the decision system the model is intended to affect. In the evaluation of projects the rate of return is management's personal estimate of future returns; whereas, in the evaluation of firms, the rate of return calculation is a report to third parties on the past performance of the firms and actually represents feedback information. It is then up to the third parties to use this feedback information to come up with their own personal estimates of future returns as management has done in evaluating individual projects.

One of the most significant differences is that while the capital expenditure model for evaluating projects refers to cash flows, the model for evaluating the performance of firms in the economy refers to earnings flows. The author personally believes that earnings is the most significant figure to the investor. There are two sides to the issue as to whether or not a given firm can pay dividends. These are the legality of the payment, and the availability of assets for disbursement. Without accumulated retained earnings a firm cannot pay dividends regardless of the cash it has on hand. With earnings, however, the firm may even choose to borrow cash to make a dividend payment.

Even this cash vs. earnings difference between the two models can be reconciled. One of the assumptions made in the capital expenditure decision model is that management is attempting to maximize the present value of future cash flows to present stockholders of the company at any point in time. It is implicitly assumed that the way to do this is to maximize the present value of the cash flows of projects undertaken by the firm. This reasoning is valid in evaluating projects by a firm. The cash flows realized can be immediately reinvested in other projects within the firm so that future earnings for that firm will also be higher

than if projects with a smaller net cash generation per period were selected.

The same reasoning does not hold for the firm as a whole, however. The firm with the greatest net present cash generation is not necessarily the one which is able to maximize the present value of future cash flows to the present stockholders. Accounting income is no longer computed on a cash basis by a significant sector of the economy. The accrual basis of accounting, therefore, determines the amount of accounting income; which, in turn, determines the legality of dividend payments. Consider the purchase of a new building by a firm, for example. The net cash generation deriving from the use of the building in the second through the thirtieth years may be huge. A statement showing the cash generation per share may at first lead the shareholder to believe that he will be receiving a large dividend check in any particular year. The subsequent charging of depreciation against the revenues realized, however, would reduce the amount of dividend payments because of legal restrictions.

The firm evaluating projects to be undertaken in the future can ignore past costs; but the investor evaluating firms cannot ignore them since they affect the legality of dividend payments. Therefore, the differences in the

models in referring to cash by one and to earnings by the other is entirely reasonable. The accrual basis of accounting does not apply to projects not yet undertaken, therefore the cash basis is relevant in evaluating these projects. The accrual basis does apply to an evaluation of firms, however, since the firm has been in existence for some time and has incurred costs which must be allocated over its future life.

The method described in Chapters III and IV for determining a rate of return on identified assets for each firm in the economy is also quite similar to the method of evaluating investment projects called the "annual rate of return on investment" method. The comments made previously concerning the rationality of one method using future cash flows and the other using past earning flows apply here as well. The serious disadvantage of using this method was previously stated as being the fact that the duration of the proceeds was ignored. Therefore, it was argued, a short-lived project with a high rate of return would be erroneously selected before a longer-lived one with a slightly lower rate of return. It was pointed out that the "true" rate of return on the latter project would be higher than for the short-lived project. This objection would not apply, however, to the use of this method for evaluating firms in

the economy. The reason for this is there is an assumption that all firms are continuing entities until proven otherwise. If all firms are considered continuing entities the firm with the highest rate of return, computed in a way analogous to the "annual rate of return on investment" method, would also be the one with the highest "true" rate of return.

The author believes he has shown that the model he devised in Chapters III and IV is analogous to a model for evaluating capital expenditures as conceived of in the area of finance. He has discussed the differences and shown that they are necessary and logical. Therefore, if it is argued in finance that the capital expenditure decision model described above provides for a more efficient allocation of funds within the firm, it can certainly be contended by the author that his "analogous" model provides for a more efficient allocation of funds within the economy. It does this by encouraging investors to provide additional funds to firms earning a high rate of return on their identified assets. Thus the cost of capital to these firms tends to be lowered.[8]

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[8]If the price of shares of stock on the market is increased, the firm could raise given amounts of additional funds without diluting the present owners' interests as much as if the price of stock had not risen.

Similarly, those firms which are being handled by relatively inefficient human resources find their costs of capital increasing, and thus are discouraged from bringing more tangible resources under their control.

Other Benefits

Closer Tie-In Between Financial Statements

In the proposal, superior (or inferior) earning power has been recognized as evidence of the presence in a firm of human resources with above (or below) normal effectiveness. The value of these resources is then recorded in the statement of financial condition. It stands to reason that, given this method, the articulation between the financial statements will be much closer than under conventional methods of preparation.

Under current practice firms show different rates of return on total assets. The absentee stockholder probably doesn't understand the reasons for this. If he were to call in an expert to explain the reasons to him, the explanation might proceed as follows.

There are many reasons why the rates of return on total assets vary among firms. One reason is that each

firm can choose the "generally accepted" accounting method which best suits its own needs. The asset values and earnings amounts, therefore, are computed differently by the various firms.

Another reason for the differences is because the asset base for each particular firm is really a total of dollars of different values. Dollars valued at 1932 prices are added in with dollars valued at, for instance, 1940, 1950, and 1962 prices. This is analogous to measuring the length of a building with a rubber-band under varying amounts of tension. (With no stretching the rubber-band may measure four inches and under a great deal of tension it may measure fifteen inches.) When the person making the measurement announces that the building is one-thousand lengths long and is therefore longer than any of the other buildings in the area, little faith should be placed in his statement. In accounting, this same type of measurement is being used currently; and is one of the reasons why the performances of various firms cannot be evaluated on a comparable basis. The asset values in each of the various firms are a conglomeration of dollars which represented different amounts of purchasing power when they were spent. No effort is made to convert historical costs into amounts

based on dollars of equal value.

The third major reason for the fact that firms show different rates of return on total assets is that not all assets are recorded under current practice. Many accountants have recognized that human resources, which are under the control of a firm and cause it to earn higher than normal rates of income, are assets. Not many of them, however, believe that these assets should be recognized in the financial statements.

If these factors leading to the non-comparability of financial statements were corrected, as has been suggested in this thesis, the rates of return on average total assets would be the same for all firms. However, the rates of return on identified assets would still be different and would encourage funds to move under the control of the more efficient human resources.

When financial statements articulate more closely with each other the investor is more certain that he is getting all the relevant information on a comparable basis and not just part of the information on a non-comparable basis as under current practice. The proposal makes a contribution to this end.

Rejuvenation of the Position Statement(s)

Kenneth S. Most once wrote that "where a continuing or growing goodwill is written off, a hidden reserve is created."[9] It is even more evident that if an existing goodwill is not even recognized in the financial statements a hidden reserve is certainly thereby created. In the terminology of the thesis this could be restated as follows: When superior unidentified assets have not been recorded in the position statements, a secret reserve has been created since the financial condition of the firm is really stronger than it appears. (Analogously it is held that the financial condition of firms having inferior unidentified assets is really weaker than it appears.)

The term, secret reserve, was used in England during the early 1900's to describe a situation wherein the management of a firm held aside some of the funds for contingencies and did not report this fact in the financial statements. It seems that they felt it would be a conservative gesture which would greatly please the investors should the firm run into some "hard times." Another purpose

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[9]Kenneth S. Most, "Valuation of Commercial Goodwill," The Accountant, CXXXVIII (March 1, 1958), p. 251.

apparently was to conceal from the public some of the information on financial strength which management thought was only its own concern. It is not surprising to find that some of the literature which appeared as a result of this practice seems applicable to the argument of this dissertation that -- if human resources are assets they should be recorded.

In 1906, an article appeared in The Accountant relating that it was the duty of the auditor to determine the "true" financial position of a company and that his duty was not discharged if only nine-tenths or even ninety-nine one-hundredths of the true financial position was disclosed.[10]

Mr. Thomas Ure, in 1901, wrote that, while he knew quite well that it was often extremely difficult to fix a true value to be put on any particular asset, any balance sheet which was not a true and correct statement of the company's financial position should not be given an unqualified certificate by the auditor.[11]

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[10] "Secret Reserves," The Accountant, XXXV (July 21, 1906), p. 63.

[11] "Is the Auditor of a Public Company Justified in Giving an Unqualified Docquet When He Knows of the Existence of Hidden Reserves?," The Accountant, XXVII (February 16, 1901), p. 227.

In the United States the problem of secret reserves also received attention. The following answer appeared in the accounting questions section of The Journal of Accountancy (in 1934) in response to a question as to whether, or not, a balance sheet failing to disclose a secret reserve was in violation of the National Securities Act: "If the accounts covered by the accountant's certificate contained so-called 'secret reserves,' and if the amounts of these reserves proved to be an important element in the statement of the accounts, then the failure to disclose such reserves would constitute . . . an 'omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading.'"[12]

An editorial appearing in The Journal of Accountancy quoted Robert Montgomery as stating that "there does not appear from an accounting standpoint, to be any justification for flagrant undervaluations in any circumstances," and also that "the fact of the matter is that an auditor is taking big chances when he approves a balance-sheet which conceals or understates assets."[13] The same editorial quoted Kester as

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[12]"Treatment of Secret Reserves Under National Securities Acts" (Accounting Questions), The Journal of Accountancy, LVIII (August, 1934), p. 154.

[13]"Secret Reserves" (Editorial), The Journal of Accountancy, LXVIII (August, 1939), p. 75.

claiming, "It is, of course, apparent that no balance-sheet containing secret reserves is a true statement of condition and the practice of creating secret reserves must usually -- perhaps always -- be condemned."[14]

It should be realized that these men are being quoted out of context. It is doubtful that they would agree with the author that not recording the value of superior human resources constitutes the creation of a secret reserve. However, if one accepts the fact that these human resources are assets such an omission certainly does just that. To the extent that the omission does create a secret reserve, the proposal contained in this thesis rejuvenates the position statements by recommending a separate statement of financial condition which makes known the formerly secret reserve.

One might wonder why the accountant presently refuses to record the value of human resources in the financial statements. The author believes that the main reason is the conservative attitude which accountants have developed over the years. There have been swings away from conservatism in the past, however, and it is evident that there

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[14] Ibid.

are again pressures for less conservatism in accounting. It might be helpful to trace some of these swings toward and away from conservatism.

During the trust period in the United States (beginning around 1900) consolidations became more prevalent than they had been before. Each firm was anxious to state its own assets at as great a value as possible before consolidation so that its shareholders might gain a relative advantage in consolidation. Because of these overvaluations, pressure fell on the auditors to present and certify balance sheets in a more conservative way.[15] Robert Montgomery believed that this experience was one of the main reasons why only purchased goodwill has been recorded since that time. He stated that "because of the many 'watered stock' frauds of early days, in the perpetration of which the term 'goodwill' was freely used, it has come to be considered bad practice to enter goodwill on the books as an asset unless it has actually been purchased."[16]

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[15]A. C. Littleton, Essays on Accountancy (Urbana, Ill.: The University of Illinois Press, 1961), pp. 219-220.

[16]Robert H. Montgomery (ed.), Financial Handbook (New York, N.Y.: The Ronald Press Company, 1925), p. 1575. It is believed, however, that the "real criminal" was not the recording of goodwill but the way in which it was valued. Apparently firms could choose to recognize goodwill

After World War I, prices began to rise significantly. It became evident that assets recorded at cost were expressed at far below their values in terms of the increasing price level. Pressure came to bear on the accountant to record assets on a more realistic basis. Some compliance was made as is evidenced by a statement made by Charles Couchman in 1928 to the effect that, "We admit with due humility and without hesitancy that our balance-sheets are not perfect. We have already adopted on occasion some modification of the established theory . . . [by incorporating] appraisal values in our balance-sheets."[17] Had the depression not hit in the late 20's, the next step may well have been the recording of unpurchased goodwill as well. The depression, however, did come, and it was soon apparent that asset values would have to be written down drastically. It is doubtful whether some of the accountants living through that period will ever again be willing to veer away from conservatism in accounting.

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arbitrarily if they so desired. There was no "objectively" verifiable evidence required for the recognition of goodwill. One of the reasons for selecting past profits as a basis of valuation in this thesis is to prevent valuations of the type mentioned above.

[17]Charles B. Couchman, "Limitations of the Present Balance Sheet," The Journal of Accountancy, XLVI (October, 1928), p. 259.

Since the depression, and especially after World War II, prices again rose significantly. Just as in the 1920's, it soon became apparent that use of the historical-cost basis for recording assets resulted in balance sheets which did not reflect the values of its assets. Pressures began mounting for some form of correction such as common-dollar accounting or replacement-cost accounting, especially for fixed assets. There were evidences that the accountant was becoming increasingly disenchanted with conservatism in accounting. For instance, in 1951, Percival F. Bundage, former president of the American Institute of Accountants, stated during his Dickinson Lecture at Harvard University that accounting conservatism is a road-block in the path of professional evolution.[18] No significant shift away from conservatism has been made, however, since the experience of the depression.

By 1962, the Moonitz and Sprouse contribution had appeared. It recommended a less conservative approach in accounting and offered a theoretical foundation upon which to base the change. None of the former movements away from

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[18]Mary E. Murphy, Accounting -- A Social Force in the Community (Carlton, Austral.: Melbourne University Press, 1956), p. 87.

conservatism had been based on such a formidable analysis of postulates and principles. Because of this formidable theoretical base, and the fact that a great deal of time has elapsed since the experience of the depression, the author believes that the accounting profession may finally be willing to move to a basis of recording assets which reflects their value (regardless of swings in prices). He also believes that the recording of human resources at their fair value should form an important part of this movement. The rejuvenation of the position statements is sorely called for. The proposal of this thesis, in combination with the Moonitz-Sprouse recommendations, serves to aid in this task.

Aid in Financial Analysis for Internal Purposes

Persons engaged in analyzing the firm for the owners, so that corrective action might be taken to improve operations, should be interested in analyzing any part of the system which has an effect on its economic performance. One part which is generally ignored in analyses that are made is the efficiency of the human resources. Yet, under a very special simplified model which can be used to visualize the firm, the human resources are the most important variable in the system.

The "systems" approach separates variables of an

organization into independent and dependent categories. It would seem that the net income performance might be identified as a dependent variable in possibly every case, while human resource decisions and actions might be considered independent variables in possibly every case. The physical resources with which the human resources work are merely tools with fixed "output" capabilities. Therefore, as the human resources in one firm become more efficient (given two firms with similar physical resources) the dependent variable "net income" for that firm is increased in relation to the net income of the other firm. The concept can be generalized to all firms providing the physical resources can be put on comparable bases. The method for making the physical resources comparable among firms is to value them at their market values so that all physical resources are stated in their dollar equivalents.[19]

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[19]It could be argued that the last dollar spent on each of the various types of physical "factors of production" should be spent on factor units which are equally productive per dollar cost. If this were not so, it would pay the firm to substitute a more efficient unit for a less efficient one. This argument is stated by Reder [Melvin Warren Reder, Studies in the Theory of Welfare Economics (New York, N.Y.: Columbia University Press, 1947), p. 41] as follows, "The individual firm . . . will make the marginal (technical) rate of substitution between any pair of factors equal to the ratio of their prices." To the extent that factors are not divisible into minute units of productive capacity the argument is weakened.

Given this oversimplified model of the firm, one could then argue that the most important area of concern for financial analysis should be determining the make-up of, and reasons for changes in, the independent variable -- human resources.

The fact that little has been done to aid firms in determining the effectiveness of the human resources was pointed out by Jacques Maritain when he stated, "Failures may be ascribed not to the system but to the managers. How to recognize what managers should be changed? The market provides no meaningful answer."[20]

If the market does not provide meaningful answers, is it not time that the accountant made some contribution to this task? A statement made by Herman Bevis in 1962 can be cited as evidence that the accountant may be called on in this task. He stated, "Recently, there have been appearing in professional literature suggestions that the CPA will in due course be undertaking 'management audits' and reporting them to third parties."[21]

The proposal of this thesis, by recording the value

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[20]Jacques Maritain, Reflections on America (New York, N.Y.: Charles Scribner's Sons, 1958), p. 101.

[21]Herman W. Bevis, "The CPA's Attest Function in Modern Society," The Journal of Accountancy, CXIII (February, 1962), p. 35.

of human resources in the statement of financial condition, at least gives the financial analyst a starting point in evaluating these resources. In this way the proposal is an aid in this type of "financial analysis."

The main benefits would derive, however, from attempting to identify the components making up the valuation assigned to human factors. Professor Kollaritsch stressed this point by stating:

> Even when goodwill is included . . . the grouping of all these intangible items under one heading conceals important developments that may have taken place within each individual group. Favorable and unfavorable developments may have been compensated by one another. . . . These data should be listed separately in order that owners may be aided in evaluating the performance of management.[22]

It is believed that this attempt should be made in the annual report, but not in the statement of financial condition itself. While such an attempt would involve many difficulties, it should serve to focus attention on the human resources so that owners may be aided in evaluating their performances. It may have an additional benefit of inducing the human resources to perform some self-evaluation as well.

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[22]Felix P. Kollaritsch, "Can the Balance Sheet Reveal Financial Position?," The Accounting Review, XXXV (July, 1960), p. 485.

The next chapter investigates the economic implications of the proposal. It is intended that special attention be given this subject. The author believes that the divergences between economic income and accounting income as presently computed must be narrowed if accounting is ever going to reach its full potential in service to the public.

CHAPTER VI

ECONOMIC IMPLICATIONS

General

John T. Wheeler once wrote that, "there is a great need for a number of people to obtain a thorough training in both economics and accounting so that in a number of ways they can bring the two fields closer . . . they can through research in the areas of mutual interest . . . remove the no man's land which has so long existed."[1] He went on to add that, while any attempt to bring the two fields closer together offers a vast opportunity for stimulating study and great accomplishments, they are so complex that it is almost impossible to master both fields.[2]

There has been a vigorous effort in recent years to give future teachers and researchers in accounting substantial training in economics. As one of the products of this effort, the author believes that it may prove worthwhile for him to reveal any economic implications which he believes

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[1] John T. Wheeler, "Economics and Accountancy" in Handbook of Modern Accounting Theory, Morton Backer (ed.), (New York, N. Y.: Prentice-Hall, Inc., 1955), p. 75.

[2] Ibid., p. 76.

his "accounting" proposal may have. He is not so naive as to believe that he has found a way to bridge the gap between accounting and economics so that nothing further need be done. However, by explaining the relevence of his proposal to economic theory, he is hoping to make some small contribution to this end. To the extent the proposal does provide for the reporting of significant economic data to third parties, it answers Kenneth Tiffany's charge to the accounting profession that, "you are uniquely qualified and placed to make valuable contributions to the economic literacy of our country at the time when economic literacy has become all-important to the survival of our way of life."[3]

Other writers have also stressed the important role the accountant can play in communicating economic data. Max Block believes that accountants can make a real contribution in helping our country win its economic conflict with the communist bloc of countries.[4] Howard Stettler stated that financial statements which fail to recognize economic reality, and which are therefore misleading and lacking in

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[3]Kenneth C. Tiffany, "The Future of Accounting," The Accounting Review, XXXVI (April, 1961), p. 204.

[4]Max Block, "Accountants and Economic Problems" (Letters), The New York Certified Public Accountant, XXIX (August, 1959), p. 554.

comparability, are potentially harmful to the operation of our economic system.[5] Raymond Dein, in writing of the future development of accounting theory, expressed the hope that such development would lead to a situation wherein accounting may render the maximum of service to the business and social structure of our society.[6]

Rather than reviewing the histories of economics and accounting, it is sufficient, for the purposes of this discussion, to state that they had separate origins. Economics had its origin in philosophy, while accounting had its origin in bookkeeping. For hundreds of years the two fields were not significantly concerned with each other. It has only been within the last half century that any serious attempt has been made to locate differences and similarities between the two.[7]

The rate of synthesis of the two disciplines has not been rapid, however. Many of the writers concerning themselves with this topic pointed out the importance of

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[5]Howard F. Stettler, "Meaningful Financial Statements," The Journal of Accountancy, CIX (January, 1960), p. 23.

[6]Raymond C. Dein, "The Future Development of Accounting Theory," The Accounting Review, XXXIII (July, 1958), p. 400.

[7]John B. Canning, The Economics of Accountancy (New York, N. Y.: The Ronald Press Company, 1929), p. 310.

bringing the two closer together and then ended by challenging others to show how this can be done. Mary Murphy, in 1956, referred to this lack of real progress when she stated, "not much progress, however, has been made to enhance liason between economics and accounting since Lord Stamp's ringing appeal, at the formation of the Accounting Research Association in London more than a decade ago, for research in the history and development of accounting; in the effect of economic, social, and legal changes upon its methods; and in the present position of theory and practice."[8] She went on to indicate her dissatisfaction with the results of the English and United States study groups which were organized to resolve the differences. She stated:

> Someone of his [Lord Stamp] calibre is needed today to unite the two disciplines most concerned with the interpretation of business results. Surely, under his inspiration, the six-year exploration by a joint committee of the Institute of Chartered Accountants in England and Wales and the National Institute of Economic and Social Research would have produced a more outstanding document than the one of forty-six pages published in 1951 as Some Accounting Terms and Concepts. Another very disappointing report, Changing Concepts of Business Income, was issued a year later by the study group composed of accountants, economists, lawyers, and businessmen, appointed by the A. I. A. and the Rockefeller Foundation. Perhaps the most significant

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[8]Mary E. Murphy, Accounting -- A Social Force in the Community (Carlton, Austral.: Melbourne University Press, 1956), p. 87.

> aspects of the latter report were those revealing the dissent of certain distinguished members of the study group from some of the conclusions of their equally distinguished colleagues.[9]

If one is to attempt a converging of concepts between accounting and economics, he must first be familiar with areas of joint interest. One writer stated that business accounting is analogous to microeconomics, national income accounting is analogous to macroeconomics, and balance of payments accounting is analogous to foreign trade economics.[10] He was careful to point out, however, that economists developed the national income and balance of payments accounting systems to a significant extent. Therefore, these systems are already closely aligned with the economic theory dealing with them. The conflict between business accounting and microeconomics, then, seems to be the area of principal concern.

The inference up to this point may have been that accounting theory should completely adapt itself to the microeconomic theory of the firm. This, however, is not the intention at all. If microeconomics were considered to be

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[9] Ibid., pp. 87-88.

[10] Richard Mattessich, "The Constellation of Accounting and Economics," The Accounting Review, XXXI (October, 1956), p. 554.

a perfect theory upon which actions in the economy should be based, it would be expected that accounting theory should completely conform. There is dissatisfaction with the microeconomic theory of the firm, however, even among economists. There are several indications that this theory will be changed substantially within the near future. Richard Mattessich indicated that both areas could be improved when he stated, "We have on one side marginal analysis, with its opportunity cost concept, with refined tools but very simple and hence unrealistic assumptions. On the other side, we find the historical cost principle, conservative evaluation approach, and no organically related mechanism for price-level adjustments."[11]

Another author, John Wheeler, stated that marginal analysis is not perfect and that many economists reject parts of its theory.[12] An example of one such economist is William J. Baumol of Princeton University. He takes exception to the assumption that firms attempt to maximize profits. The assumption that firms will produce that quantity of goods which will equate marginal cost and revenue

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[11] Ibid., p. 552.

[12] Wheeler, op. cit., p. 68.

for a given time period has been one of the main pillars of microeconomic analysis. Professor Baumol, based on several years of experience with a management and market consulting firm in Philadelphia, stated that "so long as profits are high enough to keep stockholders satisfied and contribute adequately to the financing of company growth, management will bend its efforts to the augmentation of sales revenues rather than to further increases in profits."[13] He related that almost every time he came across a conflict between profits and sales, a program which proposed any cut in sales volume to improve profit performance met a cold reception.[14] It was his contention that such behavior was not necessarily irrational since sales volume had become an end in itself and peoples' objectives are whatever they are.[15]

There are other indications that microeconomic theory is still in the process of development. Alfred Marshall, certainly considered one of the most significant

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[13]William J. Baumol, Business Behavior, Value and Growth (New York, N. Y.: The Macmillan Company, 1959), p. 50.

[14]Ibid., pp. 47-48.

[15]Ibid., p. 47.

contributors to the theory of the firm as it now exists, once told his colleagues that the qualitative stage of development was substantially completed; and that the quantitative phase was arriving and would serve the purpose of proving or disproving the qualitative, deductive theory.[16] Commenting on this point, however, Wesley Mitchell (in 1925) stated:

> With all these fascinating problems and numberless others before them in shape for attack, it seems unlikely that the quantitative workers will retain a keen interest in imaginary individuals coming to imaginary markets with ready-made scales of bid and offer prices. Their theories will probably be theories about the relationships among the variables which measure objective processes. There is little likelihood that the old explanations will be refuted by these investigators, but much likelihood that they will be disregarded.[17]

He went on to add that in the course of the reformulation of problems, economic theory would not merely change its complexion but also its content. He saw little use in insisting that every young economist receive a thorough grounding in theory, since the qualitative theory has so small a role in public finance, banking, accounting, economic history, business cycles, marketing, and labor problems.

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[16] Wesley C. Mitchell, "Quantitative Analysis in Economic Theory," The American Economic Review, XV (March, 1925), p. 1.

[17] Ibid.

His recommendation was that economics become more objective so that the breach between microeconomic theory and the "practical" subjects would be narrowed.[18] One cannot help but infer from this argument that the narrowing of divergences between accounting and microeconomics may come as the result of accounting becoming less "objective" and microeconomics becoming more "objective."

In 1955, John Wheeler wrote that microeconomics was still in the process of changing. He indicated that economists were utilizing an increased knowledge of accounting to aid them in their revisions. In his words:

> In the last few years accounting has played an important role in the development of economic theory . . . especially . . . in the theory of the firm . . . . the economic theory of the firm is rather unrealistic and in need of some greater study and revision. It has been natural that the economists looking at this theory . . . have turned to accounting to help them. . . . They have tried to find some substitute for marginal price theory . . .[19]

One economist who has been very active in attempting a reformulation of microeconomic theory is Kenneth Boulding. He has attempted to incorporate the concept of the balance sheet into the theory. He stressed the fact that "the concept of the balance sheet, unfortunately, has

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[18] Ibid., p. 6.

[19] Wheeler, op. cit., p. 52.

not been employed to any extent in developing the static theory of the firm, so that as generally presented in the textbooks the firm is a strange bloodless creature without a balance sheet, without any visible capital structure, without debts, and engaged apparently in the simultaneous purchase of imputs and sale of outputs at constant rates."[20]

Richard Mattessich also pointed out that microeconomic theory dangerously disregards accounting tools, especially the balance sheet.[21] He added the thought that this might be the route to a narrowing of concepts between the two disciplines. His concept of the balance sheet for microeconomic theory is one which would include many intangible items which are not included in the accountant's balance sheet and would contain a more detailed breakdown of items.[22]

It would seem that enough doubt has been cast on the adequacy of the present state of microeconomic theory to

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[20]Kenneth E. Boulding, A Reconstruction of Economics (New York, N. Y.: John Wiley and Sons, Inc., 1951), p. 34.

[21]Mattessich, op. cit., p. 557.

[22]Ibid., p. 558. At this point the author cannot help but indicate that the balance sheet the economists are searching for may well have many similarities to the statement of financial condition which he has proposed in Chapter IV.

indicate that a complete switch in accounting methods to ones which would implement that theory is uncalled for. There is reason to believe that microeconomic theory will change substantially in the future and will incorporate more of the terminology and techniques used in accounting.

John Canning once stated that it was the task of the accountant to locate and use materials from economics which would aid in their own discipline.[23] He recognized the weaknesses of microeconomic theory but considered the income, capital, and interest concepts as relatively sound concepts deserving considerable attention.[24]

It is the intention of the present author to give considerable attention to the topic of business income. He will investigate the extent of divergences and similarities existing between the economic and accounting concepts of income. Next, a method for using his proposal to report an "economic" income figure will be presented. Then he will review other economic implications which the proposal may have.

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[23] Canning, op. cit., p. 331.

[24] Ibid., p. 333. It must be remembered that Canning wrote this in 1929, seven years before Keynes published his classic on macroeconomics giving great attention to these concepts.

A Comparison of Accounting and Economic Concepts of Income

It is a generally accepted fact that accountants do not now report economic income. It could also be argued that there are several concepts of accounting income as well as several concepts of economic income. John Wheeler once wrote, "Accountants generally regard income as a monetary measurement of the excess of revenue over expenses arising primarily through explicit transactions . . . [which] leaves a lot of room for variations so that 'income' is not even interpreted the same way by all accountants. . . . economists cannot agree upon a concept of income either."[25] He concluded, however, that although there is no one generally accepted definition of income in either field, there is enough agreement so that some generalizations can be drawn with regard to the differences in their concepts of income.[26]

Several authors have given their impressions as to the differences which exist between the two concepts. For instance, David Solomons stated:

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[25] Wheeler, op. cit., p. 49.

[26] Ibid., pp. 60-61.

> . . . We may sum up the relationship between these two different concepts of increase in net worth, economic income and accounting income, by starting with accounting income and arriving at economic income thus:
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> Accounting income
> + Unrealized changes in the value of tangible assets which took place during the period, over and above value changes recognized as depreciation of fixed assets and inventory mark-downs,
> - amounts realized this period in respect of value changes in tangible assets which took place in previous periods and were not recognized in those periods,
> + changes in the value of intangible assets during the period, hereafter to be referred to as changes in the value of goodwill
> = economic income.[27]

Emily Chen Chang adopted a balance-sheet point of view to describe the differences. She maintained that the accountant includes only purchased items while the economist would include both purchased and non-purchased items (e.g., unpurchased goodwill), the accountant values all assets except money items at their unabsorbed original costs while the economist values all assets at the present value of their expected future net receipts, and the accountant makes no adjustment for price-level changes while the economist does.[28]

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[27] David Solomons, "Economic and Accounting Concepts of Income," The Accounting Review, XXXVI (July, 1961), p. 376.

[28] Emily Chen Chang, "Business Income in Accounting and Economics," The Accounting Review, XXXVII (October, 1962), pp. 643-644.

Assuming she would include all changes between successive balance sheets as income, her concept of the differences is the same as the one given by Professor Solomons.

Authors referring to the economic concept of income seem to have the Hicksian concept in mind. It might prove worthwhile to determine what the Hicksian concept is. Hicks stated that "it would seem that we ought to define a man's income as the maximum value which he can consume during a week, and still expect to be as well off at the end of the week as he was at the beginning."[29]

Most of the discussion of this definition seems to be concerned with the meaning of the phrase "as well off." Emily Chen Chang pointed out that if being as well off is interpreted to mean that the original money cost of capital is to be maintained intact, the accounting income concept conforms with the Hicksian concept.[30] David Solomons criticized this accounting interpretation of well-off-ness when he stated, "It is hardly open to question that you cannot really assess the well-off-ness of an enterprise by aggregating the costs, or the unexpired costs . . . any differences

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[29]John R. Hicks, Value and Capital (Oxford, Eng.: The Clarendon Press, 1946), p. 172.

[30]Chang, op. cit., pp. 642-643.

between the current value of its tangible assets and their book value based on cost will be excluded; and any value which the enterprise may have over and above the value of its tangible assets will also be excluded."[31]

The Hicksian concept of income was one of personal rather than corporate income. This is why he referred to consumption rather than dividends as being the test of income. Emily Chen Chang referring to this point commented that business income is the amount which the firm can distribute as dividends and still be as well off at the end of the period as at the beginning. She said that it is thought of in "real" terms and is the result of balance sheet valuation rather than the residual from income statement matching. In other words, business income should be measured by the growth of net worth and not the other way around.[32]

The next section shows how the statement of financial condition proposed in Chapter IV can be used to arrive at an amount of income which is even closer to the economic concept of income than is the accounting income concept inferred by using the balance sheet in Chapter IV.

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[31]Solomons, op. cit., p. 376.

[32]Chang, op. cit., p. 637.

The Reporting of "Economic" Income

The Mechanics of Computation

For purposes of illustration it will be assumed that the data contained in Table 5 is applicable to Firm W mentioned in Table 4, back in Chapter IV. Table 5 shows comparative statements of financial condition as of December 31, 1962 and 1963. It is important to realize that the asset and liability valuations given for December 31, 1962, are expressed in 1962 dollars, while those for December 31, 1963, are expressed in 1963 dollars. If the value of the dollar has not changed during the ensuing period no adjustment in these values need be made. The author has assumed, however, that the value of the dollar has decreased 5% during the period. It should also be pointed out that identified assets are recorded at market value, unidentified assets are recorded at their capitalized value as discussed in Chapter III, and liabilities are recorded at the present value of their future cash outflows.[33]

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[33] Although this valuation of liabilities has not been specifically mentioned previously, it is in agreement with the economic present value concept and with the Moonitz-Sprouse method. [See Robert T. Sprouse, and Maurice Moonitz, A Tentative Set of Broad Accounting Principles for Business Enterprises (New York, N.Y.: The American Institute of Certified Public Accountants, 1962), p. 39.]

TABLE 5.--The "W" Corporation -- comparative statements of financial condition

Identified Assets	12/31/62	12/31/63	Liabilities	12/31/62	12/31/63
Cash	$ 7,000	$ 5,000	Accounts Payable	$ 6,000	$ 4,000
Accounts Receivable	9,000	10,000	Loan Payable	28,000	6,000
Equipment	20,000	15,000	Rent Received in Advance	5,000	5,000
Buildings	85,000	80,000	Total Liabilities	$ 39,000	$ 15,000
Land	8,000	10,000			
Total Identified Assets	$129,000	$120,000			
			Stockholders' Equity		
			Common Stock	70,000	75,000
			Retained Earnings - Free from Deferred Charges	20,000	30,000
Unidentified Assets	25,000	50,000	Increase in Equity - Superior Earning Power on Identified Assets	25,000	50,000
Total Assets	$154,000	$170,000	Total Liabilities and Stockholders' Equity	$154,000	$170,000

Table 6 shows how the comparative statements of financial condition might be used to compute economic income. The increase in stockholders' equity is adjusted for changes due to the sale of common stock, the payment of dividends, and the effects of changes in the value of the dollar. The assumptions that the stock and dividend transactions occurred on December 31, 1963, are intended to simplify the illustration by expressing these amounts in 1963 dollars. The assumptions are convenient but not necessary, however.

There is another format that can be used to compute economic income. Table 7 shows the use of this alternative format. Instead of beginning with changes in stockholders' equity before adjustment for changes in the value of the dollar, it begins with changes in the valuations of assets and liabilities after adjustment has been made for changes in the value of the dollar. The capital stock issuance and dividend payment are then adjusted for. The resulting economic income is the same as under the first method, and is expressed in terms of 1963 dollars.

It would be possible to choose a year other than 1963 as the base year and to express the economic income in terms of the value of the dollar at that time. The advantage

TABLE 6.--Computation of economic income by the net worth technique

Stockholders' Equity:	
As of 12/31/63	$155,000
As of 12/31/62	115,000
Increase	$ 40,000
Less Sale of Common Stock (sold on 12/31/63)	5,000
Balance	$ 35,000
Add Dividends Paid (on 12/31/63)	11,500
Balance	$ 46,500
Less Effect of Purchasing Power Change*	6,052
Economic Income (in terms of 1963 dollars)	$ 40,448

* The value of the dollar as of 12/31/63 is only 95% of what it was as of 12/31/62. It is necessary, therefore, to adjust asset and liability (valuations as of 12/31/62 to 1963 dollars as follows:

Valuation of Assets on Hand as of 12/31/62		
Expressed in 1963 dollars $(\frac{154,000}{.95})$	$162,105	
Expressed in 1962 dollars	154,000	
Decrease in Purchasing Power Strength		$8,105
Valuation of Liabilities Existing as of 12/31/62		
Expressed in 1963 dollars $(\frac{39,000}{.95})$	$ 41,053	
Expressed in 1962 dollars	39,000	
Increase in Purchasing Power Strength		2,053
Net Decrease in Purchasing Power Strength		$6,052

TABLE 7.--An alternative format for computing economic income by the net worth technique

Value of Total Assets as of 12/31/63	$170,000	
Less Value of Total Assets as of 12/31/62*	162,105	
Real Increase in Asset Valuation		$ 7,895
Valuation of Total Liabilities as of 12/31/62*	$ 41,053	
Less Valuation of Total Liabilities as of 12/31/63	15,000	
Real Decrease in Liability Valuation		26,053
Total Real Increase in Financial Strength		$33,948
Less Sale of Capital Stock (Sold on 12/31/63)		5,000
Balance		$28,948
Add Dividends Paid (on 12/31/63)		11,500
Economic Income (Expressed in terms of 1963 dollars)		$40,448

*Expressed in 1963 dollars

$$\text{Assets} = \frac{\$154,000}{.95} = \$162,105$$

$$\text{Liabilities} = \frac{\$39,000}{.95} = \$41,053$$

of selecting one unchanging base year for all firms to use is that a series of economic income figures for a particular firm would then be comparable on a vertical time-series basis as well as on a horizontal basis with other firms. If the base year is continually shifted to the current year, a time series showing economic income over a period of years for a particular firm would have to be adjusted for changes in the value of the dollar before the figures would be comparable and therefore appropriate for analyzing the trend of earnings.

A Discussion of the Method

The author would be the first to admit that the method he has used does not report economic present value income in its "purest" sense. He will, however, attempt to show why he is willing to use a method which is not absolutely correct in theory. In economics, the value of any asset or firm is measured by the present value of its expected future net receipts. To be as well off economically the firm must maintain the present value of its expected future net receipts. If the price level has changed this must also be taken into consideration. This is the essence of the economic concept of income.[34] While the method shown above is

[34]Chang, op. cit., p. 643.

very close to this concept, it is not identical because it does not utilize the present value concept in valuing assets. Instead, market value is used (which is the present value only under very special assumptions). Canning once wrote, "If we could by any means obtain future manufacturing and sales data in the forms and amounts that are later to eventiate, we should be able to prepare a balance sheet that would be an instrument of precision."[35] The author believes that, since these figures are unattainable, his method comes as close as possible to reporting economic income, while still retaining a significant degree of objectivity and comparability. His concept has a great deal of similarity to the "accretion" concept of income which is discussed below.

In January of 1963, Edward Philips wrote an article in which he described some different concepts of income which exist. His description was as follows:

Concepts	Characteristics
Psychic income	Purely subjective. Income is what you think it is -- based on "utility" and inseparable from consumption.
Economic present value income	Gains objectivity by omitting "non-economic" factors. Values are dependent on future receipts.

[35] Canning, op. cit., p. 184.

Accretion income	Income is an increase in economic power which can be verified with reasonable objectivity. Relies primarily on market values as measures of economic power.
Accrual accounting income	Mixed. Some use of forecast and market values but generally requires an outside transaction before recognizing value changes.
Cash basis accounting income	Strictly objective. Requires realization in cash.[36]

Philips stated that psychic income is the only concept which can claim to be "true" income since it is the only one which rests on a concept of subjective well-being or utility. He claimed that by moving from psychic income to the economic present value concept, economists have already made a large sacrifice of reality for the sake of objectivity.[37]

In discussing the differences between economic present value income and accretion income, Philips stated:

> In contrast to this economic concept, the accretion concept bases its measure of economic power on market values, rather than discounted receipts. This can be viewed as a concession of some conceptual soundness in order to gain greater objectivity of measurement. It seems obvious to this writer that the superiority as to objectivity of the accretion concept over economic present value income much more than offsets any loss in conceptual soundness. . . .[38]

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[36] G. Edward Philips, "The Accretion Concept of Income," The Accounting Review, XXXVIII (January, 1963), p. 16.

[37] Ibid.

[38] Ibid., p. 17.

The author of this thesis concurs with this belief. If individual expectations were to be incorporated into financial statements, the advantage of having comparable statements, on the basis of which investors could make decisions, would disappear.

Under certain conditions, however, market values and economic present values are identical. Irving Fisher stated that the buyer of any capital article will value it for its expected services to him and that "at the margin" he will pay a price which is equivalent to its "present worth" or "discounted value."[39]

Philips commented on this point by stating that if everyone in the market made the same forecast of future receipts and used the same discount rate, market values and present values would be identical.[40] Another argument he used to favor the use of market values over present values was to claim that economic power does not really exist without market values, even though an investor may perceive that the present value exceeds the market value of an item.[41]

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[39]Irving Fisher, The Nature of Capital and Income (New York, N.Y.: The Macmillan Company, 1930), p. 189.

[40]Philips, op. cit., p. 17.

[41]Ibid.

John Canning cast further doubt on the practicability of using present values for the valuation of individual assets. He stated that present values cannot even be determined for individual capital instruments when used in conjunction with other instruments to produce goods. Although admitting that the individual instruments do have separate values, he claimed that the values are not determinable from any money-valued service series ordered in time.[42] It seems, then, that the use of market values is much more feasible than the use of present values for the valuation of assets. It is also evident that in certain cases the two values would be identical. The author believes that the divergences in most cases are not sufficient to prevent him from labeling the income figure derived in this chapter as "economic" income.

This concludes the business income phase of the analysis. Attention is next directed toward other economic implications of the proposal.

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[42] Canning, op. cit., p. 233.

Other Economic Implications

How the Proposal Affects the Allocation of Resources

Throughout the study of microeconomics the point is stressed that the price system provides for the optimum allocation of resources.[43] How then can the author claim that his proposal for the recording of human resources aids in this cause?

His argument would proceed along these lines. By identifying the most efficient users of capital in the economy, it is possible to lower the cost that they must pay for funds. This results from investors being willing to supply more funds to these producers (because of the lower risk involved) at each rate of interest (or return) than they would to less efficient producers. The supply curve for funds thus shifts to the right for these firms, lowering the cost of funds and increasing the quantity that would be demanded. (The exact opposite would be true for the inefficient firms.) These funds would be used to invest in capital projects which had become profitable due to the decrease in the cost of capital. This could be viewed as a movement

[43] George Stigler, The Theory of Price (New York, The Macmillan Company, 1952), p. 4.

down along the marginal efficiency of capital curve for these firms. The increased amount of funds in the hands of the efficient firms could also be used (through the price system) to bid complementary resources away from the less efficient users. The rise in demand for complementary resources comes about because the increased use of capital resources in these firms raises the marginal physical product of complementary resources, thus shifting the demand curve for these resources outward. While the demand for resources which are substitutes to the capital resources would decrease, it is believed that the efficient firms would experience a net increase in the quantity of resources under their control.

The author also believes that the demand for resources is a function of both the willingness and the ability to bid for their control. In microeconomic theory it is assumed that if a resource can earn at least the value of its marginal product it will automatically be demanded. In reality, the availability of funds also has an effect on the quantity that will be demanded. In encouraging the more efficient firms to bid for more resources by making funds readily available to them (and vice-versa for inefficient firms), it is felt that the allocation of resources will be improved.

To the extent that the allocation of resources is improved, the production function for the economy will shift outward. This means that at each level of employment more goods and services could be produced.

One additional thought concerning the allocation of resources is that "compensatory arrangements are largely in the hands of the management group itself."[44] Thus, it is possible for a management group to pay itself more than the value of its marginal product. The effect of this would be to decrease accounting income which, in turn, results in a decrease in the valuation which is placed on human resources. The signal is thus given to the market that a lesser amount of funds should be supplied to this firm than if management had been paying itself only the value of its marginal product. From the investor's point of view, the signal is correct. Management has appropriated for itself some of the income rightfully due the owners. It has taken advantage of the owners' disorganization in decision-making.

From a resource allocation point of view, however, more funds should be provided to this firm, assuming it is

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[44] E. Joe De Maris, "'Success Indicator' Function of Income Concept Argues Its Further Development," The Accounting Review, XXXVIII (January, 1963), p. 42.

abnormally efficient in the handling of physical resources and that the additional funds would be used to acquire control of more physical resources.

While this situation does interfere with the optimum allocation of resources, the effect is thought to be only temporary in any given situation. The reason for this is that the owners would probably not permit management to receive more than the value of its marginal product on a permanent basis.

The National Income Accounting Implications of the Proposal

It is no secret that the accounting statements produced by firms in the economy have not been readily adaptable for national income accounting purposes. The existence of divergent accounting practices and the nature of the accounting concept of income have been two of the major causes for this situation although there are others also. Mary Murphy once stated that it is regrettable that wider use has not been made of accounting data in the formulation and execution of economic policies, and that accounting reports have not proved adequate for such purposes.[45] She also believes "the

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[45]Murphy, op. cit., pp. 80-81.

major possibility today for increasing the social usefulness of our field lies in the development of the accounts of business enterprise with attention to the broadest possible use of these accounts, and the summarization of overall figures covering capital employed, prices, wages, costs, interest and rent for use in the administration of the economy."[46]

Edward Philips believes that the accretion concept of income (which has many similarities to the accounting income concept of Chapter IV and to the "economic" income concept of Chapter VI) is substantially consistent with the national income concept. In his words:

> The basic notion of the accretion concept is that income is any change in economic power that can be measured with reasonable objectivity. This does not appear essentially different from what we have in mind when we attempt to measure national income. To the extent that we are able to approximate this for every entity in the economy we can measure national income by summing entity income. In this respect, progress toward the accretion concept would contribute to the improvement of national income data as well as entity income data.[47]

Since the proposal in this thesis only applies to the corporate sector of the economy, it does not pretend to offer the final answer to the problem of making entity statements adaptable to national income accounting purposes. The

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[46] Ibid.

[47] Philips, op. cit., pp. 21-22.

proposal does, however, have some relevance to this problem especially since the proposal deals quite thoroughly with making financial statements comparable among firms (and thus more susceptible to statistical summation).

The Welfare Implications of the Proposal

While the "invisible hand" theory espoused by Adam Smith (to the effect that the economic man in pursuing his own interests also aids society in achieving its goals) is generally true, there are some exceptions to this theory which are relevant to this thesis. It might be worthwhile to pursue some of them.

The proposal of the thesis has adopted the viewpoint of the absentee investor. There is an implicit assumption, therefore, that what is good for him is also good for society; but this is not always true. Sometimes in pursuing his own ends he creates social costs which are not taken into account in his calculation of income.

E. Joe De Maris in writing of these unrecorded social costs stated:

> . . . accounting must take as a "given" that specific enterprises can cause deleterious, anti-welfare side-effects that inflict losses upon others and that the cost of effacing these losses, where they can be ameliorated, may not be borne by the enterprise at all,

> or only partially. These social losses appear in many forms: damage to human health, injury to plant and animal life, deterioration or destruction of property values, [and] premature depletion of natural resources, to mention a few. . . .[48]

Thus, under the proposal, it is possible that firms producing at high rates of private income may (because of unrecorded social costs) be operating at net social losses. Yet, the proposal would tell the investor to give more funds to these producers, thus leading to a further lessening of welfare in the economy. It is obvious from this discussion that other forms of control, such as city smoke ordinances and zoning laws, are necessary to control these situations.

There is another type of social cost which should be mentioned. It is the social cost of allowing monopolies to restrict output to the level which will maximize their profits. The result is a misallocation of resources. The monopolist and the competitor both equate marginal cost with marginal revenue in maximizing profits. However, in the case of the competitor, marginal revenue is equal to price; and thus, price (or marginal social benefit) is equal to marginal cost (or marginal social cost). Under pure competition, the marginal social cost is equal to the marginal

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[48]De Maris, op. cit., p. 40.

social benefit at the profit-maximizing output and thus the firm, in pursuing its own interests, is also aiding in maximizing welfare.

Under monopoly, however, the price is higher than the marginal revenue at the profit-maximizing output and is, thus, greater than marginal cost. Stated in welfare terms, the marginal social benefit is greater than the marginal social cost. It would increase social welfare, therefore, to allocate more resources to the monopolist and force him to produce at an output where the marginal social cost is equal to the marginal social benefit.

Here again, it can be seen that what is good for the firm is not always good for society as a whole. Commenting on this point Gabriel Preinreich stated that "although goodwill may not always be 'good' in the social or ethical sense, the term is in general used to designate the capital value of all periodic surpluses accruing to an enterprise in the regular course of business, whether or not they are efficiency or exploitation profits."[49] It is obvious that the proposal is not discriminating between the two and, thus, it

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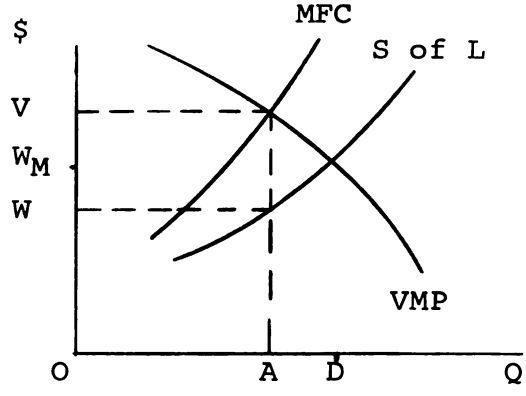
[49]Gabriel A. D. Preinreich, "Economic Theories of Goodwill," The Journal of Accountancy, LXVIII (September, 1939), p. 177.

is necessary that anti-trust regulations be directed toward lessening this social cost.

There is still another situation which could be mentioned to further establish the fact that the firm in maximizing its profits does not always maximize social welfare. The situation referred to is that of the monopsonist (the only buyer of a resource in a given market) who is in a position to pay a resource less than the value of its marginal product and appropriate the difference for the owners. This situation can best be seen graphically:

GRAPH 1.--The monopsonistic case



Where:

VMP = The value of the marginal product, which, in turn, is equal to the price of the final product times the marginal physical product of the resource in question (assuming the firm is a pure competitor on the product market).

S of L = The supply curve of labor.

MFC = The marginal factor cost or the extra cost of hiring an additional unit of the factor and also of giving a wage increase to all preceding units hired.

The firm would equate VMP and MFC to find the amount of the resource (i.e., labor) it wishes to employ since for this resource it views these as its marginal revenue and marginal cost curves, respectively. It would choose, therefore, to hire OA units of the resource, which contribute a value of the marginal product of OV. To hire the required number of workers the firm would only have to pay a wage of OW.

From a welfare point of view, resources should be allocated in such a way as to equate the value of their marginal products with their prices.[50] It is obvious that the proposal in this thesis has no mechanism for doing this in this situation. Therefore, other means must be found for accomplishing this task.

One corrective action which can be taken is to set a minimum wage at the level OW_M so that the firm (by equating MFC and VMP) would choose to hire the quantity OD of labor. Thus, the price (or wage) would equal the value of the marginal product. This solution causes the Supply of Labor curve and the MFC curve to coincide over to the output OD as shown below:

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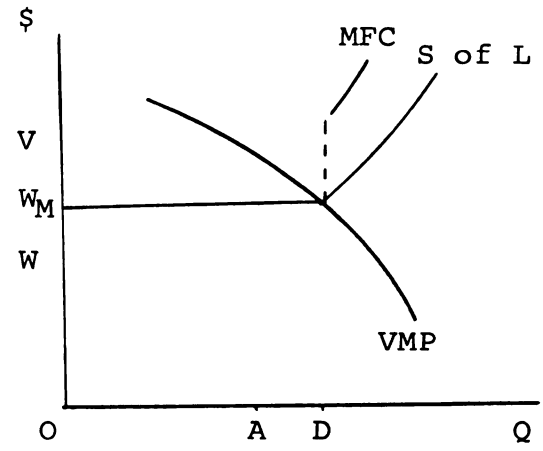
[50]Melvin W. Reder, Studies in the Theory of Welfare Economics (New York, N.Y.: Columbia University Press, 1947), p. 43.

GRAPH 2.--Correction of the monopsonistic case through minimum wage legislation



Another corrective measure in this situation might be to increase the mobility of workers. The result of this would be that this firm would no longer be the only buyer of the resource (in the expanded labor market) and would, thus, lose its monopsonistic advantage. The supply curve of labor under competitive labor conditions is a horizontal line. Thus the MFC and Supply of Labor curves would coincide throughout the relevant range.

The major point of this section is that the author realizes his proposal does not solve all the world's problems. Other actions and controls are necessary to correct for fallacies in the "invisible hand" theory, as the maximization of individual profit does not necessarily maximize social welfare.

The Increase in "Knowledge" Resulting from the Proposal

In economics the assumption of perfect knowledge is made in the case of perfect competition. While this stringent assumption is not present in other market situations, there is an implicit assumption that the more complete the extent of knowledge, the more efficiently will the economy operate. Maurice Moonitz wrote of the importance of knowledge of alternative investment opportunities as follows:

> It is not enough to compare performance (actual) with a budget (plan) as a means of control, unless we assume that the existing management group is the only one that can decide what to do with the resources under its control. But suppose that investors want to know whether to shift resources from autos, or chemicals, to electronics? How do they know that management's selection of the "best" plan is in actuality not to be improved upon in some other employment? . . .[51]

On this same point Richard Leftwich commented that "investors make mistakes when they lack knowledge of alternative investment opportunities throughout the economy."[52]

The proposal of this thesis provides for an economy-wide comparison of performances by corporations. The fact

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[51]Maurice Moonitz, "Should We Discard the Income Concept?," The Accounting Review, XXXVII (April, 1962), p. 180.

[52]Richard H. Leftwich, The Price System and Resource Allocation (New York, N.Y.: Holt, Rinehart and Winston, 1961), p. 330.

that statements are made comparable allows this system to work. It is also possible for an investor, by looking only at the statement of financial condition of one firm, to determine its effectiveness in relation to the average of other corporations in the economy. The author, therefore, believes that his proposal makes a real contribution toward improving "knowledge" in the economy.

Some Concluding Remarks

This chapter has attempted to show the relevance of the proposal to economic theory. The correlation of accounting and economics in any area of mutual interest is, at best, a difficult one. The most notable attempts which have been made to do this in the past have been by Irving Fisher and John Canning. Irving Fisher once stated that the book written by Canning was a much better one for this purpose than was his own.[53] Canning admitted his attempt was only a beginning but that he would make no apology for his attempt.[54] With these authors belittling their attempts at

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[53] Irving Fisher, "Is Appreciation Available for Dividends? -- General Comments," The Accounting Review, V (March, 1930), p. 55.

[54] Canning, op. cit., p. 331.

correlation, the present author feels no shame in admitting that his attempt may only contribute in some small way to the eventual narrowing of the gap which still exists between accounting and economics.

The author is convinced that the two fields will continually be drawn together, however. While it is agreed that both areas need improving, the author cannot help believing that the present state of accounting as practiced in the United States must be changed significantly if it is to serve the social function of which it is capable. Herbert F. Taggart in his remarks to Professor Paton's book, Accounting Theory, stated that "accounting is not merely a trade whose sole interest is in practice and expediency, but instead [it] is or should be founded on logic and a full appreciation of its responsibility as a guide to economic conduct."[55] It is in the spirit of this remark that this chapter has been included in the thesis.

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[55]Herbert F. Taggart, "Remarks," in Accounting Theory, William A. Paton (Chicago, Ill.: Accounting Studies Press, Ltd., 1962), p. 6.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The purpose of this chapter is to summarize the major contributions of the dissertation. Specific contributions which are elaborated below are -- increased comparability and completeness of financial statements leading to a more efficient allocation of funds, a rejuvenation of the position statements, a closer tie-in between financial statements, an aid in analysis for internal purposes, an extension of the Moonitz and Sprouse contribution, a more precise definition of assets, and a closer relationship between related disciplines.

A review of the reasoning which led to the basic proposal is first presented.

A Review of the Argument

In 1962, Professors Maurice Moonitz and Robert T. Sprouse co-authored a monograph entitled, A Tentative Set of Broad Accounting Principles for Business Enterprises.[1] They indicated that the principal task of accounting is to

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[1] Robert T. Sprouse and Maurice Moonitz, A Tentative Set of Broad Accounting Principles for Business Enterprises (New York, N. Y.: American Institute of Certified Public Accountants, 1962).

account for all of the assets and asset changes for particular economic entities. Whether or not presently used methods of accounting result in the accomplishment of this task depends on the definition of assets one chooses to adopt.

The most commonly used definitions of assets in accounting textbooks can be divided into two categories. The first defines assets as things of value owned. The other defines assets as unexpired costs awaiting assignment to the income stream. Neither of these seems to be completely satisfactory since the first category would not include things of value controlled (which have economic significance to the firm even though they are not owned), and the latter "deferred charge" definition conflicts with the commonly held view that assets are things of value rather than past costs.

Economists regard assets as being services, rather than "things" which are capable of providing services. From an economic point of view assets, resources, and factors of production are identical concepts and are thought to represent expected future services.

A synthesis of the accounting and economic views is possible. The method of grouping values and labeling them according to the agent or "thing" which will provide

the future services can be retained from accounting. The amount of valuation and the identification of additional assets can be retained from economics. The resulting definition of assets is as follows: Assets are scarce resources (defined as agents rather than services), assignable to the entity, capable of being transferred, and expressible in terms of money; which have been acquired as a result of some current or past transaction, and which have the apparent ability to render future economic benefits. This definition is substantially in agreement with the concept presented by Professors Sprouse and Moonitz.

It is contended that human resources are includable under the definition, and should therefore be given recognition in the financial statements. The presently constituted body of accounting theory does not indicate how this might be accomplished.

A revision of accounting theory so as to include the measurement of human resources should be made. Assets may be grouped into two major categories, identified assets and unidentified assets. Identified assets would include all scarce resources, legally or constructively owned by the entity, having a market value. Identified assets, therefore, could conceivably be used for the

payment of entity debts. Unidentified assets would consist of all other scarce resources under the control of the entity. This latter category is conceived of as representing the value of human resources in the entity.

Neither category would be intended to include items commonly referred to as deferred charges. Since these items are not resources in their present form (but only charges awaiting assignment to the income stream), they are not considered to be assets under the definition selected. Deferred charges would still be accorded a place on the balance sheet, however, and would be used in determining accounting income.

Besides showing deferred charges (at unexpired cost) on the balance sheet, identified assets, liabilities, and net worth would also be shown. Identified assets would be shown at their market values, and liabilities at the present value of their future cash outflows. This method of showing balance sheet values roughly conforms to the method recommended by Professors Sprouse and Moonitz. The main point of difference is that while Sprouse and Moonitz generally recommended the use of market values for assets, they deviated from this for specific assets. They would show inventories at net realizable value where determinable

and would only restate buildings, equipment, and land at specified intervals of "perhaps 5 years." Such deviations from the continuous use of economy-wide market values for all assets, however, would cause the financial statements of various firms to be less comparable.

The retained earnings shown on the balance sheet would be divided into two parts, one showing the portion pertaining to deferred charges and the other showing the portion free from deferred charges. This modification is necessitated by the fact that a statement of financial condition would be recommended as a separate statement (in addition to the balance sheet) and would not include deferred charges or the portion of retained earnings pertaining to them.

The statement of financial condition would show the same values for identified assets and liabilities as did the balance sheet. Although excluding the deferred charges and the portion of retained earnings pertaining to them, it would include the value of human resources and the resulting equity change. The statement of financial condition would be designed to show the worth of the enterprise to the absentee stockholder. The presently used "historical-cost" balance sheet does not do this and neither

would the balance sheet described above.

The major problem in presenting a statement of financial condition would be to place a "realistic" and somewhat "objective" valuation on human resources. From a strictly theoretical viewpoint it would seem that the valuation should be equal to the present value of expected future benefits that these resources will provide. From a practical viewpoint, however, this method is too imprecise since no one can foretell the future. As an alternative, the capitalization of past superior or inferior earnings should be used.

The question then becomes the number of past years to include in the actual computation. The author believes the best indication of the present existence of superior (or inferior) unidentified assets in a particular firm is that it earned a higher (or lower) than average rate of income on its identified assets for the most recent year. Although only one year would be included in the actual basic computation, investors could still examine the performances of previous years in an effort to determine the trend of effectiveness.

Only divergences from normal would be given recognition. The concept of valuation for human resources is

thus a relative one and is based on the following reasoning. If one can assume that all bases of identified assets and methods of computing accounting income are completely comparable among corporations in the economy, he could attribute the superior (or inferior) earnings on identified assets to the effectiveness of the human resources. Those which are above average in effectiveness increase the going-concern value of the enterprise above the apparent value of identified assets less liabilities. Those which are below average in effectiveness have the opposite effect.

The capitalization rate for firms to use in computing the values would be determined by dividing the total average value of identified assets of corporations into the total accounting income of these firms. Each firm would be asked to notify a central information-gathering agency as to the average value of its identified assets for the year and the amount of its accounting income. After an economy-wide rate had been determined, an announcement of the rate could be made. The rate would then be used by the individual firms in calculating the value of its unidentified assets or negative assets. (It is possible that only a sampling of firms would be necessary to approximate the economy rate.)

A system quite similar to the one presented here was one discussed by Professor William A. Paton for placing a value on unpurchased goodwill.[2] He decided against using the method for three main reasons. He claimed it would result in a uniform rate of earnings by all firms, it would represent a capitalization of the owners' own services, and that it would erroneously record assets which had not been paid for by the firm.

These objections can be met, however. The scheme would result in a uniform rate of earnings only if a rate of return were computed after the capitalization had been recognized. The proposal does not recommend this, but instead computes a rate of return before capitalization.

There has recently been a significant separation between ownership and management so that the method would not amount to recording the value of owners' services as assets. The system would only be used for corporations having a separation of ownership and management.

His last objection can be met by pointing out the fact that donated assets receive asset recognition at a positive value. This serves as a precedent for analogously

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[2]William A. Paton, Accounting Theory (Chicago, Ill.: Accounting Studies Press, Ltd., 1962), pp. 313-317.

treating human resources which have not been specifically paid for.

The proposal could be carried even one step further. By comparing statements of financial condition for two successive periods, it is possible to arrive at a figure which is very close to the Hicksian concept of economic income. (Adjustments would be necessary to correct for price level changes, stock transactions, and dividend transactions.) This possibility, however, is not part of the basic proposal.

The benefits which would result from an adoption of the basic proposal are the topic of the next section.

The Benefits Which Would Result from an Adoption of the Proposal

There are several specific benefits which would result from an adoption of the proposal. One such benefit is that investors would have more comparable and complete information concerning possible firms in which to invest. This should result in a more efficient allocation of funds. Funds would flow toward efficient human resources and away from inefficient human resources. Efficient and inefficient human resources would be identified more clearly than under present methods of reporting.

The author believes the lack of comparability, resulting from the preparation of financial statements under the commonly used methods of accounting, represents a serious flaw in the present state of accounting theory. Professors Moonitz and Sprouse have made a major contribution in attempting to correct this deficiency. The thesis aids in this task. It proposes a method for computing the value of unidentified positive or negative assets that depends upon the existence of comparable bases of identified assets and net income figures. The fact that currently used methods of accounting do not depend on the existence of comparability to this extent has, undoubtedly, been a factor in the lack of achievement of this goal.

It must be recalled that one of the ways in which the thesis achieves comparability is to record identified assets at their market values. It is likely that some will object that these are so elusive and difficult to determine that they should not be used. However, for some items (i.e., finished goods inventory) market value can be determined more objectively than can cost. Other items, such as fixed assets create more of a problem. It would seem, however, that comparability could still be achieved by making prices (at which these items change hands) and

appraisal values more generally known throughout the economy. Published price and appraisal lists may serve as the vehicle for increasing this type of "knowledge."

Another benefit is that the position statements would become more useful. Instead of having one position statement which attempts to serve both as a balance sheet and as a statement of financial condition, separate statements would be prepared.

The thesis carefully points out that not much faith can be placed in the conventional balance sheet as a statement of financial condition. The point was made that financial condition, from the absentee owner's point of view; is taken to mean the worth of the enterprise as a going concern. It was further established that worth includes not only identified assets but also unidentified assets or human resources. The statement of financial condition presented in the thesis conforms to the concept presented by Professor Kollaritsch[3] as being that which is ideal from the absentee owner's point of view.

If the proposal were adopted, the auditor, instead of stating that the balance sheet fairly presents the

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[3]Felix P. Kollaritsch, "Can the Balance Sheet Reveal Financial Position?," The Accounting Review, XXXV (July, 1960), p. 486.

financial condition of the entity (when he knows it really doesn't) would be able to indicate that the statement of financial condition serves this purpose.

There would also be a closer tie-in between financial statements. Investors could be more certain that all assets had been recorded because of this closer relationship between the position statements and the income statement.

The placing of human resources on the statement of financial condition would also aid in the analysis of the firm for internal purposes. Persons engaged in analyzing the firm for the owners should be interested in any part of the system which has an effect on its economic performance. One part generally ignored in financial analyses is the efficiency of the human resources. Yet, the human resources may well be the most important variable in the system. For instance, if the human resources could be identified as the independent variable in the system, it could be argued that the most important area of concern for financial analysis should be determining the make-up of, and reasons for changes in, the human resources.

The next section reviews additional contributions of this thesis.

Other Contributions of the Thesis

An Extension of the Moonitz and Sprouse Contribution

Professors Moonitz and Sprouse have recommended a drastic change from conventional accounting practices. In their monograph they have recommended that all assets and asset changes be recorded but have not shown how this might be accomplished (at least for human resources). This thesis shows specifically how this task might be accomplished. While there will be those who disagree with the method selected, at least the argument has been given and can serve as a starting point for those who believe some other method should be used.

The author believes that the Moonitz and Sprouse ideas will eventually be adopted. He hopes that his proposal will be viewed as a logical extension of the new concept.

A More Precise Definition of Assets

Accountants have been criticized for the impreciseness of their commonly used definitions of assets. The thesis concludes that not all items commonly listed on the

left-hand side of the balance sheet are really assets and that some assets are not recorded.

If the definition selected for use in the thesis were to be generally adopted, much of the confusion which currently exists as to the nature of assets would disappear.

A Closer Relationship Between "Related" Disciplines

Professor A. C. Littleton once wrote:

> Practice in the association of ideas helps us to make new combinations. New combinations will present a new pattern. In research today, after so many people have been searching for so long, it is difficult to be startlingly original. But give your mind a chance to receive many ideas. Some of them may associate themselves together, and when they do, they may present a different pattern. Then find out how new it is and what might be involved.[4]

This advice has been used by the author throughout the preparation of the thesis. He has continually attempted to associate ideas from accounting, finance, economics, and management. One of the main benefits of the thesis, therefore, is that it attempts to bring together disciplines which at times seem to drift apart. Below are discussed the ways in which these related disciplines are brought closer together.

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[4]A. C. Littleton, Essays on Accountancy (Urbana, Ill.: The University of Illinois Press, 1961), p. 587.

Accounting and Economics

In recent years much has been written on the differences which exist between accounting and economic concepts of income. The articles have generally pointed out the main differences and then have called for increased effort in the future to eliminate them. The thesis shows specifically how accounting financial statements could be used to arrive at economic income. By doing so, it aids in the task of bringing these two disciplines closer together.

Other economic implications are also discussed. For instance, a justification for not attempting to change accounting theory so that it completely implements the microeconomic theory of the firm is given. Microeconomic theory itself is in need of substantial revision. Eventually, however, it would seem that accounting should serve as the information system upon the basis of which microeconomic forces can be set in motion. The information system could serve to increase "knowledge" and thereby aid in maximizing the efficiency of the economy.

The two disciplines may also have been drawn closer together in the macroeconomics area. The proposal of the thesis by making financial statements more comparable (and

therefore more susceptible to statistical summation), and by using valuations which are closer to the economic concept, may represent a beginning toward the goal of being able to sum individual statements for national income accounting purposes.

Accounting and Finance

The author has shown that the "accounting" model he has devised (to promote an optimum allocation of funds in the economy) is analogous to a model commonly used in finance (to promote an optimum allocation of funds among capital projects within a firm). He has shown that differences in emphasis are necessitated by the differences in the decision-making situations.

These two disciplines seem to have been in disagreement recently as to the emphasis which should be placed on cash flows vs. earnings flows. The discussion in the thesis contends that it is proper that accounting concentrates more on earnings and that finance concentrates more on cash flows.

Accounting, in reporting to investors, is responsible for showing the amount which is legally available for dividends. Regardless of how large the cash flows are, dividends are restricted to the level of earnings. Since

unexpired costs effect future earnings the accountant cannot ignore them.

Finance is properly more concerned with cash flows. In the capital expenditure decision-making area, for instance, all relevant costs are in the future, therefore making past costs irrelevant. Future cash flows include all relevant revenues and expenses.

An understanding of the reasons for these and other differences in emphasis contributes to bringing the two disciplines closer together. The thesis aids in this effort.

Accounting and Management

A significant part of the management discipline is concerned with human resources. When asked what constitutes a firm's most valuable asset, many would indicate -- the human resources. Yet, the accountant has failed to give asset recognition to these resources.

The thesis, by recording the value of human resources also helps to draw these two disciplines close together. The accounting representation of the firm thus conforms more closely to the management concept of the firm. From a systems approach, human resources are probably the most important independent variable one could identify. The recording of human resources on the statement of financial

condition gives at least a starting point for the internal (as well as external) evaluation of the effectiveness of these resources.

General Comments

A fairly radical change in the method of accounting has been proposed in this thesis. A statement pertinent to the spirit in which the argument was presented was made by F. S. Bray when he commented that "the long-term future of any profession is influenced by its present encouragement of new points of view . . . professional institutions by the very nature of their constitutions are concerned to preserve well-tried and proven systems, but it must also be recognized that development depends upon the discovery and investigation of new ideas and new methods."[5]

The present author has benefited significantly from presenting his ideas and proposal for change. He only hopes that they may also make a contribution to the long-term betterment of accounting as a discipline and as a profession.

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[5]F. S. Bray, "Accounting Dynamics III," Accounting Research, VI (July, 1955), p. 267.

APPENDIX A

SOURCES IN WHICH NO SPECIFIC DEFINITION OF ASSETS WAS LOCATED

(Listed in Chronological Order)

1921	The Fundamentals of Accounting	Cole
1922	Advanced Accounting	Bennett
1923	Accounting Priciples	Bell
1923	Problems in Industrial Accounting	Sanders
1924	Management Through Accounts	Bliss
1925	How To Read a Financial Statement	Stockwell
1927	Advanced Accounting	Tinen
1928	Ratio Analysis of Financial Statements	Wall and Duning
1929	Problems in Accounting Principles	Walker
1930	C.P.A. Problems	Taylor and Miller
1930	Fundamentals of Auditing	Sherwood and Hornberger
1931	Corporate Accounting	Sunley and Pinkerton
1931	The Cultural Significance of Accounts	Scott
1931	Comprehensive Propositions in Accounting	Pace and Bryan
1933	Public Accounting Procedure	McGinley
1933	Intermediate Accounting	Taylor and Miller
1933	Financial Examinations	Thornton
1936	Stabilized Accounting	Sweeney
1936	Accounting (Part I)	Rowland and Magee
1937	Goodwill as a Business Asset	Seed
1938	Problems in Accounting	Hosmer
1938	Bookkeeping and Accounting	Rosenkampff and Wallace
1939	Truth in Accounting	MacNeal
1939	Advanced Accounting Problems	Kohler
1943	Integral Accounting	Sermon
1946	Intermediate Accounting	Johnson
1946	Modern Practical Accounting Practice (Advanced)	Saliers
1949	What's Behind a Financial Statement	Rankin

1950	Advanced Accounting	Newlove and Garner
1950	The Monthly Financial Statements	Staples
1950	Rowe Bookkeeping and Accounting Practice	Alexander
1950	Advanced Accounting	Holmes and Meier
1950	Preparation and Certification of Financial Statements	Greidinger
1950	Advanced Accounting	Yorston, Smyth and Brown
1952	Introduction to Group Accounts	Bogie
1952	Asset Accounting	Paton and Paton
1953	Internal Auditing	Smith
1953	Management Accounting	Wheeler
1955	Corporation Accounts and Statements	Paton and Paton
1958	Intermediate Accounting	Karrenbrock and Simons
1958	Principles of Accounting -- Intermediate	Finney and Miller
1958	Intermediate Accounting	Holmes, Maynard, Edwards and Meier

APPENDIX B

LISTING OF SOURCES CONTAINING VARIOUS DEFINITIONS OF ASSETS

Authors Defining Assets as "Things of Value Owned"

Artemas M. Bogle, Comprehensive Bookkeeping (London, England: The Macmillan Company, 1907), p. 139.

J. A. Lyons and Oliver S. Smith, Lyon's Bookkeeping and Accounting (New York, N. Y.: Lyons and Carnahan, 1920), p. 12.

S. Bernard Koopman and Roy B. Kester, Fundamentals of Accounting (New York, N. Y.: The Ronald Press Company, 1921), p. 22.

John Raymond Wildman, Principles of Accounting (New York, N. Y.: University Press, 1922), p. 8.

John R. Bangs, Jr., Industrial Accounting for Executives (New York, N. Y.: McGraw-Hill Book Company, Inc., 1930), p. 8.

Frank H. Streightoff, Advanced Accounting (New York, N. Y.: Harper & Brothers Publishers, 1932), p. 636.

Windsor A. Hosmer, Thomas H. Sanders, and Arthur W. Hanson, Problems in Accounting (New York, N. Y.: McGraw-Hill Book Company, Inc., 1934), p. 6.

Earl A. Saliers, How To Keep Accounts and Prepare Statements (New York, N. Y.: The Ronald Press Company, 1938), p. 9.

J. F. Sherwood and Clem Boling, Secretarial Accounting (Cincinnati, Ohio: South-Western Publishing Company, 1939), p. 15.

George R. Husband and Olin E. Thomas, Principles of Accounting (New York, N. Y.: Houghton Mifflin Company, 1939), p. 17.

Edwin L. Theiss and Jay L. Hunter, Practical Accounting (New York, N. Y.: McGraw-Hill Book Company, Inc., 1942), p. 9.

Richard E. Strahlem, Accounting Fundamentals (New York, N. Y.: The Ronald Press Company, 1942), p. 4.

Donald D. Kennedy, George R. Esterly, and William J. vonMinden, Introductory Accounting (New York, N. Y.: The Ronald Press Company, 1942), p. 45.

Howard S. Noble, Accounting Principles (Cincinnati, Ohio: South-Western Publishing Company, 1945), p. 15.

John N. Myer, Accounting Technique (New York, N. Y.: Published by the Author, 1948), p. 2.

Robert R. Milroy and Geoffrey L. Carmichael, Introduction to Accounting (Cambridge, Mass.: Houghton Mifflin Company, 1949), p. 2.

Paul A. Carlson, Hamden L. Forkner, and Alva Leroy Prickett, 20th Century Bookkeeping and Accounting (Chicago, Ill.: South-Western Publishing Company, 1952), p. 3.

Hugh J. Jackson, Elements of Accounting (New York, N. Y.: McGraw-Hill Book Company, Inc., 1952), p. 7.

John P. Powelson, Economic Accounting (New York, N. Y.: McGraw-Hill Book Company, Inc., 1955), p. 18.

William W. Pyle, Fundamental Accounting Principles (Homewood, Ill.: Richard D. Irwin, Inc., 1955), pp. 2-3.

Arthur W. Holmes, Gilbert P. Maynard, James Don Edwards, and Robert A. Meier, Elementary Accounting (Homewood, Ill.: Richard D. Irwin, Inc., 1956), p. 3.

H. A. Finney and Herbert E. Miller, Principles of Accounting (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1958), p. 4.

Authors Adding a Phrase to Include Amounts Owing to the Entity

Harry H. Wade, Fundamentals of Accounting (New York, N. Y.: John Wiley & Sons, Inc., 1934), p. 5.

Charles Reitell and Clarence Van Sickle, Accounting Principles for Engineers (New York, N. Y.: McGraw-Hill Book Company, Inc., 1936), p. 10.

Authors Not Specifically Mentioning That Assets Must Be Owned

James O. McKinsey, Bookkeeping and Accounting (Cincinnati, Ohio: South-Western Publishing Company, 1950), p. 8.

Saul Wolpert, Arthur Rosenkampff, and William C. Wallace, Introductory Course Bookeeping and Accounting (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1955), p. 7.

C. Aubrey Smith and Jim G. Ashburne, Financial and Administrative Accounting (New York, N. Y.: McGraw-Hill Book Company, Inc., 1960), p. 13.

Authors Contrasting Legal and Constructive Ownership

Arnold W. Johnson, Elementary Accounting (New York, N. Y.: Rinehart & Company, Inc., 1946), p. 9.

Perry Mason, George B. Stenberg, and William Niven, Elementary Accounting (Brooklyn, N. Y.: Foundation Press, Inc., 1951), p. 26.

J. F. Sherwood, Clem Boling, and A. B. Carson, College Acounting (Cincinnati, Ohio: South-Western Publishing Company, 1951), p. 10.

APPENDIX C

RULES TO FOLLOW UNDER EACH OF THE TWO TYPES OF BUDGETS

Financing Budget

If the company is using a "financing budget" all competing projects with a rate of return greater than the cost of capital should be accepted. Where mutually exclusive projects are involved, so that the selection of one project precludes the selection of any of the others in the group, that project which has the largest outlay but gives an incremental yield greater than the cost of capital should be selected. In this situation the project with the highest rate of return is not necessarily selected. An example may be helpful:

TABLE 8.--Computation of incremental rates of return

Mutually Exclusive Projects	Years t_o	Years t_1	Rate of Return	Marginal Gross Benefits	Incremental Rates of Returns
A	$-100	$125	25%	-	-
B	$-200	$242	21%	$117 (242-125)	17%
C	$-300	$351	17%	$109 (351-242)	9%

Table 8 shows data for three different mutually exclusive investment projects, only one of which can be accepted. The incremental cost of each is shown under the current year (t_o). The cash benefits to be received in the following year are shown under column t_1. It can be seen that Project A has the highest rate of return (25%). In computing the incremental rates of return it is necessary to arrange the projects in an order which starts with the lowest cost project and ends with the highest cost project. The extra cash benefits received by investing in a project as compared to the project immediately preceding it are shown in the fourth column. For instance, investing in Project B rather than in Project A would increase gross cash benefits by $117, while investing in Project C rather than in Project B would increase gross cash benefits by $109.

The incremental rate of return is computed by subtracting the marginal cash cost from the marginal cash benefits and dividing the result by the marginal cost. For instance:

Marginal cash benefits of investing in B rather than A	=	$117
Marginal cash cost of investing in B rather than A	=	100
Difference		$ 17

$$\text{Difference} = \frac{\$\ 17}{\text{Marginal cash cost}} = \frac{\$\ 17}{\$100} = 17\%$$

The rule to follow in maximizing profits is to select that project which gives the largest outlay but has an incremental yield greater than the cost of capital. For instance, if the cost of capital is 10%, Project B should be selected, since its incremental rate of return is greater than 10% while the incremental rate of return of the project immediately following is less than 10%. This can be seen from Table 9.

TABLE 9.--Computation of net profit assuming a 10% cost of capital

	A	B	C
Gross Profit From Each Project	$25	$42	$51
Less Cost of Capital (at 10%)	10	20	30
Net Profit From Each Project	$15	$22	$21

If, on the other hand, the cost of capital were 8%, Project C would be the most profitable as can be seen from Table 10.

TABLE 10.--Computation of net profit assuming an 8% cost of capital

	A	B	C
Gross Profit From Each Project	$25	$42	$51
Less Cost of Capital (at 8%)	8	16	24
Net Profit from Each Project	$17	$26	$27

If the cost of capital were above 17%, Project A should be accepted. It is worthwhile to always put more money to work rather than less if the incremental return is above the cost of capital and a financing budget is being used.

Rationing Budget

When a "rationing budget" is in use the "ground-rules" are different. The marginal approach for mutually exclusive projects does not necessarily hold. In this situation the regular rate of return rule for selecting the project with the highest "r" is equally unreliable. Therefore, a special rule is needed. To prove this statement the following facts shall be assumed:

TABLE 11.--Assumed data concerning available projects

Mutually Exclusive Projects	Years t_o	Years t_1	Rate of Return	Marginal Gross Benefits	Incremental Rate of Return
A	$-100	$125	25%	-	-
B	$-200	$242	21%	$117	17%
C	$-300	$351	17%	$109	9%
Competing Projects					
D	$-100	$128	28%		
E	$-100	$120	20%		
F	$-100	$120	20%		

It shall also be assumed that the cost of capital is 10% and that the total amount of the rationing budget is $300.

Table 12 shows the results of using the marginal rule as compared to the rate of return rule.

TABLE 12.--Comparison of the results of using the two different rules

Using the Marginal Rule				Using the Rate of Return Rule			
Projects Selected	Cost t_o	Returns t_1	Rate of Return	Projects Selected	Cost t_o	Returns t_1	Rate of Return
D	$-100	$128	28%	D	$-100	$128	28%
B	-200	242	21%	A	-100	125	25%
				E	-100	120	20%
	$-300	$370			$-300	$373	
Net Profit		$70		Net Profit		$73	

It can be seen from the above that the use of the marginal rule does not always result in the greatest net profit when a rationing budget is being used. Neither does the rate of return rule always result in the greatest net profit, however. If Projects E and F were assigned a yield of $116 or lower, the net profit from using the rate of return rule would have been lower than by using the marginal rule. ($69 or less versus $70).

A conclusion may be drawn that when a rationing budget is in use neither the marginal rule nor the rate of return rule is reliable for all cases. Therefore, the most profitable mutually exclusive project to select can only be determined by comparing the project which would be selected under the marginal rule with the combination of --

the mutually exclusive project with the highest rate of return plus the competing projects which could be accepted along with it due to the lower incremental investment involved. In the example above this would entail comparing Project B with Projects A and E.

Another problem which arises when using a rationing budget is which project to choose when the lives of the projects vary. The decision depends on the alternative investments which will be available when funds are released from the shortest project. Conceivably a project with a 20% return and a 15 year life would be preferable to one with a 25% return and a 5 year life, if management believes that available projects at the end of 5 years would only have yields of 10-15%.

The upper limit under the rationing budget is the total amount allotted for capital expenditures for the year. However, if projects are being continually approved throughout the year, a minimum acceptable rate equal to the average rate of return might insure that available funds are not all committed when some lucrative projects are proposed toward the end of the year.

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