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PROCEDURES VERSUS CURRENT COMMERCIAL
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The Louisiana State University and
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COMPENSATION FOR USE OF CAPITAL ASSETS DURING
PERIODS OF RAPID INFLATION: AN EVALUATION
OF DEPARTMENT OF DEFENSE PROCEDURES
VERSUS CURRENT COMMERCIAL PRACTICE

A Dissertation
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy
in
The Department of Accounting

by
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August 5, 1975
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ABSTRACT

This study developed out of the author's assignment as an Air Force Reserve officer to the Air Force Business Research Management Center.

Conforming to traditional accounting theory and practice, the Department of Defense (DOD) presently compensates its contractors for capital asset use via historical cost allocative depreciation methods. While fairly equitable in stable economic periods, this process increasingly loses significance and equity during rapid economic inflation.

Observing the accounting environment's increasing pressure to deviate from traditional methodology, and assuming resulting stimulation of asset revaluation, knowledge of this environment becomes essential to development of any alternative DOD asset revaluation system.

Accordingly, a questionnaire was addressed to two groups of controllers of major United States corporations to discern magnitude, direction, and recent response to inflation's effect on capital asset use recognition. The questionnaire also addressed itself to the semantic orientation of respondents, particularly to the terms "cost" and "profit" in connection with a communication problem encountered by the Air Force in attempting to introduce a "capital funding" compensation element as "profit" in Defense Procurement Circular (DPC) No. 107.
An equally important phase of the research was a study of the concept of capital asset use, current recognition of inflationary effects, and some semantic and philosophic considerations of "cost" versus "profit" in connection with DPC No. 107.

The questionnaire elicited a 54% response from one group (96 of the top 100 DOD contractors in fiscal 1973) and a 45% response from the other group (a random 100 of the Fortune Top 500).

Responses were computer analyzed for frequency and percentage relationships, and a chi-square analysis was performed for group answer congruity and detection of significant difference between answers to some questions for 1973-74, compared to prior time.

No significant differences in time period answers, nor significant differences between groups' answers were noted.

Some 11 queries were posed for consideration by the 30 questions in the questionnaire, and responses to these were combined with the other phases of the research to reach four major conclusions to the study as outlined below.

There is a critical lack of pragmatic capital asset revaluation experience in the United States. The majority of respondents indicated no historical cost adjustment and the few deviations were generally in the form of a "professionally safe" general price level type.

As indicated by the questionnaire response pattern and the intensive research of the authoritative professional bodies, development of an adequate capital asset use revaluation process is critical to the United States and DOD. The SEC is requiring replacement cost reporting on inventories and fixed assets, and a large
percentage of respondents indicated they would "enthusiastically welcome" government sponsored revaluation for taxes and contracting.

Replacement cost is both highly desirable as a value surrogate, and its use feasible in a DOD pragmatic capital asset revaluation system. It is most directly related to a measure of economic sacrifice and has been widely utilized by appraisers. As stated previously, the SEC is requiring a rudimentary generation of replacement cost figures on inventories and fixed assets, and finally the Netherlands' Philips Company has demonstrated ample proof of its pragmatic feasibility by operating a replacement cost system efficiently and effectively on a world-wide basis for a number of years.

The final conclusion is that the new "imputed interest" concept for compensating DOD contractors should be labeled neither "cost" nor "profit", but rather it should be introduced at the operational level as a completely different new concept and adequate orientation should be given in the introduction to the underlying economic nature of the concept.
CHAPTER I

INTRODUCTION

In 1973 the United States Air Force created a new unit designated the Air Force Business Research Management Center, and charged it with the responsibility of coordinating Air Force research in the areas of defense procurement and improvement of general business practices.

The reserve officers selected for initial staffing were each offered research topics from a comprehensive list compiled by AFBRMC. I selected the general topic of "Inflation", and the sub-project "Determining What Methods are Employed by Civilian Contractors to Contract in the Economy Characterized by Rapid Price Escalation". The general and sub-topics were further refined into the working definition outlined as the title of this dissertation.

BACKGROUND

Allocation Versus Valuation

The traditional approach of accountants of initially recording assets at total acquisition cost has seldom been questioned. This procedure is objective, verifiable, and adheres to internal consistency in record maintenance.

However, the measurement of asset utility diminution has been one of the more controversial areas of accounting theory. Since it
first reared its fuzzy head, following the demise of single venture accounting, this problem has occupied the minds of both academicians and practicing accountants. Uncertainties in such areas as asset useful life and salvage value are further compounded with the passage of time by an ever widening gap between historical cost of an asset and most measures of its current value.

Accounting theorists have proposed various solutions to deal with this problem of asset valuation on the balance sheet and its consequent effect on the income statement, including periodic revaluations via a general price index.

Enthusiasm for the revaluation of assets in terms of current value, along with its pneumatic effect on stock market prices, led to the sad experience of the 1920's when "appraisal surplus" became a synonym for unreliable subjectivity. Practicing accountants sought refuge from a deluge of criticism by reinforcing the principle of historical cost and the related concept of depreciation as an allocation rather than a valuation process. Thus, for hard, practical considerations, the concepts of historical cost and depreciation via a "rational" allocation method are deeply rooted in both financial and income tax accounting theory and practice.

Department of Defense/Internal Revenue Service Procedures' Conformity to Generally Accepted Accounting Principles

Conforming to the pattern of "generally accepted accounting principles", the Department of Defense (DOD) has traditionally utilized Internal Revenue Service-approved methods of depreciation as
a basis for reimbursing civilian contractors for use of their capital assets in negotiated defense procurement.

That the basic tax collection philosophy of the Internal Revenue Service and the contracting philosophy of the Department of Defense should be widely divergent could be perhaps summed up in the old adage that "taxation and equity are seldom the best of friends." As Ross points out, "The most deeply cherished conviction of the tax collector is a strong faith in the taxpayer's ability to look after himself. Thus the collector's principal concern is to prevent income from being understated."^1

While it is true that a basic premise of DOD procurement activities is the acquisition of goods and services at the lowest possible cost consistent with required quality and quantity, this premise is conditioned by a host of other socio-economic policy considerations. Among these are labor law, pricing, "buy American", Small Business Administration, non-discrimination, and patent policies. With the exception of "off-the-shelf" purchases on the open market, a guiding light in DOD procurement is equitable treatment of the contractors it deals with. To quote from The Procurement Function:

The government has a conscience. It has no intention of dealing with its contractors as firms in the commercial world deal with each other, where one's loss is another's

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gain . . . We are in some cases extremely severe, but always scrupulously fair, always impartial.2

While generally accepted accounting principle dictated allocation methods of depreciation are theoretically geared to "fair" presentation of financial position and operating results, they are not used as the basis of managerial decisions concerning the assets, except for consideration of their income tax effect. To imply then that these methods of depreciation should serve as a basis for "equitable" compensation of contractors seems to be theoretically a contradiction in terms, since the methods are by definition "allocation" and not "valuation" processes.

In practice, during periods of relatively moderate economic fluctuations, or of slowly rising inflation, the assumption of a "constant dollar" and the related use of allocation depreciation methods have not created tremendous difficulty or inequity in the governmental contracting process. While theoretical objections have been recognized, both government and contractor have been generally satisfied to let historical cost and allocation methods of depreciation serve as a basis for capital asset use compensation, while concentrating negotiation efforts on various other elements of the "profit formula".

Current Recognition of the Effect of Inflation on Capital Asset Use

Compensation

In periods of rapidly escalating inflation, historical cost/allocation methods of depreciation obviously do not generally serve as an adequate basis for leaving the contractor "whole" after government-caused diminution of capital asset utility. This has been recognized by the Tax Court in two renegotiation cases involving Boeing and North American aircraft companies, where the Court set aside historical cost less accumulated depreciation in favor of "fair market value" as a determinant of asset basis.

The Internal Revenue Service has hardly shied away from application of the term "fair market value" in such areas as taxability of asset exchanges, employee compensation via asset receipt, constructive dividend receipt via sales of corporate assets to stockholders at less than "fair market value", etc.

The Cost Accounting Standards Board has also recognized the validity of this problem by authorizing a staff research project related to appropriate recognition of cost of contractor capital in performance of negotiated defense contracts. This project appears to be a much broader study than the project I propose, and apparently couches "capital" in the much less restrictive sense of assets in relation to debt, stock, and retained earnings. The emphasis in this study appears to be on the "economic cost" of capital asset acquisition in terms of payment required to various factors in order to acquire the necessary funds for capital asset acquisition. Risk analysis also will be a major consideration of this study. The appropriateness
and feasibility of developing a possible cost accounting standard dealing with this general subject is also being studied by the CASB.

Two additional factors lend impetus to the Air Force's interest in this problem. The Air Force does not regard itself as a price maker, but rather a price taker in economic terms; hence, the increased competition for resources in a rapidly escalating economy will demand competitive negotiation practices in order to effect necessary procurement. In addition, the Department of Defense has made known its intention of divesting itself of as much ownership of capital assets as possible, and of minimizing further acquisition. This should translate into increased pressure to recognize economically-adjusted costs of contractor-owned capital assets as a bona fide subject for contract negotiation.

While the purpose of this study is to examine current practices in dealing with inflationary effects on capital asset use compensation in the United States, the experience of other countries in coping with this problem on a practical basis should not be overlooked.

A review of practices of Latin American countries plagued by high rates of inflation at various times since 1950 revealed allowable procedures ranging from optional revaluation of capital assets in Mexico to mandatory annual revaluation of land and buildings in Columbia.³ Revaluation procedures have been geared to such diverse

factors as one-time currency devaluations, fluctuations in exchange rates between indigenous currency and the U.S. dollar, cost of living indexes, and appraisals.

It is interesting to note that apparently in cases where asset revaluation is optional, there has been a reluctance to exercise the option due to attendant tax increases in the form of either one-time assessments based on the capital increase, or recurring annual increased taxes similar to a state corporate franchise tax on capital balances.

The concept of explicit inflation recognition via adjusted "cost" reimbursement versus implicit recognition via "profit" charges (a problem peculiar to governmental contracting) is also incorporated into this study.

Another example of problems encountered would be the violent controversy in Mexico surrounding utilization of depreciation charges based on revalued asset accounts as a factor in labor wage negotiations.

It appears that regardless of a Latin American government's willingness to allow revaluation of capital assets, there has been little inclination to veer from arbitrarily determined allocation procedures. A general tendency is to allow only straight line depreciation at relatively modest annual rates set "across the board" for various categories of assets. This may be the "fairest" alternative in developing economies where, as Bryce puts it,
businessmen often "pride themselves upon devious methods of book-keeping so they can evade taxes."\(^4\) Arnett would also argue that intangible concepts such as "fairness" (hence perhaps "equity" in government contracting) cannot be measured, and that being "fair" implies mainly utilizing methods in accordance with the sometimes arbitrary "rules of the game".\(^5\)

It is debatable whether this sort of logic should apply to government contracting in an environment characterized by adequate disclosure, cost accounting standards determined by an authoritative, informed body, and a general willingness to negotiate on the part of all parties concerned.

A recent charge by Senator Proxmire that DOD contractors utilize accelerated depreciation methods to recoup costs rapidly from the government on assets that are retained in service, and later used for non-government production, points up the problem of justifying allocation procedures to diverse interests.

The problem of how to treat assets which have previously been fully depreciated in non-government contracts also is troublesome.

Donated assets may presently be capitalized (and hence their use compensated) at "fair" value at time of receipt. Defense Procurement Circular No. 111, which provides guidelines for asset capitalization, does not elaborate on how "fair" value is determined.


The magnitude of the problems involved in administering capital asset compensation utilizing methods based on "objective", "verifiable" historical cost is tremendous. How much more difficult it would be to utilize economically adjusted asset bases is obvious. The other side of the coin is the idea expressed by George May that there is "no promise to forsake all others and cleave unto cost on the part of accounting."  

Accounting has traditionally chosen the virtues of objectivity and verifiability over the siren call of "current value"; primarily, I believe, because the risks of subjectivity were not outweighed by a monumental difference between historical cost and current value. Without arguing the relative merits of the inductive approach here, it is obvious that accounting has generally regarded theory as the handmaiden of practice.

We have prided ourselves on being a "pragmatic" discipline, but perhaps have misinterpreted the meaning of pragmatism to imply equivalency to current practice, and not what current practice is capable of doing.

Prince discusses nine characteristics of pragmatism, three of which I believe have direct relevance to the present situation in asset revaluation:

(1) All of life is engaged in continuous change or evolution. In other words everything is in a transitional setting.

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(2) Furthermore, one needs to know the past history, the present, and some estimation of the future direction of an object or aspect of life. It is necessary to simultaneously recognize the impact of these three statements—the total transition of life, the interaction of the object with the environment, and the particular transition that a given object or aspect is experiencing.

(3) All understanding—all intelligence—is relative to the present degree of development in the areas of observation and measurement. Therefore, as new insights are made in observation and measurement, it is necessary to modify certain current theories.7

To paraphrase the celebrated George Bernard Shaw/G.K. Chesterton exchange regarding Christianity, I believe asset revaluation has not been tried and found wanting, but rather that asset revaluation has been found to be difficult, and not really tried.

Ross would apparently agree with this idea, and outlines the experience of the Imperial Tobacco Company of Canada, Limited to illustrate the idea that problems which appear almost insoluble in theory often give way to relatively easy solution in practice. Imperial Tobacco began in 1961 to formulate its financial statements utilizing fixed assets at current values and has continued to do so through the present time. According to Ross, the final result has "stood up to the scrutiny of the financial community."8 Realizing that "one swallow does not a summer make", I believe there is much validity in the assumption that accounting can and will develop acceptable means of providing for the recognition of economic inflation's effect on capital asset bases.

As a final example of an accounting response to inflationary effects in prior times, the development of the Lifo method of inventory valuation might be cited. Regardless of the theoretical objections to Lifo and its unrealistic effect on the balance sheet, it has survived wars, recessions, and political change. It has provided a workable alternative to alleviate recognition of inflated gross profit in inflationary periods. While the logistical mechanics of asset revaluation would have to be much more sophisticated than those of the Lifo method, I do not believe they are beyond the capabilities of accounting--given the proper motivation and freedom from historical constraints.

Whether the Department of Defense should proceed with attempts to develop an asset revaluation system which flies in the face of generally accepted accounting principles, historical cost, and conservative balance sheet presentation, is obviously an incendiary question, particularly in light of the constant fear on the part of many accountants that accounting by government flat is just around the corner.

My own feeling is that this might be an ideal environment to test and develop an asset revaluation process, given the competitive interplay of contractor and government purchaser, and the assumption that the resulting process is designed to facilitate equitable capital asset use compensation, and not to dictate general acceptance by the accounting profession.

When, and if, revaluation of assets for the purpose of reported income determination becomes a necessity in this country due
to effects of inflation, the lessons learned in capital asset revaluation for contractor compensation could be invaluable.

A philosophy which has served long and well is not lightly cast aside, but that idea will comfort us little if we have relied on a "Maginot Line" of historical cost, and suddenly find ourselves engulfed by a rapidly rising sea of current values which renders cost absurd as a basis for transacting business or reporting effects of those transactions.

"Cost" Versus "Profit"

Defense Procurement Circular 107 procedures, available to DOD contractors since December 11, 1972, provide for an equal consideration of weighted guideline procedures and capital utilization in contractor profit negotiation.

While this was an attempt primarily to provide contractor relief in the form of recognizing increased funding costs in capital asset acquisition via allowing a profit element calculated on capital utilized, a recent survey indicated that less than one percent of contracts let during this period have taken advantage of the revised procedures.

Contractors have been reluctant to acknowledge compensation for capital asset use as an element of "profit" as opposed to "cost". The concept of "profit" in negotiated reimbursement type contracts appears to be much more volatile and amenable to subject ve interpretation than is "cost", hence the natural reluctance on the part of DOD contractors to shift a compensation element away from the category of "cost" and into the category of "profit". This reluctance
by contractors to utilize a beneficial provision because of the "label" attached to the compensation, points up a nearly universal tendency of human beings to confuse a symbol and the thing or idea for which it stands.

Hayakawa would distinguish between the "intensional" meaning of a word—that which is connoted inside an individual's head, and its "extensional" meaning—that which it points to in the real world. He also points out the human tendency to seek imprisonment of reality in our description of it. According to him this leads to symbol worship and "categories we once evolved, and which were the tools we used in our intercourse with reality, become hopelessly blunted."10

He notes that "society regards as 'true' those classifications that achieve desired results", and as a result of this we tend to become "two-value oriented", viewing things in an either/or context.11 Since interest paid on funds to acquire capital assets has not traditionally been capitalized nor included in a classic categorization of manufacturing overhead, it does not fit into the historical concept of "cost" of capital assets; but yet to imply that a compensation element based on capital utilized should be categorized as "profit" clearly made the contractors uncomfortable.

An extensional orientation on the part of the contractors would have perhaps led to a recognition that this beneficial

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10Ibid., p. 169.

11Ibid., pp. 223-233.
procedure need not necessarily be circumscribed by either of the
intensionally oriented concepts of "profit" or "cost". One of the
areas I intend to cover in my study of capital asset compensation is
the tendency to classify procedures and ideas into two-valued systems
which foster the concept of "symbol worship". I believe part of the
rigidity and reluctance to allow imaginative deviations from historical
cost is due to this tendency.

DELINEATION OF THE PROBLEM

This study addresses itself to the problem of discerning,
for two separate groups, the magnitude, direction, and type of recent
response to the effect of inflation on capital asset use compensation.
As an additional consideration, the idea that "two-valued" orientation
has hindered our attempts to deal with problems such as asset
revaluation will also be explored.

The two groups were comprised of one selected from among the
index of 100 companies which received the largest dollar volume of
military prime contract awards in fiscal year 1973, and the other
from among Fortune magazine's list of top 500 U. S. corporations,
excluding any corporations in the first group.

The meaning of the term "capital asset" as used throughout
this study is defined to conform to Defense Procurement Circular
No. III; i.e., assets have have physical substance, more than
minimal value, and are expected to be held by an enterprise for
continued use or possession beyond the current accounting period for
the services they yield. This would include an original complement of
low cost equipment items whose individual cost might not warrant capitalization, but whose aggregate cost represents a material investment.¹²

The term "compensation" as used above is intended to imply internal calculations for corporate management to indicate in current dollars what it would take to make the corporation "whole" again after production-caused diminution of asset utility.

The study is not aimed at reporting for external users via "generally accepted accounting principles", although asset revaluation attempts in this area are explored via a review of related bibliographic material.

RESEARCH METHODOLOGY

The methodologic approach to the study was divided into three related phases.

The first phase encompassed an extensive examination of literature and compiling of a related bibliography. Sources for this material included the Defense Documentation Center; Cameron Station Virginia; Defense Logistics Studies Information Exchange, Fort Lee, Virginia; Legal Information through Electronics (LITE) system, HQ USAF/JASL, Denver, Colorado; Nicholls State University Library; LSU Baton Rouge Library; and the Air Force Institute of Technology Library, Wright-Patterson Air Force Base, Ohio.

This examination provided information for examination and discussion of the concepts of capital asset use compensation, current asset valuation, environment and the human tendency to polarize concepts such as "cost" and "profit" to the detriment of solving practical problems. This phase also provided assistance in delineating the concepts and related questions to be included on the questionnaire.

The second phase encompassed the design, evaluation, and mailing of the questionnaire, including one follow-up mailing to non-responders. The questionnaire was addressed to the controller or his equivalent of 196 major United States corporations. One group was comprised of 96 of the top 100 defense contractors, and the other group of 100 chosen at random from the Fortune Top 500 less any included in the first group. The questionnaire contained 30 short, easily-answered questions designed to furnish some measure of response to the problem of compensation for capital asset use; whether this response, if any, has been in the direction of asset revaluation or alternative procedures, and what computational devices (i.e., indexes, appraisals, etc.) were utilized. In addition some of the questions were designed to test willingness to deviate from intensional conceptions of the terms "cost" and "profit" in dealing with the element of capital asset use compensation.

The third phase involved collection and grouping of the data furnished by the questionnaire, and analyzing them via measures of frequency and dispersion, in order to draw some conclusions about the magnitude and type of response to inflationary effects.
In addition, some tentative conclusions were reached relative to the extensional versus intensional orientation of responders, in relation to the terms "profit" and "cost".

The logic involved in this approach is obviously primarily inductive, and perhaps I could be accused of once again forcing theory into the involuntary servitude of practice. I believe capital asset revaluation in practice has been actively discouraged in this country due to the negative effects of "generally accepted accounting principles", the related requirement that income tax depreciation procedures adhere to historical cost, and the crushing by the Securities and Exchange Commission of abortive attempts at asset revaluation as it did in 1947 by rejecting initial statements of E. I. dePont de Nemours and Company, and United States Steel Corporation, which utilized depreciation departing from historical cost concepts.\(^{13}\)

Much has been written about various theories of asset revaluation utilizing a deductive approach, but little opportunity has been afforded for observing these theories in practical application in this country.

CONTRIBUTION OF THE STUDY

The assumption that the last 18 to 24 months of escalating economic inflation in the United States has forced a grappling with

the problem of capital asset use compensation upon American industry is inherent in this study.

This study is an attempt to chronicle the reactions to this problem on the part of two groups— one heavily oriented to defense-type production, and the other not primarily defense oriented.

A related aspect is hopefully some initial insight into communications problems caused by intensional orientation and "symbol worship", which complicate efforts at practical solutions to problems involving concepts such as "cost" and "profit".

Hopefully, the study will aid in stimulating further research in the area of qualitatively evaluating various procedures employed in practice to calculate capital asset use compensation.

While the study is not aimed at "generally accepted accounting principles", or financial reporting for external users, it is obvious that this area will be under increasing pressure to provide for asset revaluation in the face of rapidly escalating inflation. Insight gained in confronting this problem on a practical basis via DOD contractor capital asset use compensation could prove valuable in stimulating research on "generally accepted accounting principle" oriented asset revaluation.

SCOPE AND LIMITATIONS OF THE STUDY

The study does not purport to be a quantitative evaluation of efficacy of various methods of calculating capital asset use valuation. It is an attempt to initially assess by magnitude and type the response to economic inflation's effect on capital asset use valuation for purpose of initial analysis and presentation of trends. In addition
the scope of the analysis dealing with the communications problem of extensional versus intensional orientation is limited to a relatively small portion of the study dealing primarily with willingness to depart from intensional concepts of "cost" and "profit".

The limitation of the two groups to those which were included in first, the "Fortune 500", and secondly, the index of 100 companies which received largest prime military contract awards excluded some companies which may have developed unique innovative responses to the problem studied, including some which are primarily defense oriented, but whose total dollar volume of production does not qualify them for either group.

Because of the limitations imposed by "generally accepted accounting principles" on external reporting, the study was primarily geared to assessment of internal procedures for management information, but conversely, the freedom from conformity to "generally accepted accounting principles" should have encouraged innovative attempts at capital asset use compensation analysis.
CHAPTER II

THE CONCEPT OF CAPITAL ASSET USE

The concept of periodicity in income measurement could probably be labeled as the "father of most accounting difficulties." Efforts of the accountant to segment revenues and expenses into time periods have led to a realization that certain assets were basically short-lived creatures which were given birth, performed their economic functions, and then rapidly departed, while others came into the entity and remained to perform their economic functions for extended periods of time. Acquisition costs of the latter group have been labeled "capital" expenditures, as opposed to "revenue" expenditures whose economic benefits are generally considered not to extend beyond the current accounting period.

This chapter examines the historical development of the concept of capital assets and formulates an understanding of the methods employed traditionally to recognize capital asset use in the financial statements of business enterprises. The related concept of "cost of capital" is also examined and compared to traditional methods of capital asset use recognition. Finally, the methodology employed by the Department of Defense in recognizing capital asset use for purposes of compensating contractors in cost reimbursement type contracts is examined with a corresponding look at the recent depreciation standard formulated by the Cost Accounting Standards Board.
HISTORICAL DEVELOPMENT AND DEFINITION

The realization that certain assets were long-lived and performed their economic functions over an extended period of time apparently took place centuries before realistic attempts were made by accountants to recognize a decline in the utility of these assets in financial statements.

Peloubet outlines a printing company partnership trial balance dated April 26, 1565 in which "Fixed Assets" consisting of presses, types, books and manuscripts, fixtures, and foundry are segregated from "Tangible Assets" consisting of raw materials (paper), books in process of printing, printed books in stock, and receivables.¹

Apparently there was very little impetus to consider any recognition of use of these "Fixed Assets", other than by including them in the list of things owned by the business entity. The trial balance was prepared one and one-half years after the firm's formation and its baroque date gives mute testimony to the absence of periodicity as an important concept in sixteenth century financial reporting.

The nature of business ventures at that time did not generally embody an assumption of continued life or a requirement to delineate between permanent capital and periodic income. The typical business venture was organized for a specific purpose and a limited time. At the conclusion of the venture the proceeds of liquidation

were distributed without any theoretical division between capital and income.

Separation of ownership and management was not yet a general condition, and theoretical problems such as deception of stockholders via capital distributions disguised as dividends had not begun yet to plague the accountant. Literature in the field of accounting at that time was primarily descriptive and procedure oriented with little consideration of theoretical concepts.

In 1494 Fra Luca Paciolo, often labeled the "Father of Accounting", published his *Summa De Arithmetica, Geometria, Proportioni Et Proportionalita*, containing the celebrated treatise on bookkeeping, "De Computis et Scripturis".\(^2\) This document has been generally recognized as the single most influential publication in accounting's early development, and indeed much of the overall process described by Paciolo remains virtually unchanged today. Paciolo outlines detailed instructions on asset recording procedures but does not venture into a discussion of the theoretical nature of various assets.

Accounting has traditionally developed in response to perceived needs of business and society. The perceived needs of the businessman at that time were apparently oriented toward a system of ordering things owned and things owed, without any great compulsion to analyze changes in these categories and segment their effects into time periods.

The descriptive and stewardship aspects of accounting were geared to recognition and recording of external transactions via a double entry system. It was obvious that with the passage of sufficient time any asset would either lose its utility to the business entity or be sold or traded, but more often than not, long lived assets outlasted the business venture.

The concept of periodic determination of net income in an ongoing business entity, with all its inherent theoretical controversy, did not even cloud the horizon of accountants in Paciolo's time. As Professor Littleton points out, the desire to determine net income carefully and its related necessity to distinguish between capital and revenue expenditures did not trouble Paciolo and his contemporaries at all—nor should they have.  

Little in the way of original thought about the theoretical nature of assets was generated in the period from the publication of Paciolo's treatise until the 1830's. As James Winjun points out in his article "Accounting in its Age of Stagnation", the prime function of any accounting system was not to provide information, but rather to provide order.  

The industrial revolution and development of the great trading companies eventually gave rise to the necessity for making a distinction between capital and revenue expenditures.

In the 17th century the great trading companies began a gradual transition from joint venture operations, terminable after

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each voyage, to more permanent organizations which carried over unliquidated balances to subsequent voyages. East India Company began subscribing capital for four-year periods in 1613, and in 1657 was granted a charter which provided for permanently invested capital. There began to occur a comparison of changes in balances to determine profits, and along with this dawned the difficulty of discerning "true" profit separately from permanent capital.

In earlier times all assets were sold at the end of a trading venture including those which might have been categorized as "fixed". The creation of permanently invested capital simultaneously created the problem of dealing with valuation of those assets which remained unliquidated at the end of each venture, since they were no longer to be objectively converted into cash. The problem was resolved apparently, at least in the case of the trading companies, by estimating the amounts the unliquidated assets might have realized, had they been sold.

Apparently the creation of permanently invested capital did not eliminate substantial changes in the composition of proprietorship interests with the completion of each successive venture. The realizable value of capital assets thus probably had a strong influence on stock prices at completion time of each successive venture.

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The inverse of this relationship (i.e., the concept that rising stock prices should be translated into justification for increases in asset values) helped lead to disastrous asset overvaluations in the United States in the 1920's.

While this approach of periodic capital asset revaluation based on estimated net realizable value may have served as an interim solution for trade oriented companies of that era, it was not a viable alternative to the developing manufacturers and merchants who did not measure entity activity primarily in terms of completed ventures or voyages.

Their concern was with the problem of recognizing the use of capital assets on a continual basis and assigning a value to the use of these assets for the purpose of assessing costs of products sold or services rendered. As early as 1832 Charles Babbage advocated the calculating and reporting of depreciation on capital assets as a critical procedure in accounting for manufacturers.7

It became apparent that industrial production and its ancillary activities in the areas of finance, insurance, sales, etc. were going to require the subscription of large amounts of capital assigned to a form of business entity not subject to the vagaries affecting single venture entities. Thus the corporate form with its attributes of limited liability, ease of ownership transference, and continuity of existence gave birth to the accounting concept of the "going concern."

7Peloubet, op. cit., p. 12.
The concept assumes that, in the absence of evidence to the contrary, the business will continue in existence for at least the foreseeable future. Consequently, realizable value of assets that are to be retained in the business entity and used is overlooked in favor of value established by amortizing asset acquisition costs over their estimated useful lives in some rational manner.

Once the concept of a distinction between capital assets and revenue expenditures developed, it ushered in a continuing theoretical controversy over the dual problem of placing a value on the capital asset itself and the methodology of allocating that value to periodic income determinations.

Both problems will be examined in detail in later sections of this chapter and this section concludes by offering its definition of the term "capital asset" as utilized in the research questionnaire. The definition is consistent with that of a "tangible capital asset" in section 404.30(a)(4) of Defense Procurement Circular No. 111 dated June 6, 1973 and is meant to include only tangible assets as they are the area of primary concern in this dissertation.

A capital asset is defined as one which has physical substance, more than minimal value, and is expected to be held by an enterprise for continued use or possession beyond the current accounting period for the services it yields.

COST OF CAPITAL AND CAPITAL ASSET COST

The concept of cost of capital is generally considered to be more related to economic determinations of income as opposed to the
concept of capital asset cost which is usually considered to be oriented to accounting convention.

The word "cost" is common to both terms and Solomons would argue that there really is only one bona fide set of concepts, and that theoretically no conflict should exist between the precepts of economics and accounting. He further speculates that in cases of apparent conflict, an examination of the suspect accounting concept will usually reveal it to be flawed.8

While not necessarily agreeing with Solomons' idea that in an apparent inconsistency between economics and accounting, the accounting position will reveal deficiencies upon examination, it is worthwhile to consider the interaction of the two disciplines.

Economists are allowed the luxury of theoretical speculation without the constant necessity to demonstrate pragmatic results. Accountants conversely must deal daily with the problem of translating both obvious and subtle changes in the business entity's attributes into an informational format.

In order to imbue this informational format with some measure of consistency for purposes of comparison, the accountant leans occasionally in the direction of the practically measurable at the expense of the theoretically more desirable.

Additional consideration should also be given to the diverse roles an accountant is called upon to play. In his role as advisor to management on capital and investment decisions, he slips

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comfortably into the use of concepts such as opportunity cost, sunk cost, incremental cost, avoidable cost, controllable cost, marginal cost, etc. At the same time he realizes that these concepts often require him to venture beyond the latitudes allowed him under "generally accepted accounting principles."

Here the ultimate criterion is utility and preciseness of mechanical measurement technique is not regarded as the cardinal virtue, if it is achieved at the expense of informational content.

His role as reporter of entity activity to outside interests requires more formality and adherence to reporting convention, in order to avoid anarchy in reporting techniques. In this role the dual criteria of "objectivity" and "verifiability" govern his approach, giving rise to the accusation that he sometimes chooses to be "precisely wrong" rather than "approximately right."

Another accusation sometimes justly leveled at the accountant is that the apparent crispness of his computational and reporting techniques often lend an air of preciseness to his work that is not at all warranted in view of the assumptions and estimations underlying his work.

No discipline exacts perfection of its adherents and accounting is no exception to this rule. The accountant appears to be as able as the economist in utilizing economics flavored managerial analysis techniques for decision making purposes, but in exercising his reporting functions he recognizes the danger to consistency and comparability in embracing subjective measurements not geared to fairly universal criteria.
In any role as pragmatic intermediary between government and contractor the accountant will, I believe, be operating primarily in the environment of his reportive function. The prime requirement of equitable administration of contractor capital asset compensation will severely restrict the ability of the accountant to subjectively pursue the ethereal concept of cost of capital.

With the exception of the communication problems encountered in Defense Procurement Circular No. 107, as discussed in Chapter IV, the thrust of this dissertation will be toward considering the effects of inflation on capital asset cost and not on cost of capital. However, in order to distinguish between the two concepts and to delineate the connotation given capital asset cost in this dissertation, both topics are explored here.

The economic concept of cost of capital is related to a measurement of the sacrifice necessary to acquire investment necessary for entity operations. It ties investment acquisition to the various means of funding and speaks not only to actual payments for investment acquisition, but also to the economic concept of foregone alternative opportunities inherent in choosing one financing method over another.

Van Horne points out the widespread differences of opinion as to how this cost should be measured and it is beyond the scope of this dissertation to evaluate possible measurement methods in detail.9

Funding sources are divided between debt and equity, and costs of capital are explicitly recognized via dividend and interest

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calculations. Implicit recognition is given to opportunity costs created by choosing one funding method over another, as in the situation where a decision to retain earnings for expansion via reduced dividend payments causes a lowering of stock market price.

Obviously this concept is geared more to such diverse factors as risk, dividend policy, and capital structure than it is to actual price paid for unique assets employed by the business entity. It focuses on costs which will vary greatly from firm to firm and venture to venture. Thus any attempt at achieving equitable compensation of contractors via use of this approach would be extremely difficult to administer.

The cost concept generally utilized by accountants exercising the reporting function has been historical cost or some modification of that concept.

Generally, with the exception of occasional downward revisions in the name of conservatism, the initial price paid to acquire an asset has remained intact on the records of the entity, subject only to a "rational" amortization of that cost over the period of the asset's estimated useful life.

The obvious problem inherent in the use of this concept is the rapid loss of informational value with the passage of time. Beyond the exercise of charge/discharge accountability function, the retention of capital asset historical cost is of little value for decisions about those assets. Indeed, the accountant in exercising his managerial advisory function regards historical cost of capital assets less related amortization as completely irrelevant to managerial decisions, except as these figures affect income and/or other taxes.
Obviously then cost is most meaningful at the time of asset acquisition and derives its importance at that time because of its generally close correspondence to value.

Solomons makes the point that "all costs are values, but not all values are costs," implying that value is the more pervasive of the two concepts and certainly the more desirable in terms of information content. To illustrate this, he points out that value may exist in the absence of cost as when a sudden demand change creates substantial worth in a formerly valueless piece of property. The Department of Defense recognizes this principle in allowing compensation to contractors for the use of donated assets based on "fair market value." Due to the difficulty of measuring value, the accountant and the Department of Defense have fallen back on the surrogate of historical cost in their measurement attempts. The goal of equity in contractor compensation during inflationary periods can hardly be served by the use of a measurement surrogate which is discarded as irrelevant for most economic decisions.

It appears that current replacement cost would be a much more desirable surrogate for value here. The experience of various entities in attempting to utilize this concept will be examined in Chapter III with some observations on the feasibility of use in the Defense contracting environment.

The concept of current replacement cost is a complex one, involving such considerations as technological obsolescence of the

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10Solomons, op. cit., p. 118.
present assets, availability of identical assets, relative age of the present assets, etc. The additional consideration of foreseeable costs incidental to the replacement process should probably also be considered in an attempt at equitable compensation.

Solomons discusses the concept of value of an asset to its owner and defines it as "the adverse value of the entire loss, direct and indirect, that the owner might expect to suffer if he were to be deprived of the asset."^{11}

Further, he speculates that value is defined within a range where replacement cost sets the upper limit and net realizable value sets the lower limit. It would appear that in Defense contracting, the lower limit would not apply, as once a decision has been made to commit an asset to Defense production, the alternative of selling it is no longer viable.

Likewise, the concept of opportunity cost, while it may be very legitimate for the contractor in deciding whether to accept a particular Defense contract or not, should not be the criterion for equitable contractor compensation, once the contractor makes a voluntary decision to commit a particular asset to Defense production. An equitable measure of loss caused by asset deprivation certainly should not exceed restoration costs of putting the contractor in the position occupied prior to that deprivation.

While accountants have waged theoretical wars over the determination of "value" versus the allocation of "cost", others who have been faced with the demand to reach pragmatic conclusions have

^{11} Ibid., p. 123.
produced results in the areas of compensation for insured losses, rate making for public utilities, etc.

The accountant has long argued that in his role as independent auditor he is not called upon to perform as an appraiser. In his role as internal management advisor, he cannot escape so lightly and an examination of an appraiser's concept of "replacement cost" is germane to this investigation.

Babcock limits the term "replacement cost" to physical properties already in existence and which are replaceable. Further, he limits the term "replacement property" to one as good as, but no better than, the replaced property. He also states that a replacement property may be a duplicate of the original, or an equally good substitute property.

His distinction between the replacement of a "new" item of property and a "used" item would not seem to be terribly important on its face, as it would seem that replacement cost and historical cost are synonymous in a new item. However, a consideration of the concept of a "new" item as being one not previously used requires that the treatment of such assets as stand-by production facilities be examined separately.

Babcock first considers the four possibilities in replacement of a new asset with another new asset. This concept would have relevance in periods of rapid inflation due to the lag in time between initial capital asset acquisition and the commencement of

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production from those assets, and also in the case of stand-by facilities mentioned earlier.

The four alternatives are summarized in Exhibit II-1. At least one alternative must be feasible to have replaceability, but conversely there is obviously no mandate that all four alternatives be always feasible.

EXHIBIT II-1

NEW ASSET REPLACEMENT ALTERNATIVES

Replacement of a New Asset with a
NEW ASSET

by acquisition of a
Duplicate (identical)
NEW ASSET

by acquisition of an
Equivalent (equally good substitute)
NEW ASSET

by PURCHASE of a
Duplicate NEW ASSET as a whole unit

by REPRODUCTION of a Duplicate NEW ASSET via assembly, manufacture, construction, fabrication or natural growth of living things

by PURCHASE of a substitute NEW ASSET as a whole unit

by PRODUCTION of a substitute NEW ASSET via assembly, manufacture, construction, fabrication of natural growth of living things

Source:

Henry A. Babcock, p. 143 (adapted).
Babcock states that there are two possible ways of replacing used assets with other used assets and summarizes these alternatives in Exhibit 11-2.

**EXHIBIT 11-2**

**USED ASSET PURCHASE REPLACEMENT ALTERNATIVES**

<table>
<thead>
<tr>
<th>Replacement of a Used Asset with a Used Asset</th>
</tr>
</thead>
<tbody>
<tr>
<td>by PURCHASE of a DUPLICATE USED ASSET in the same condition as the replaced asset</td>
</tr>
</tbody>
</table>

**Source:**

Henry A. Babcock, p. 144 (adapted).

Logically the construction of a used asset from its inception to completion would seem to be a project reserved for the editors of the National Lampoon, or their equivalents in the world of television or movies.

However, the concept of remanufacturing used assets via replacement of worn parts gives rise to an important segment of the asset market. Babcock does not seem to provide for this alternative in Exhibit 11-2, therefore, Exhibit 11-2A is offered to include these possibilities.

Where there is a dearth of applicable used asset sales or remanufacture of used assets, a substitute method of estimating replacement cost has been utilized by appraisers. In essence it involves the concept of replacing a used asset with an equivalent new
asset and then reaching a current value by subtracting applicable depreciation based on some usually arbitrary "rational" method from cost of the new asset.

EXHIBIT II-2A

USED ASSET PURCHASE--REMANUFACTURE REPLACEMENT ALTERNATIVES

Here the appraiser runs headlong into the same allocation problems that plague the accountant in applying depreciation to historical cost.

The allocation or time segmentation aspect of capital asset use is reserved for examination in the next section of Chapter II.

The concept of current replacement cost is obviously more difficult to apply than is the accumulation of historical cost. The difficulty of application remains relatively constant with increased economic price levels, but the relative usefulness of current replacement cost as a surrogate for value varies in direct proportion to the level of price increases.

The current state of rapidly accelerating inflation in the United States almost demands that we explore the attempts of others
to employ this concept and reach some conclusions as to its adapt-
ability in Defense Contractor capital asset compensation.

Summarizing, we have explored the economics oriented concept
of cost of capital in order to delineate it from capital asset cost
and have placed a detailed discussion of its measurement beyond the
bounds of this dissertation.

The concept of capital asset historical cost was explored,
and its inadequacy as a surrogate for value in inflationary periods
was pointed out.

Finally, the idea of replacement cost was discussed and its
advantage over historical cost as a value surrogate was mentioned.
Along with this, attention was devoted to the appraiser's approach
to replacement cost valuation as an introduction to pragmatic
attempts to utilize the concept.

DEPRECIATION--ALLOCATION VERSUS VALUATION

The question of whether depreciation should represent an
attempt to reflect changes in asset values or merely a "rational"
process which ignores current asset values in favor of allocating
historical cost is an interesting one.

The going concern concept discussed earlier in this chapter is
aligned with the matching principle which states that "Income is
measured in a particular period by offsetting revenues earned during
that period against costs expired." Together they lend much support
to the use of historical cost and its related allocation to successive
time periods via depreciation.
However, for financial accounting purposes, the concept of attaching a value to the use of capital assets in a particular period has been inextricably bound up with the concept of income realization.

As Pattillo observes:

In spite of the apparent relation of the going concern and matching principles to the cost principle, the actual basis for the almost exclusive use of historical costs in the accounts is the income realization principle.

He further points out that since non-realized appreciation in value is not recognized, historical cost serves as the basis for income calculation.

Concerning inventories, he notes that they are not generally considered to be the subject of the going concern concept, yet are carried forward as historical cost items having no relation to current costs until allocated to periods benefited.\(^1\)

Despite the fact that the going concern concept does not apply to inventories, and that the current costing of inventories sold or consumed would be a relatively easy and objective process compared to attaching a current value to the use of capital assets, the realization and conservatism principles have consistently annulled any attempts at a happy marriage between valuation and allocation in inventory costing.

The "back door" technique of lifo, which derives its quasi-legitimacy from tax relief urgency in inflationary periods, succeeds only in "robbing Peter to partially pay Paul," leaving ludicrous balance sheet inventory figures in its wake.

This historical prejudice against the "valuation" of inventories could be summarized by the curt statement of Paton and Littleton that "Inventories and plant are not 'values', but cost accumulations in suspense, as it were, awaiting their destiny."14

Obviously, we have come to view the "expense" of asset use as something almost completely contingent on the revenue recognition process.

Storey elaborates on this thus:

Expenses result from changes in the figures at which asset values are carried. If the realization rule prevents recognition of such changes, except as assets are sold or imputed to be consumed in sales, then revenue recognition must be the controlling factor in the timing of expense recognition. Instead of expenses being determined independently, costs must somehow be matched or allocated to revenues in determining income.15

Thomas points out that theoretically costs and revenues could be arrived at independently, but that accounting convention has made expense recognition dependent upon revenue recognition.16

Since depreciation as a "valuation" concept has been rejected as spurious, accountants have been left only the allocation process on which to focus their collective intelligence and perhaps frustration.

Various elaborate methods of "calculating" depreciation have been developed, all claiming attractive and logical attributes, and


the accountant is now called upon not only to choose a particular method but to be well prepared to defend his choice of method.

An even more demanding task is that of defending a change to an alternative method of depreciation. Obviously, no honorable gentleman and scholar would admit to a choice dictated by such mundane considerations as tax advantage or brightening an adverse income figure.

APB Opinion No. 20 places much of the burden for the justification of change requirement on the desirability of consistency in financial statements. Thus paragraph 16 states:

The presumption that an entity should not change an accounting principle may be overcome only if the enterprise justifies the use of an alternative acceptable accounting principle on the basis that it is preferable.17

In discussing a change in amortization (depreciation) method and related disclosure in paragraphs 23 and 24, the opinion highlights the requirements for a systematic pattern of charging costs to expense.

It also admits that various patterns of charging costs to expense are acceptable, and allows that various factors are considered in selecting an amortization method for identifiable assets. Further, it states that those factors may change, even for similar assets.18

Mr. George C. Watt, in dissenting from Opinion No. 20, pointed out that although depreciation method changes are conceptually accounting changes, they are "inextricably tied to subjective judgment

18Ibid., pp. 394-395.
of the periods of exhaustion of the useful lives of assets and therefore the selection of a method is usually the result of a composite decision involving both methods and estimated useful lives.\textsuperscript{19}

Both the opinion and the dissent then admit the subjective nature of choosing any allocation process, and the opinion offers little guidance as to what constitutes "justification" for a change of method, beyond the observation that issuance of an APB opinion creating a new accounting principle, expressing preference for an accounting principle, or rejecting a specific accounting principle will constitute adequate justification.

It appears that where alternative accounting procedures are available the choice will often be made with an eye open to two factors primarily, tax advantage and adverse or beneficial effect on reported income. A comparison of the relative percentages of adoption of LIFO and accelerated depreciation for tax purposes by eligible business entities would lend credence to this observation.

Sidney Davidson goes so far as to say that "any management that fails to take depreciation as rapidly as legally permissible to minimize the present value of tax payments is remiss in its responsibility to stockholders."\textsuperscript{20} He does allow that some exceptional circumstances would alter that course, but confines these to relatively rare cases.

\textsuperscript{19} Ibid., p. 402.

There is no Internal Revenue Code requirement that deprecia-
tion methods be identical for tax and financial reporting and most
entities choose straight line depreciation for financial reporting
and declining balance or sum of the years' digits for tax purposes,
thereby reporting income less conservatively for financial purposes
than for tax purposes.

In contrast, the adoption of LIFO for income tax purposes
mandates a similar adoption for financial reporting. Largely because
of this, LIFO has not been widely adopted. A 1963 government report
indicated that after decades of availability, LIFO had been adopted
by only 6% or less of corporations filing returns.\(^1\)

As Alexander Grant and Company points out in its monograph
"LIFO" directed to clients considering adoption of LIFO under the
heading of "Disadvantages":

> Many corporate managers believe the need to take special
care in explaining lower profits is a disadvantage of LIFO. They
would rather trade the higher taxes of FIFO for whatever
benefit the higher reported profit levels may have (for
example, on the price of a company's stock).\(^2\)

Without implying an academician's criticism of what is
intended to be a practical document oriented primarily to the layman,
the above statement succinctly places the alternatives in perspec-
tive: a tax advantage coupled with a reporting disadvantage versus
a tax disadvantage coupled with a reporting advantage.

\(^1\)Ronald M. Copeland, Joseph F. Wudyak, and John K. Shank,
"Use Lifo to Offset inflation," Harvard Business Review, May-June,
1971, p. 97.

\(^2\)Alexander Grant & Company, Certified Public Accountants,
In defense of the document, it does also point out in another section that Lifo provides a "better matching of current costs with current revenues."

Not only do probable beneficial or adverse effects on reported financial net income often dictate choice of alternative accounting methods, but in some cases they also go so far as to dictate the avoidance or conclusion of the actual transaction itself.

Sedgwick Mead, in arguing for analysis of profitability based on funds flow, pointed out that in a classic case of the "tail wagging the dog," most major corporations shy away from potentially lucrative investments in real estate because stockholders evaluate management performance via reported earnings, not cash flow, increase in market values, and tax shelter contributions. 23

Relating all this back to a consideration of choice between alternative methods of allocating depreciation, it appears fairly obvious that despite the desirability of choosing an alternative method which most accurately reflects relative decline in utility, it is doubtful that this criterion consistently dictates the choice. Even where the method chosen is theoretically objective, such as the unit of production method, physical deterioration may be made irrelevant by technological obsolescence.

The choice between methods which produce increasing, decreasing, constant or fluctuating "costs" of using assets each year

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should be geared to "anticipated flow of benefits from the asset." As Pattillo observes, even where this is attempted, it does not remove the basic "unfairness" of using historical cost under conditions of specific or general price changes.

No amount or variation of elaborate ritual in escouncing the corpse of historical cost can remove the reality that it no longer is a viable force in daily business decisions.

If there existed a clearly defined indicator of decline in asset utility giving adequate consideration to useful life and salvage value, there would be little problem in "justifying" a change in accounting "principle" via depreciation method change. In fact defense of a decision not to change methods would be the more difficult problem.

In a study by Barry Cushing of the effects of APB Opinion No. 20 on volume and types of accounting changes, a sharp decline was noted in depreciation method changes in years subsequent to issuance of the opinion.

In the random sample drawn from 100 of Fortune 500 firms, depreciation changes went from the most prevalent type (5 out of 18) in 1969-70 to one change out of 14 in 1970-71, to zero out of 24 and 13 changes respectively in 1971-72 and 1972-73. This would seem

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to indicate that most corporations faced with "justifying" a change in accounting principle via a depreciation method change simply chose to forego the change after APB Opinion No. 20 became effective for fiscal years beginning after July 31, 1971.

Changes in accounting estimates do not create consistency difficulties under SAS No. 1 and require no qualification of opinion by the independent auditor. APB Opinion No. 20 does not require "justification" for changes in accounting estimate, only disclosure of the related effect on income and per share amounts for the current period of the change.

Proving perhaps that there is "more than one way to skin a cat", Cushing cites the case of one corporation which turned an earnings drop of $.32 per share into an increase of $.27 per share by extending its estimate of asset useful lives. Disclosure was made via footnotes, but no reference to the change was made in the independent auditor's opinion.27

Faced with operating in an environment where consistency is the overriding consideration accountants may choose to avoid the problem of justifying method changes by such a procedure, or alternatively by just ignoring the justification requirement, posing a real challenge to attempts to reduce discretionary alternatives.

Cushing sees the latter course as a trend, noting that even after issuance of APB Opinion No. 20, no justification of changes was given in 17% of his sample cases.28

27 Ibid., p. 60.
28 Ibid., p. 62.
In summary, this section has considered the concept of depreciation as both a valuation and an allocation concept.

While both the going concern and matching principles support historical cost, it is the realization principle which has effectively ruled out depreciation as a valuation concept and enmeshed it in the income recognition process.

Left with only the allocation process, the accountant devised various methods of relating depreciation charges to the flow of asset benefits received. While paying lip service to this ideal, method decisions were more often made in view of income tax and/or reported net income effect.

Until the issuance of APB Opinion No. 20 there was no prohibition against method change, providing income effects were revealed. APB Opinion No. 20 introduced the requirement for "justification" of method change and a sharp decline was noted in method changes.

Along with this, there is some evidence of a trend to ignore the "justification" requirement for accounting changes and the possibility that changes in accounting estimate, such as useful life estimate, are being used to achieve the same purpose as an accounting method change.

In philosophizing about the number of historical dollars which "danced on the head" of an asset at various stages in its life, accountants then have ignored the more important question of the "real" cost of using that asset.

It appears that the present state of "consistency by fiat" dictated by APB Opinion No. 20 has brought a quasi-stabilized
condition where neither valuation nor allocation is particularly well served.

GENERAL ACCOUNTING PRINCIPLES,
INTERNAL REVENUE SERVICE AND
DEPARTMENT OF DEFENSE
TREATMENT

Robert Sterling, in describing Kenneth Boulding's comments on accountants' "valuation" processes, refers to them as "ritual".

He further quotes Boulding:

Ritual is always the proper response when a man has to give an answer to a question, the answer to which he cannot really know. Ritual under these circumstances has two functions. It is comforting (and in the face of the great uncertainties of the future, comfort is not to be despised) and it is also an answer sufficient for action.

Further, he points out that the accountant seeks the "sufficient" answer, rather than the "right" answer.

Sterling agrees that valuation is concerned with the future, and the future is unknown, but disagrees that ritual is sufficient for action.

Perhaps the basic distinction between GAAP and IRS/DOD treatment of depreciation has been that GAAP treatment has emphasized the comfort to be taken as a result of "orthodox" performance of the ritual (witness "justification" of a change in method under APB Opinion No. 20), while IRS/DOD treatment has recognized the arbitrary

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nature of the ceremony and circumscribed its performance with barriers
designed to limit subjective benefits only to the "more deserving".

In discussing the nature of depreciation, and its application
in special circumstances, Chapter 9 of Accounting Research Bulletin
No. 43 had this to say:

The cost of a productive facility is one of the costs
of the services it renders during its useful economic life. Generally accepted accounting principles require that this cost
be spread over the expected useful life of the facility in
such a way as to allocate it as equitably as possible to the
periods during which services are obtained from the use of the
facility. This procedure is known as depreciation accounting,
a system which aims to distribute the cost or other basic
value of tangible capital assets, less salvage (if any) over
the estimated useful life of the unit (which may be a group of
assets) in a systematic and rational manner. It is a process
of allocation, not of valuation.30

There is no elaboration on the terms "equitably", "systematic"
or "rational", and very probably this falls into the category of
questions to which man "cannot know the answer."

Any good attorney would attest to the ease of discerning
"rational" methodology from "non-rational" by simply locating "the
rational man" and obtaining his judgement of the methodology.
Having glibly formulated the ritual, then we can go on to other more
pressing problems.

The American Accounting Association emphasizes the concept of
tyng depreciation recognition to coordinate revenue recognition and
in scholarly fashion reports that it "regrets the tendency to report
to stockholders depreciation that has been accelerated beyond any

30"Restatement and Revision of Accounting Research Bulletins,"
Accounting Research Bulletin No. 43, (New York: American Institute
of Certified Public Accountants, 1953), p. 76.
realistic estimate of useful life of assets in order to achieve a tax advantage or to manipulate income calculations. It also recommends the "explicit and regular" recognition of obsolescence in depreciation computations.

Both the approach of the AICPA and the AAA seem to overlook the basic fact that depreciation charges and their resultant asset book values have no real meaning outside of their effect on income taxes or perhaps property taxes.

Thus, we continue to argue for such things as "equitable" distribution or against such things as "unrealistic" accelerated depreciation because we believe they conform to or violate the ritual which gives meaning to our existence as accountants.

Again from Chapter 9 of Accounting Research Bulletin No. 43 discussing the decision not to allow current prices to influence depreciation charges:

Without such formal steps (continuous and consistent depreciation charges based on the new asset values), there would be no objective standard by which to judge the propriety of the amounts of depreciation charges against current income, and the significance of recorded amounts of profit might be seriously impaired.32

The implication that profit significance suffers in the absence of conformity to the ritual is easily converted into the presumption of significance when the ritual is properly performed.

Accounting Research Bulletin No. 44, ostensibly dealing with declining-balance depreciation, had little to say about the method

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32Accounting Research Bulletin No. 43, loc cit.
beyond pointing to its long history of acceptance in England and other
countries; alluding to its desirability in situations where asset
productivity or revenue earning capacity is relatively greater in
early life, and observing that it is "systematic and rational" (whatever that means). 33

The bulletin dealt primarily with the income tax allocation
problem caused by adoption of different depreciation methods for
determination of income for general accounting purposes versus taxable
income determination. Indeed, two members of the committee objected
strenuously to the use of a bulletin on depreciation as a vehicle for
changing views on accounting for income taxes.

Accounting Principles Board Opinion No. 1 treated the problems
created by the new shorter guideline lives authorized by Revenue
Procedure 62-21. Once again, it did not offer much guidance as to
rationale or acceptability of different methods of depreciation, and
was involved principally with the problem of accounting for income
taxes. 34

Accounting Terminology Bulletin No. 1 dealt with the term
"depreciation" by discussing a number of alternative definitions of
the word "depreciation" and then settling on a definition of
"depreciation accounting" which reiterates the definition given in
Accounting Research Bulletin No. 43, mentioned earlier. It went

33"Declining-Balance Depreciation," Accounting Research Bulletin
No. 44 (Revised), (New York: American Institute of Certified Public

34"New Depreciation Guidelines and Rules," Accounting
Principles Board Opinion No. 1, (New York: American Institute of
further to explain that "depreciation for the year is the portion of the total charge under such a system that is allocated to the year."

It also pointed out that "although the allocation may take into account occurrences during the year, it is not intended to be a measurement of the effect of all such occurrences."

It continues:

Definitions are unacceptable which imply that depreciation for the year is a measurement expressed in monetary terms, of the physical deterioration within the year, or of the decline in monetary value within the year, or, indeed, of anything that actually occurs within the year.35

One is left then with the inescapable conclusion that the depreciation ritual, in order to conform to "generally accepted accounting principles", must attempt to be an "equitable" allocation process and must be "systematic" and "rational".

Beyond that, we are cautioned not to attach any measurement significance to the annual performance of the ritual ourselves, but not to scandalize the "investor faithful" by arbitrarily embracing a change in ritual formula without "justification". Additionally, we are warned against unseemly acceleration of the ritual to achieve tax advantage, or conversely deceleration to shore up sagging profit.

Section 167(a) of the Internal Revenue Code of 1954 does not bother to define "depreciation", but speaks immediately in the constrictive tone of the tax commissioner thus: "There shall be allowed as a depreciation deduction a reasonable allowance for the

exhaustion, wear and tear (including a reasonable allowance for obsolescence):

(1) of property used in the trade or business, or
(2) of property held for the production of income.\(^{36}\)

Not about to open a Pandora's Box similar to the GAAP one labeled "systematic and rational", the jaundiced tax collector quickly defines the term "reasonable allowance" in the next paragraph.

A "reasonable allowance" is one computed via regulations of the Secretary of the Treasury in accordance with the straight line method, the declining balance method at a rate not exceeding twice the straight line rate, the sum of the years digits method, or any other consistent method which will not produce in the first two-thirds of an asset's useful life a total allowance greater than that produced by the declining balance method at twice the straight line rate.

Various other restrictions are placed on the use of accelerated methods geared to give preference in its use to taxpayers who acquire new personal or residential real property as opposed to those who acquire used personal or commercial real property.

The intent of allowing accelerated methods on certain classes of assets while denying or severely restricting its use on others is clearly to stimulate acquisition of the assets given preferred treatment, and nowhere is it intimated that one depreciation method is preferable to another because it "more equitably" distributes original cost in a pattern which approximates utility diminution.

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Change from one method of depreciation to another does not have to be "justified" under the Internal Revenue Code. Permission for a change in adopted method of depreciation is required for all changes except from declining balance or sum of the years digits to straight line, or declining balance to sum of the years digits where asset depreciation ranges are used, or to a method permitted or required for residential real property. However, permission can usually be assumed if the taxpayer has filed form 3115 and complied with certain conditions.

The treatment of method choice and change is recognized as arbitrary and probably represents one of the least controversial areas in practical application of tax law.

The treatment of salvage value appears to be another area where very little attempt is made to enshrine orthodox ritual in tax law. Theoretically, assets may not be depreciated below salvage value, but the code provides that salvage value not in excess of 10% need not be considered in depreciation computations.

My own observation is that salvage value generally winds up being a "ball park" figure in most depreciation computations. Obviously, except in extreme cases, it would be difficult to discredit any figure chosen from a fairly wide range of alternative values.

The question of asset estimated useful life probably provides more basis for controversy in tax treatment of depreciation than any other area. The regulations propose various "guidelines" as to suggested asset useful life, but these are not binding on the taxpayer who can demonstrate shorter lives in his subjective experience.
As mentioned earlier this area may become also one of the more controversial in GAAP treatment due to the restrictions imposed on reporting and justifying a change in "accounting principle" under APB Opinion No. 20.

Finally, the code allows special accelerated depreciation treatment for "emergency" and pollution control facilities as well as "additional first year" depreciation under section 179.

Imbued with the philosophy that income tax deductions exist solely as a matter of specific legislative grace, the commissioner does not regard depreciation as a dogmatic ritual, the exercise of which is guaranteed by a covenant with the Great Bookkeeper in the Sky. He does not necessarily imply that depreciation should allocate costs in an "equitable", "rational" or "systematic" manner, only that it should meet certain clearly defined criteria in order to be deductible.

Within limits, the taxpayer may choose the method or change to a method which he perceives as most advantageous to him at the moment. He may have to request permission for the change, but there is no requirement for a pious incantation of "justification" to the custodians of orthodox ritual.

Section 15-205.9 of the Armed Services Procurement Regulation (ASPR) defines depreciation as "a charge to current operations which distributes the cost of a tangible capital asset, less estimated residual value, over the estimated useful life in a systematic and logical manner. It does not involve a process of valuation."

It goes on further to state that depreciation will be considered reasonable if it satisfies three conditions: it is consistent with policies and procedures; followed in the same cost
Little guidance is offered as to what constitutes the essence of rationality, systematicity, or equitability, but the impression is created that if the depreciation ritual is properly performed, and excesses are voided, all will have been done which can be expected of a believer and his conscience may rest easy.

The Internal Revenue Code and its enforcers take a more jaundiced view and generally refuse to endow depreciation with any intrinsic mystique. Rather, they recognize its basic asignificance and rather arbitrarily prescribe methodology allowed in accordance with goals to be achieved by tax legislation.

Finally, the Department of Defense has traditionally nodded respectfully in the direction of generally accepted accounting principles, but in the final analysis has relied almost exclusively on Internal Revenue Code depreciation procedures and policies in the past.

This latter policy is scheduled to undergo some major revisions with the implementation on July 1, 1975 of the proposed Cost Accounting Standard entitled "Depreciation of Tangible Capital Assets." This standard is discussed and evaluated in the following section of this dissertation.

THE NEW COST ACCOUNTING STANDARDS
BOARD DEPRECIATION STANDARD

The proposed standard was met by an avalanche of hostile criticism from industry and other sources which either expressed a questioning of the need for the standard altogether, or criticized certain portions of it.

As a result of this criticism, the CASB made considerable modifications of the original document and took the unusual step of republishing the modified standard in the Federal Register, Vol. 39, No. 193 on October 3, 1974.

Even though the date for a congressional resolution to set the standard aside had expired, Senate hearings on the standard were held April 14, 1975, and based on a request from the National Security Industrial Association, a House Banking Subcommittee is holding hearings in early May, 1975.

Apparently, "Feds rush in where angels (and other ritual adherents) fear to tread!"

Quoting from section 409.20:

The standard is based on the concept that depreciation costs identified with cost accounting periods and benefiting cost objectives within periods should be a reasonable measure of the expiration of service potential of the tangible assets subject to depreciation. Adherence to this standard should provide a systematic and rational flow of the costs of tangible capital assets to benefited cost objectives over the expected service lives of the assets.

Contrast this concept (particularly the underlined portion) with the statement seen previously in Accounting Terminology Bulletin No. 1:

Definitions are unacceptable which imply that depreciation for the year is a measurement expressed in monetary terms of the physical deterioration within the year, or of the decline in monetary value within the year, or, indeed, of anything that actually occurs within the year.
Much as the ill-fated Accounting Principles Board did in the early 1960's when it assumed it could codify accounting principles (a task no other organized accounting body anywhere had been able to do), the Cost Accounting Standards Board has announced to the world its requirements for the "reasonable" measurement of the expiration of service potential.

The bulk of adverse comments received by the Board were directed toward such things as record keeping requirements for determination of useful life, etc. rather than towards the futility of attempting a "reasonable" means of service potential expiration. Perhaps this can be attributed to an innate recognition that disallowance of accelerated depreciation methods due to lack of correlation with rate of service potential expiration will be as hard to "justify" as would its inverse.

Much of the motivation for development of the standard appears to have been due to congressional feelings that somehow the use of accelerated depreciation methods was creating "windfall" benefits for DOD contractors, and this idea has been expressed vociferously by such people as Senator William Proxmire.

Assuming that an asset is retained in primarily DOD contracting work, obviously no greater total amount of depreciation will generally be allowable by use of accelerated methods. The obvious advantage is, of course, the time value of the earlier reimbursements, but in an ongoing entity this may not be nearly as significant as it seems.

The Council of Defense and Space Industry Associations (CODSIA) expressed this succinctly when it pointed out that:
The government contractor could be viewed as a going concern and government contracting as a continuous process . . . means that reasonable depreciation practices consistently followed will provide equity in costing. Under these conditions, the amount of costs allocated in any period is not significantly affected by the method of depreciation or lives used.38

Venturing further afield in its endorsement of accelerated depreciation methods, the Council suggested that consideration by the CASB of such economic factors as declining value, obsolescence probability, monetary inflation, and investment stimulus, would support the use of accelerated methods.

The Council states, "We reiterate that accounting should be based on economics and we believe that current underlying economic factors justify the present approach to depreciation accounting."

My own observation here would be that accelerated depreciation methods are not really a substitute for economic revaluation of the total amount of depreciation allowable or adjustment of other methods of compensating contractors for use of their capital assets.

While accelerated depreciation methods may move the compensation closer to the date of asset acquisition, and hence compensate in dollars of more-nearly-equal purchasing power, their use cannot really eliminate the fact that total compensation is still limited to total dollars of historical cost, a procedure clearly unfair in periods of rapid inflation.

Section 409.40(a)(3) of the Standard states:

The method of depreciation selected for assigning the depreciable cost of a tangible capital asset (or group of assets)

to the cost accounting periods representing its estimated service life shall reflect the expected consumption of services in each cost accounting period.

Section 405.50(a) points out that many of the same factors affect both estimated service life and "likely" consumption of services. It also defines factors which may be taken into account as: "quantity and quality of expected output, and timing thereof; potential standby usefulness; and technical or economic obsolescence of the asset . . . or of the product or service it is involved in producing."

Section 409.50(g)(3) points out further that consumption of asset services as affected by the above factors may be measured by either expected activity or expected physical output and gives as examples: hours of operation, number of operations performed, number of units produced, or number of miles traveled. Acceptable monetary surrogates mentioned are: estimated labor dollars, total cost incurred, or total revenues generated.

It allows also that time passage may be used as a substitute where reliable data for measurement or estimation of asset service consumption is lacking.

The Standard further "clarifies":

An accelerated method of depreciation is appropriate where the expected consumption of asset services is significantly greater in early years of asset life.

The straight line method of depreciation is appropriate where the expected consumption of asset services is reasonably level over the service life of the asset.

Section 409.50(g)(1) requires that the method of depreciation used for financial accounting purposes be used for contract costing unless it "does not reasonably reflect the expected consumption of
services for the tangible capital asset . . . or is unacceptable for
Federal Income Tax purposes." This leaves the contractor with the
absurd possibility (albeit not probability) of having three separate
depreciation methods to reckon with on the same asset.

The battle lines between contractor and DOD appear to have
been drawn primarily around the area of determination of asset
useful life and the record keeping requirements to support choice of
useful life.

Correlation of useful life with mere physical life would offer
little problem in accounting theory, but the introduction of economic
factors affecting obsolescence make the problem more difficult, and
these factors may be considered in estimating useful life under the
Standard.

The Standard allows "reasonable approximations" of estimated
useful life to be used initially, followed by periodic reviews of
actual experience in order to support and develop standard useful
lives for various categories of assets. Where no prior experience
has been established, asset lives may not be estimated for periods
shorter than those prescribed in the guidelines published in Revenue
Procedure 72-10 of the Internal Revenue Service.

Gains and losses on disposition of capital assets are
considered adjustments of prior depreciation and assigned to the
disposition period. However, any gain attributable to a sales price
in excess of original asset acquisition cost is not recognized.

Other provisions of the Standard do not appear to deviate
radically from prior treatment of depreciation covered in the Armed
Services Procurement Regulation discussed previously.
In summary, the new CASB depreciation standard no longer accepts conformity to Internal Revenue Service depreciation policies and procedures as a condition sufficient for compensating DOD contractors for capital asset use.

It introduces new requirements for determination of asset useful lives and depreciation methods based on the assumption that asset use cost assigned to a particular accounting period should be a "reasonable measure" of the expiration of asset service potential in that period.

An analogous requirement in Accounting Principles Board Opinion No. 20 that a change in depreciation method be "justified" has resulted apparently in reducing depreciation method changes from the most frequent type of accounting principle change to probably an almost non-existent type of change. There is some evidence that firms which are denied a desired change have attempted to achieve similar reporting results by altering length of estimated useful life.

It appears that "justification" of a choice of depreciation method under the new CASB Standard will be as nearly impossible as "justification" of a depreciation method change under APB Opinion No. 20 has proven. Consequently, I believe this requirement of the Standard is doomed either to complete abandonment or to some sort of arbitrary enforcement similar to IRS dictates on "allowable" methods of depreciation for various types of assets.

The Standard's requirement for detailed support of estimated useful life is perhaps more justifiable theoretically, but I am in basic agreement with the CODSIA observation that it will result in increased incidences of dispute between DOD and contractors, more
DOD audits, and an end result little different from that achieved by following current practice.\textsuperscript{39}

**SUMMARY**

The initial discussion in this chapter traced the development of the concept of capital assets from the earliest accounting systems which dealt in terms of order rather than information, and in which periodicity was not a very relevant concept, through development of the great trading companies and their need for periodic asset "revaluation" to settle accounts and yet maintain continuity of capital at completion of each voyage or trading venture; to the development of the corporate form necessary for operation of the great manufacturing enterprises of the late 19th century, and their successors today.

It concluded by offering a definition of the term "capital asset" which coincides with the definition of a "tangible capital asset" in Defense Procurement Circular No. III.

Following this, the concepts of "cost of capital" and "capital asset cost" were discussed and delineated, and a detailed exploration of the former term and its measurement were set beyond the limits of this dissertation.

Capital asset cost was then viewed from the traditional limitations of historical cost, and its inadequacy as a value surrogate in times of inflation was highlighted.

Attention was then focused on the related concept of replacement cost and its relative desirability as a value surrogate. Finally, a consideration of the approach of appraisers to this concept was made in order to introduce pragmatic efforts at utilizing the concept.
The next section considered the alternatives of depreciation as a valuation versus an allocation process, and concluded rather swiftly that the realization principle, coupled with the going concern and matching principles, has traditionally precluded depreciation as a valuation process.

The pragmatic motivations of a choice between alternative allocation methods were then discussed along with some related observations concerning the LIFO inventory costing method.

This section concluded by noting the spectacular decline in depreciation method changes as a result of introduction of APB Opinion No. 20 and its requirement of "justifying" a depreciation method change.

Along with this, a potential trend of ignoring issued opinions or alternatively achieving pragmatic desired results via alteration of asset estimated useful lives was discussed, and the conclusion was drawn that the "consistency by fiat" brought about by APB Opinion No. 20 does little to enhance the status of the concept of depreciation.

Next, a detailed discussion of the treatment of depreciation under generally accepted accounting principles, the Internal Revenue Code, and the present Armed Services Procurement Regulation was pursued.

Generally accepted accounting principles have argued for "rational" and "systematic" depreciation which "equitably" distributes asset cost to expense over its estimated useful life, but have insisted that a particular period's charge is not a measure of decline
in value, physical deterioration, or in fact anything actually occurring within that period.

The income tax treatment of depreciation has emphasized its "allowability" aspect as a tax deduction, avoiding the implication that any method is more theoretically appropriate because of its ability to correlate periodic depreciation charges with actual expiration flow of service potential. A particular method is clearly either "allowed" or "not allowed", depending on the type of asset being depreciated.

The determination of estimated useful life has probably provided most controversy in the area of income tax depreciation.

The present Armed Services Procurement Regulation which has guided DOD depreciation policy in the past speaks of "generally accepted accounting principles," but basically employs conformity to IRS depreciation policy and procedure as a criterion for reimbursement of contractors for capital asset use.

In summary, generally accepted accounting principles have offered pious emphemisms designed to salve the accountant's conscience, without much in the way of specific guidance. At the same time, in order to avoid scandalizing the layman, consistency has been enshrined as a cardinal virtue via the promulgation of APB Opinion No. 20.

In contrast, IRS/DOD procedures have taken a pragmatic stand by recognizing the arbitrary nature of the various allocative processes and specifically prescribing "allowability" by asset type.

The last section of this chapter treated the new CASB depreciation standard and concluded that its requirement that periodic
depreciation charges be a "reasonable" measure of asset service potential expiration is "unreasonable".

The question of estimated useful lives of assets again pops up, with the Standard requiring detailed record keeping to support lives used for depreciation.

This area, I believe, will be the most productive of controversy and perhaps theoretical development in the future for those who are of the "allocationist" persuasion. It has always been most productive of controversy in income tax treatment; APB Opinion No. 20 highlights it by requiring "justification" for method change, but only disclosure for estimate change; and judging by industry response to the new CASB depreciation standard it will be the single most controversial area in depreciation for DOD contracting.

Finally, the observation should again be made that even if it were to become theoretically possible to allocate costs in a precise manner approaching actual loss of service potential in each period, the whole process loses much import when it is realized that the historical costs being allocated are themselves made increasingly less meaningful with the passage of time and changes in general and specific price levels.
CHAPTER III

CURRENT RECOGNITION OF INFLATIONARY EFFECTS

In the United States today there is much pressure for change in asset accounting to give recognition to "current value". The form and direction of this change remain highly controversial, and suggested patterns of recognition of price level changes, such as the supplemental restatement in terms of a general price index recommended in APB Statement No. 3 and Accounting Research Study No. 6, have not been widely adopted. This chapter proposes to look at the experiences of various groups in attempting to recognize inflationary effects on asset accounting, and to examine some of the forces in this country which are both accelerating the pressure for change and attempting to cope with that change.

In line with the general pragmatic tone of the dissertation, the practical experience of foreign countries in this area will also be examined, and some general conclusions will be drawn about the possible applicability of their experience to DOD contracting procedures. Finally, the general concepts of pragmatism, and the inductive approach traditionally followed in developing and promulgating accounting theory will be examined in the light of the current environment in the United States.
While historical cost and allocation methods of depreciation have been de rigueur in recognizing capital asset use for DOD contracting, there is some precedent for a departure from that type of valuation in two Renegotiation Board cases which were successfully appealed to the Tax Court.

The question of excessive profit realization by DOD prime contractors and subcontractors gave rise in World War II to the Renegotiation Act of 1942 and its successor, the Renegotiation Act of 1951. The Renegotiation Board functions as an administrative body dealing with excessive profit refunds generated by its own proceedings and voluntary contractor action.

Prior to July 1, 1971 appeals from Board action were heard by the Tax Court, and since that time contractors have had the right to petition the U. S. Court of Claims on a de novo basis for a finding in disagreements with the Board.

As Wright and Van Daniker point out in their article entitled "Accounting Considerations In Renegotiation Appeals", most Board filings have been resolved by negotiation rather than sharply defined controversy. In addition, only a small percentage of filings with the Board have turned on accounting issues. Of the 1,000-plus cases appealed to the Tax Court, 154 decisions were rendered and only 14

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concerned accounting issues.2 These 14 cases included four which dealt with asset revaluation, and while all four will be considered here, the Boeing and North American cases represent the most controversial and have been cited most often as precedent in later jurisprudence.

The revaluation by the Tax Court related strictly to intangible assets and would probably be more properly called a "valuation" of assets rather than a "revaluation", since it led to a recognition of previously unrecorded assets rather than a modification of values of previously recorded assets.

The importance of the cases lies not in the fact that they revolutionized methodology of DOD compensation for use of tangible capital assets—they didn't—but rather in the fact that they represented a significant departure from the principle of historical cost.

In Boeing Company vs. Renegotiation Board, 37 TC 613, Boeing contended that its pre-tax net income in 1952 should not be compared to its book net worth at that time for determination of excess profits. Boeing said that book net worth, based on historical cost, was inaccurate and unreliable and hardly represented "true" net worth. In addition, the argument was put forth that manufacturing "know-how" and design and engineering attributes of the Boeing Company were not accounted for on its books.

The government countered with the argument that no precedent could be found in law or regulations for value imputation to

2 Ibid.
such intangible assets and even questioned their existence in Boeing's case.\(^3\)

The Tax Court was not intimidated by lack of precedent and agreed that Boeing's various categories of manufacturing "know-how" were indeed a valuable asset which should be added to net book value for purposes of reassessing the relationship between net income and net worth. Further, the Tax Court endowed the "know-how" with a value equal to that of all the combined other assets. Next, the Court inconsistently doubled the prior net worth figure rather than doubling the asset figure, and upon comparison with the unadjusted return rates of 50 contemporaneous companies, pronounced Boeing's adjusted rate of return not excessive.

**North American Aviation, Inc. vs. Renegotiation Board.** 39 TC 207, was decided along the same lines within a year of the Boeing case. North American successfully argued the rationale once again that its book net worth did not reflect the true value of assets used in the business.

Once again, the Tax Court agreed and made an adjustment to net worth which doubled its value, and then compared the rate of return calculated on this adjusted net worth figure to the unadjusted return rates of the 50 contemporaneous companies, thereafter ruling no excess profits for North American. The adjustment of net worth was again intended to be reflective of the fact that manufacturing "know-how" was not recorded on the books.

\(^3\)Ibid., p. 33.
Offner Products Corporation vs. Renegotiation Board, 50 TC 856, was the third case in the line of decisions concerning asset revaluation and occurred six years after the North American decision. Offner was a much smaller corporation to which Dr. Offner, an inventor and college professor, contributed substantial personal inventive talents. The firm's net worth was relatively low.

The Tax Court actually applied the doctrine espoused in the Boeing Case by adding the amount of recorded assets to net worth, instead of doubling net worth. This resulted in a tripling of net worth, and again a decision of no excessive profits having been earned.

The fourth case in the line of decisions involving attempts at asset revaluation was L.T.V. Aerospace Corporation vs. Renegotiation Board, 51 TC 369. Again the argument that book net worth was not reflective of true net worth was proposed, and the Boeing and North American cases were cited as support in the brief for the petitioner.

The Tax Court this time, however, did not follow the precedent it set in the Boeing and North American cases and instead ignored "unrecorded intangibles" in favor of introducing a new concept of "entrepreneurial profit". In essence the new concept recognized that a disparity between various contractors in the relative percentages of government supplied capital vis-a-vis contractor capital should give rise to different allowable rates of return.

4Ibid., p. 40.
The Court argued that a contractor using government supplied capital is not necessarily entitled to a smaller rate of return on its own net worth. Accordingly, "entrepreneurial profit" should be based on total capital employed, regardless of ownership; and, conversely, contractors should be entitled to a higher rate of return on disproportionately low net worth.

Instead of increasing net worth arbitrarily as had been done in the Boeing and North American cases, it adjusted allowable rates of return. In departing from the "unrecorded intangibles" procedure, the Tax Court apparently recognized the idea that, as Wright and Van Daniker state, "there is no effective way of determining the value of intangibles."^5

The deviation from precedent then was not apparently related to a desire to return to historical cost, but more to the peculiar nature of intangible asset valuation problems. This would not seem to bar the use of current asset values, assuming objectivity in valuation methods could be demonstrated.

To summarize, this section discussed a line of cases decided on appeal from the Renegotiation Board to the Tax Court which dealt with the concept of asset valuation in order to render decisions on excessive profit realization.

In the Boeing and North American cases the Tax Court imputed a value to manufacturing "know-how" equal to the book value of all other combined assets, but inexplicably doubled net worth rather than asset book value, and pronounced the resultant rate of return on this

^5Ibid.
adjusted net worth as not excessive, when compared to the unadjusted return rates of 50 contemporaneous companies.

The Offner case allowed the existence of the same type of intangible, but added the book value of the assets to net worth, resulting in a tripling of net worth. Once again a conclusion of profits not being excessive was reached.

The last case in the decision line ignored the prior arguments for recognition of unrecorded intangibles, and instead introduced a doctrine of "entrepreneurial profit" which allowed an adjustment of allowable rates of return where net worth of a contractor was disproportionately low due to use of government capital.

Apparently, there has been no refutation of the concept of allowing deviation from historical cost, but rather a transition to the concept of allowing rate of return to be based, at least partially, on the inclusion of other than contractor-owned capital assets.

Recent citations of the Boeing and North American cases in trade journals relative to deviation from historical cost in capital asset compensation, and the fact that the Cost Accounting Standards Board has requested interested parties to furnish it with reports of competent research concerning current value accounting, seem to indicate that these cases may have been the precursors of processes in the future which will embrace deviation from historical cost in capital asset compensation.6

While the Internal Revenue Code has consistently insisted on cost as a basis for depreciation of a purchased asset, it has required asset valuations in terms of "fair market value" in other cases.

The general tenor of the code is to use the term "fair market value" rather glibly almost as though it is a term so universally well defined and consequently so well understood that it does not require definition in the code itself. Thus Section 1014(a) states that "... the basis of property in the hands of a person acquiring the property from a decedent or to whom the property passed from a decedent shall ... be the fair market value of the property at the date of the decedent's death ..." 7 Although Section 1014 contains lengthy language qualifying various other aspects of basis determination in the case of property acquired from a decedent, it nowhere contains any language elaborating the meaning of the term "fair market value."

Regulation 1.1014-3(a) defines "fair market value" in this instance as "the value of property as of the date of the decedent's death as appraised for the purpose of Federal estate tax or the alternate value as appraised for such purpose, whichever is applicable." In the absence of a requirement to file a Federal

estate tax return, "fair market value" is the appraised value for state inheritance or transmission taxes.\(^8\)

Once again no enlightenment on how "value" is established is given other than by rote reference to a figure determined in another legal process.

Section 1015(a) dealing with basis of property acquired by gifts and transfers in trust continues "... except that if such basis... is greater than the fair market value of the property at the time of the gift, then for the purpose of determining loss the basis shall be such fair market value." Again, the remaining language of the section sheds no light on the development of the concept "fair market value".\(^9\)

Regulation 1.1015-1(e) defines "fair market value" in this section as "the value of property as appraised for the purpose of the Federal gift tax." In the alternative, if Federal gift tax is not applicable the value as approved for a State gift tax is deemed "fair market value".\(^10\) As in Regulation 1.1014, "fair market value" is determined by reference to the result of an appraisal for a different purpose.

Section 2031(a) of the Code which deals with value determination for Federal estate tax purposes does not use the term "fair

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market value" but merely states the "value" of the gross estate will include all property of decedent regardless of nature or location.

Section 2031(b) does state that where there has been an absence of sales of unlisted stock and securities, the value of stock of listed corporations in the same or similar business must be considered in any value determination on the unlisted stock or securities.\(^11\)

IRC Code Section 2512 entitled "Valuation of Gifts" states "If the gift is made in property, the value thereof at the date of the gift shall be considered the amount of the gift."\(^12\) Again, "value" is not elaborated on.

Regulation 25.2512-1 enlightens thus:

The value of the property is the price at which such property would change hands between a willing buyer and a willing seller, neither being under any compulsion to buy or sell, and both having reasonable knowledge of relevant facts. The value of a particular kind of property is not the price that a forced sale of the property would produce. Nor is the fair market value of an item of property the sale price in a market other than that in which such item is most commonly sold to the public, taking into account the location of the item wherever appropriate.\(^13\)

In general terms this paragraph probably goes farther in delineating what fair market value is and is not than any of the other Code or Regulation sections.

Obviously then, the application of the concept has been largely a process of judicial rather than legislative definition.


\(^12\) Ibid., pp. 25, 432.

Among the factors which have been considered in determining "fair market value" by the courts have been cost, book value, actual sales prices of similar property, bid and asked prices, earnings potential, appraisal, and expert testimony.

In Grace N. Williams Est. vs. Comm., 256 F2d 217, the Tax Court defined "fair market value" as the "price at which a willing buyer and a willing seller would arrive, after negotiation for sale, where neither is acting under compulsion." This definition, which is usually cited as a leading authority in tax cases involving the term "fair market value" substitutes "after negotiation for sale" for "both having reasonable knowledge of the facts." Thus the Court substitutes the much more easily observable process of negotiation for the elusive "reasonable knowledge of facts."

The case, which dealt with the valuation of a growing crop of hops, also rebuts the presumption that fair market value may not be less than cost of production and establishes the principle that a trier of fact is not bound by expert opinion and may disregard it altogether in its decision. However, if its disregard was arbitrary and capricious the appellate court has a right to reverse.

In overruling expert testimony, it pointed out that judges are often called upon to make decisions about contests in highly technical fields about which they possess no knowledge or experience.

The ease with which judges slip into this sort of role was mentioned previously in the discussion of Renegotiation Board cases involving asset valuation. I believe the judiciary appreciation of different concepts of asset valuation (or lack of it) will be an
extremely important factor in any sort of capital asset use revaluation system adopted by DOD in compensating its contractors.

In Lorenzo Alvary vs. The United States, 302 F2d 790, the Court pointed out that a difference exists between value and liquidity, and the lack of present buyers does not make "fair market value" equal zero.

Recent sales of similar property are used as fair market value evidence but neither sales nor cost represent an exclusive test.

The IRS concept of "fair market value" is based on what buyer and seller might reasonably have expected. Accordingly, retrospective appraisals are not given much weight.

Replacement cost is not looked to by the courts in most appraisals unless it approximates "fair market value" at about the same date.

The experience of the Internal Revenue Service in defining and interpreting the concept of "fair market value" would appear to offer little in the way of practical guidance in the development of a system of adequate compensation to DOD contractors for use of their capital assets.

The IRS concept of "fair market value" does not appear to be a well defined concept which could be applied with any degree of equity or consistency to the large groups of diverse assets owned by contractors. Looking once again to the Tax Commissioner's recognition of current value in order to compensate contractors apparently would be even less satisfactory than utilizing his depreciation methods has been.
The Securities and Exchange Commission, created by Congress in 1934 as an independent regulatory agency of the United States Government, performs a critical quasi-judicial role in controlling the trading and distribution of securities.

Prior to its inception there was strong sentiment in Congress for creation of a corps of government auditors to review required financial statements. The accounting profession was able to convince Congress that independent certification would be much the preferable course, and the 1933 Securities Act gave the SEC authority to require certification, which it has exercised. Thus, the tone was set for what can usually be described as a "working partnership" in development of accounting principles, with the SEC taking a generally passive role of reviewer of new principle proposals, and on occasion striking down proposed new directions of change in accounting principles.

A number of recent events have given indication that the traditional passive role of the SEC may be metamorphosing into a much more active one.

The posture of the SEC on valuing the use of capital-assets has particular relevance to the Department of Defense because most DOD contractors fall into the category of firms regulated by the SEC. Consequently, any authoritative pronouncements of the SEC in this area would mandate additional attention to any revaluation methods recommended. This would obviously breathe new life into methods thought desirable previously, but not embraced because of administrative costs which could not be justified in the light of method allowability.
The traditional posture of the SEC has paralleled that of the AICPA in following the "generally accepted accounting principle" of capital assets being valued at historical cost and allowing reported depreciation only on that basis.

A serious attempt to deviate from that principle was made in 1947 when the United States Steel Corporation based its annual depreciation on estimated plant replacement cost.

E. I. DuPont de Nemours and Company in the same year charged off a portion of a new plant cost deemed excessive due to high prevailing costs.

Chrysler Corporation at the same time adopted what came to be known as the "Chrysler Formula", basically a method of accelerated depreciation geared to the idea of justification of high capital asset costs only because of exceptional immediate market possibilities.

The attempts by U. S. Steel and DuPont at adjusting the value of capital asset use were rather summarily struck down by the SEC which cited nonconformity to "generally accepted accounting principles" as rationale. The "Chrysler Formula" was let to stand and became a precursor of accepted accelerated methods of depreciation.14

Subsequent to this, the SEC in 1952 and 1954 again reiterated its requirement for adherence to historical cost in reports filed with it.15


A formal application to adopt a requirement for "economic" depreciation's disclosure in the accounts or by alternative disclosure was also denied by the SEC.¹⁶

The Iowa-Illinois Gas and Electric Company filed its 1958 statements in which it charged operating expenses for depreciation based on fair value of property used to serve customers in districts where that fair value basis had been allowed in setting rate charges to customers.

This company also credited to a capital account maintained for recovery of fair value depreciation the amount of $198,000. This amount was calculated by taking $420,000, the extra revenue allowed to recover fair value depreciation by rate setting bodies, and subtracting related estimated income tax of $222,000.

Subsequently, the company filed an amended statement in which it reverted back to historical cost depreciation and showed the net fair value depreciation of $198,000 after the amount designated "Net Income".

A note to the financial statements explained that management believed the provision for fair value depreciation should be reflected as an operating expense deducted before arriving at operating income, and stated further "However, the company is informed that much treatment will not be acceptable to the Securities and Exchange Commission."¹⁷


Ayshire Collieries Corporation filed its form 10-K for the year ending June 30, 1958 in which it made a provision for price level depreciation of $195,429 after Net Income but prior to addition of "Equity in Undistributed Net Income of Affiliated Companies", to arrive at a final figure labeled "Net Earnings, Including Equity in Undistributed Net Income of Affiliated Companies."

A note to the financial statement explained that:

Price level depreciation represents the excess of depreciation cost measured by the current purchasing power of the dollar over depreciation cost measured by the purchasing power of the dollar at dates of acquisition or construction of the companies' depreciable property.

An amended statement later filed listed "Net Income" followed by a deduction of $195,429, labeled "Appropriation for Price Level Depreciation" to arrive at "Balance of Net Income Transferred to Earned Surplus."

The revised note to the financial statement read:

The company believes such appropriations of net income should be deducted before arriving at net income for the year, but is informed that such treatment is not in accordance with generally accepted accounting principles and will not be accepted by the Securities and Exchange Commission.18

Thus in the case of depreciation computed on assets revalued both by replacement cost and general index purchasing power concepts, the SEC had forced a return to historical cost in order to stay within the bounds of "generally accepted accounting principles."

Accounting Research Study No. 6 and its offspring APB Statement No. 3, which recommended supplementary general price level

18Ibid., p. 18.
adjusted statements, have found little favor with the accounting profession, and have generated little enthusiasm on the part of the SEC.

As early as December, 1969, a few months after the issue of APB Statement No. 3, Sidney Davidson noted the organized opposition to the concept of price level adjustment by regulatory and taxing authorities, due to the restructuring of elaborate administrative procedures based on historical cost, and the probability of increased utility rates and declining tax revenues which would be created by price level adjustments.

He saw intransigence in this area unless inflation were to reach a rate of, say 6% per year for several years.19 Unfortunately, that condition has become fact and accordingly the SEC has responded.

The response, however, has not been in the direction of embracing general price level adjusted values for capital assets.

Accounting Series Release No. 151, issued January 3, 1974, noted that 1973's rate of inflation had "significantly reduced" the utility of the "traditional accounting measurement model based upon historical cost." Accordingly, it disclosed that in October, 1973, a change to Regulation S-X had been proposed requiring all registrants to indicate "the effect on net income, if significant, of using current replacement cost (for valuing inventories) in the computation of cost of sales."

Noting difficulty of implementation, the SEC decided not to make disclosure mandatory for 1973 statements but urged affected entities to voluntarily disclose the extent to which reported earnings are comprised of potentially unrepeatable and usually unsegregated inventory profits . . . prior to the adoption of final requirements by the Commission. Disclosure could be made in the financial statements, notes or textual material.

Further the Release stated that while continuing or accelerating price level changes might require a fundamental change in the basic accounting measurement model, suggestion of such a change seemed premature at that time, and at any rate both the FASB and the SEC would have to give careful consideration to effects of such a major step prior to its implementation.20

Homer Kripke, in a 1970 article, said:

"In effect the SEC has made it an exercise in futility for practicing accountants or anyone else to argue for revision of valuation methods in balance sheets or income statements . . . only the SEC could provide the motivation that might lead to a basic reconsideration of the structure of accounting and perhaps move us to a value system.21

Evidence that perhaps the time had come for the SEC to provide that motivation surfaced in an address by John C. Burton, Chief Accountant of the SEC at the University of California's (Berkely) Accounting Day, May 30, 1974.22 He made it plain that a mere

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requirement for mandatory supplemental general price level adjusted statements would be too narrow, and "eliminates consideration of many relevant alternative means of dealing with inflation in financial reporting."

Pointing out that if revenues are measured by current market phenomenon, "costs must be similarly based if the matching process is to produce a meaningful measure of results." This seems to argue strongly for a measurement system using current economic costs. Under such an approach, expenses would be based on the current cost of replacement of the particular assets sold or used (emphasis supplied).

Mr. Burton expressed the view that difficulties of determination of current replacement costs had been overestimated and cited the successful experience of the Phillips Company (discussed in a later section of this chapter) as support for his view.

He also highlighted the determination of economic life of an asset as being a much more formidable problem (a conclusion reached in the discussion of depreciation in Chapter II of this dissertation).

Further, he went on to point out that "data produced by a general price level adjustment system may be affirmatively misleading rather than helpful to the users of financial statements."

Citing the fact that the system is one of historical costs expressed in terms of a purchasing power unit, he dubbed it PuPU Accounting in the interest of "easy communication". The metaphor clearly reflected his disdain for a system which he states gives the appearance of an improvement when in actuality it is a detriment.

Further, he seemed particularly distressed about the probability that the "PuPU" system would be "annointed" by the
Financial Accounting Standards Board. Burton's worst fears were confirmed recently when the FASB announced it would make mandatory the disclosure of supplementary general price level information in January, 1976. Citing the costliness of a "false start" in that direction he called for "rapid movement in the direction of replacement cost accounting."

Burton finally considered the question of supplementation of historical cost vs. supplanting and concluded that the present environment justified only the supplemental approach. He noted the SEC was already proposing disclosure of income effects in inventory and cost of goods sold and urging disclosure of "inventory profits".

In concluding he alluded to the possibility of requiring a supplemental set of financial statements on a replacement cost basis.

A brief announcement in The CPA Letter of May 26, 1975 heralded what I believe will be the most traumatic change in capital asset treatment in the last 50 years. It disclosed that the SEC is working on a proposal which would require disclosure of a corporation's replacement cost of fixed assets and inventories, probably by means of an unaudited footnote. The proposal is expected to be ready for comment prior to the end of June, 1975.

Another recent article indicated that at the same time the SEC is formulating requirements for replacement cost disclosure, it

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is apparently considering a prohibition of publishing general purchasing power financial statements.24

The position of the SEC then has come full circle from that of consistently striking down any attempts at deviation from historical cost in asset valuation, to proposing and requiring disclosure of replacement cost, which was rejected by both APB Statement No. 3 and Accounting Research Study No. 6.

Any study of forces which are currently involved in the effect of inflation on capital asset valuation must consider the present legal environment in the United States.

The argument that any deviation from historical cost would disrupt the basic contractual relations which hold the fabric of our society together is often advanced in advocacy of historical cost. The other side of the coin is the layman's idea that accounting for assets is basically a "true" valuation process, deserving of considerably more verity than is realizable from historical cost/allocation-depreciation methodology.

This leads us into what could probably be described as the "damned if you do and damned if you don't" predicament of today's accountant in deciding whether his attempt to recognize current value in a particular situation is forbidden, optional, or mandatory under prevailing law.

While most of this concern has been couched in terms of potential liability for damages under the law, the present status

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24Louis E. Mullen, "Are You Ready for Inflation Accounting?", The Journal of Accountancy, 139, No. 6 (June, 1975), pp. 91-95.
of the law and its future direction will be critical to DOD's attempts at any asset revaluation process.

The recent and apparently future trends seem to be in the direction of shifting responsibility for deciding the appropriateness of "fair" asset valuation away from the professional accountant and into the hands of the layman (including in that term judges, attorneys and juries).

The classic doctrine espoused in Ultramares vs. Touche & Co., 174 N.E. 441, that liability for an accountant's negligent conduct should not be extended beyond his immediate employer, has been eroded by a number of court decisions under federal statutes designed to protect investors relying on financial statements associated with the accountant.

Not having been steeped in the proper traditional reverence for historical cost or generally accepted accounting principles, the layman has not been reticent about wading in and offering enlightened decisions on fairness of presentation, geared to his own subjective interpretation of that elusive concept. Deviation from historical cost does not seem to weigh heavily on his conscience.

Two cherished convictions of the accountant have been the importance of "fair" presentation in accordance with generally accepted accounting principles, and the idea that since he was theoretically reporting to the sophisticated statement reader, he was under no obligation to elaborate or simplify for the occasional naive viewer of his statements. Both concepts have been rather summarily brushed aside by the courts in two separate cases.
In *United States vs. Simon*, 425 F2d 796, the court clearly enunciated the opinion that it did not necessarily consider generally accepted accounting principles and "fair" presentation synonymous.

Despite the testimony of eight expert accountants to the effect that presentation of a relevant receivable was "in no way inconsistent with generally accepted accounting principles or generally accepted auditing standards . . ." 425 F2d 805, the court imposed fines on those accountants who certified financial statements containing the receivable. The court based the allegation of misrepresentation on failure to disclose nature of collateral pledged, and also failure to disclose an increase in the receivable subsequent to the balance sheet closing date.

In its instruction to the jury, the court pointed out that "fair presentation of the financial position by the statements as a whole would constitute a critical test." "Fair presentation" was geared in this case to the jury's own subjective standards.

Appealing the decision to the United States Supreme Court, the AICPA in an *Amicus Curiae* brief, urged that criminal liability not be found where it could be shown that generally accepted accounting principles had been followed. Arguing that financial statements cannot possibly present all financial information desired by investors, the AICPA contended that in any case this was a matter to be decided by accountants, their professional governing bodies and the SEC, not judges, and particularly not juries.25

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The Supreme Court denied certiorari, and in my opinion this may have been the best alternative for the accounting profession under the circumstances. Obviously, no court in the land will ever concede to any professional body the sole right to administer policing of its profession to the complete exclusion of interference by the law. An adverse decision on the part of the Supreme Court could have gone a long way toward destroying the credibility of the accounting profession and the attest function of the CPA.

While the case did not exactly turn an asset valuation, it has importance because it implies that no longer will reliance on historical cost as a generally accepted accounting principle necessarily preclude liability where cost is not considered by the judge or jury to provide "fair" presentation. Indeed, the AICPA had gone so far as to point out in its Amicus Curiae brief, "generally accepted accounting principles require, in the interest of objectivity, that land be carried on a balance sheet at cost, rather than at current market value which might be of greater interest to investors."

The court in United States vs. Monjar, 47 F. Supp. 421, noted that the very purpose of the securities laws was to protect those who lacked business acumen. Extending this principle to a case involving the mail fraud statute the court said "the monumental credulity of the victim is no shield for the accused"--Deaver vs. United States, 155 F2d 740. No longer can it be presumed that
Investors will possess sufficient knowledge to grasp the essence of the accounting profession's concept of historic cost valuation.\textsuperscript{26}

The effect of the court's interpretation of The Securities Act of 1933 and The Securities and Exchange Act of 1934 is to make potential liability an important consideration by the accountant in adoption of any asset valuation process. While the liability aspect does not necessarily have a direct impact on compensation for use of DOD contractor assets, it is likely that any compensation process based on a valuation process other than historical cost will be influenced by liability-oriented asset valuation jurisprudence.

The 1933 act covers sponsors and accountant registration statement preparers. It established liability toward stock acquirers at a time when the registration statement or prospectus contains misleading material fact omissions or untrue statements.\textsuperscript{27}

The 1934 act applies to transactions both before and after registration, prohibits proxy statement material misstatements or omissions, and gives authorization to the SEC to rule out deceptive devices in connection with security sales and purchases. Both acts provide criminal penalties for willful omissions or misleading statements.

Four criteria appear to be relevant in attaching liability: materiality, defendant's state of mind, degree of deception, and finally reliance thereon.\textsuperscript{28} The materiality factor is obviously

\textsuperscript{26}Ibid., p. 52.

\textsuperscript{27}Ibid., p. 47.

\textsuperscript{28}Trienens, "Legal Implications of Current Value Accounting," p. 60.
related to the degree of deception and some analysts place both under the category of materiality.

SEC rule 10b-5 talks in terms of the illegality of making an untrue statement of a material fact or omission of the statement of a material fact "... necessary in order to make the circumstances under which they were made not misleading." In the words of Trienens the language of 10b-5 "couldn't be broader."29

In List vs. Fashion Park, Inc., 340 F2d 45, the court said "the basic test of 'materiality' is whether a reasonable man would attach importance (to the fact misrepresented) in determining his choice of action in the transaction in question." Trienens and Smith conclude a little more restrictively that "information is material if it would have altered a person's conduct in the situation."30

Trienens and Smith further point out that the standard of materiality has been expanded to include any information influential to investors. In terms of current value the courts have held a reporting requirement essential on appreciated value of a tobacco inventory (Speed vs. Transamerica Corp., 99 F. Supp. 808) current value of substantial real estate holdings (Gerstle vs. Gamble-Skogmo, Inc., 298 F. Supp. 66) and current value of a corporation's majority stock interest in a railroad (SEC vs. Bangor-Punta Corp., 331 F. Supp. 1154).31

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31 Ibid.
Where promissory notes were shown at full value despite some question as to realizable value, and where these same notes had been received in exchange for land which the seller was obligated to repurchase at buyer's option for original sales price or higher, the court held that misstatement of current value had occurred (Seeburgh-Commonwealth United Litigation, CCH Fed. Sec. L. Rep. 92, 277).

In Securities and Exchange Commission vs. Texas Gulf Surphur Co., 401 F2d 333, the court found a violation of rule 10b-5 where officers published a press release stating conclusions as to "... size and grade of ore would be premature and possibly misleading" relative to a potential major mineral ore strike. Even though the court allowed that the evidence of a major strike was still not complete proof, it noted that the possibility of the mine of vast magnitude was "surely more than marginal" where a rich drill core had been extracted remarkably close to the surface. Various insiders had purchased and placed calls on shares of TGS stock prior to public announcement of the strike.

The defendant's state of mind has always been important in imposing liability under the law--his knowledge, intent to mislead, and failure to cure. The SEC statutes, however, do not deal with these concepts; they only forbid the material omission or untrue statement.

It appears that the principles establishing liability in this area are still not clearly defined, but as Trienens and Smith observe "the trend is toward imposing liability even though defendant's deceptive conduct may be remote from the occasion of plaintiff's
injury, or where the defendant simply fails to remedy the deceptive action of another of which he has knowledge. 32

In Ellis vs. Carter, 291 F2d 270, the court held that "any manipulative or deceptive device" could violate the statute. Thus intent to deceive was not considered critical, only the deceptive device's presence. This interpretation of rule 10b-5 has been consistently followed in other later cases.

The Continental Vending case, while it dealt with criminal liability, normally a more narrowly constructed area of the law, held in a broad interpretation that criminal sanctions could be imposed even where a complete absence of proof of commercial motivation to mislead existed, and where presentation was made in accordance with generally accepted accounting principles. 33

The degree of deception cases span a wide range of latitude in what the courts have considered sufficient to warrant attaching liability. In Escott vs. Bar-Chris Construction Corp., 283 F Supp. 643, an overstatement of net current assets by $610,000 and an understatement of liabilities by approximately $325,000 was considered sufficient to attach liability where correct total current assets were $4,524,000 and correct total current liabilities were $2,478,000. Thus an overstatement of current assets and an understatement of liabilities by a little more than 13% in both cases had been considered an adequate degree of deception to warrant positive court action.

32 Ibid., p. 60.
33 Trienens, "Legal Aspects of Fair Value Accounting," p. 31.
In another leading case, Gerstle vs. Gamble-Skogmo, Inc., 298 F. Supp. 66, stockholders of a merged corporation were successful in showing that assets carried at a book value of $10,576,418 prior to the merger, and later sold for $25,081,121 were undervalued. The corporation had sold 25 parcels in the two years prior to the merger for $33,000,000 when book value had only been $11,150,000. In addition, there had been a misleading explanation on statements sent to stockholders prior to the merger pointing out that company real estate with a book value of $2,860,873 was believed to have a value of approximately $3,700,000 based on recent appraisals and exchanges. Total understatement of assets in this case then was about 200% of their stated book value.34

The final requirement of reliance on the material misstatement or omission in order to establish liability is being eroded by recent court action. The reliance requirement has been eliminated in cases of non-disclosure (Crane Co. vs. Westinghouse Air Brake Co., 419 F2n 787) and in derivative actions (Pappas vs. Mars, 393 F2d 865). The defendant can escape liability if he can demonstrate the misleading statements were never disseminated nor viewed by any investor.35

One final consideration should be the timing of the release of information on changes in asset values. The SEC has endorsed the concept of continuous information flow in order to protect the

34Tienens, "Legal Implications of Current Value Accounting," p. 60.
outsider in his assessment of potential market action and to preclude Insider profiteering from information not yet publicly released.

Here the asset valuer is once again caught between early release of less objective information and later release of more definite information. As Flom and Atkins point out, the old adage "when in doubt, disclose!" can be very dangerous if information which later proves to be inaccurate is prematurely released. The trend here has been to require disclosure to combat rumors or unusual market activity, and to allow the exercise of good-faith judgment by corporate officers as to information release where there is demonstrably no trading or other inordinate use of inside information.

The summary conclusion that the law has abandoned historical cost and generally accepted accounting principles would be unwarranted. However, it is clear that reliance on generally accepted accounting principles will not serve as an adequate defense where the court (judge and/or jury) considers subjectively that valuation of assets is not "fair". In addition, the asset valuation process may be subject to attack if it is aimed exclusively at the sophisticated information recipient. Consequently, the idea that the limitations of the traditional historical cost, or any other valuation approach, are understood by the statement reader can be extremely dangerous. One final point is that the SEC's concept of continuous information flow coupled with its requirement for asset

replacement cost reporting will force a continuous consideration of asset current values.

Summarizing, this section has examined IRS, SEC and legal recognition of current value in asset treatment.

The IRS has traditionally adhered to historical cost and allocative depreciation in allowing depreciation of a purchased asset. Its deviation from historical cost has taken the form of determination of "fair market value", primarily in the case of valuation of gifts, estates, asset exchanges and employee compensation.

The Internal Revenue Code does not define "fair market value", furthermore, the regulations and rulings have leaned in the direction of broad definitions, involving "willing buyers", "willing sellers", "negotiation", "no compulsion", etc. The process of determination of "fair market value" has been primarily a judicial rather than a legislative one and the judiciary has not been reluctant to assume this role. No one test of "fair market value" has been paramount and among factors considered have been cost, book value, contemporary sales of similar property, prices bid and asked, earnings potential, appraisal, and expert testimony. Replacement cost is not usually considered relevant unless it coincides with "fair market value", and retrospective appraisals are given little weight.

Due to its being geared to litigatory determination in most cases, the IRS concept of "fair market value" does not appear to be of much value in offering guidance to DOD in compensating its contractors for capital asset use.
The SEC has paralleled the AICPA for many years in its treatment of capital assets, recognizing only historical cost and allocation depreciation methods. It has traditionally operated as a "silent partner" to the accounting profession, striking down on occasion deviations in accounting procedure which it considered excessive.

Recently, however, the SEC has assumed a more active role in direction of accounting practice where it considered the accounting profession to be "dragging its feet", and an apparent divergence of viewpoint on asset valuation with the AICPA and the FASB has resulted.

The FASB is indicating it will make supplementary general price level reporting mandatory by 1976 and the SEC is simultaneously requiring replacement cost disclosure on inventories and fixed assets. Judging by Chief Accountant Burton's comments regarding general price level accounting, a major confrontation between the SEC and FASB may be in the offing.

My own appraisal is that the concept of replacement cost, because of its SEC endorsement will become the generally accepted method of capital asset valuation on a supplementary basis in the future. Consequently, I believe the DOD will have to get into the business of asset valuation via this method.

Finally, this section discussed the impact of recent legal decisions on the asset valuation environment. A general trend toward shifting responsibility for judging what is "fair" reporting of asset valuation away from the accounting profession and into the hands of the layman was noted.
Reliance on reporting in accordance with generally accepted accounting principles, and assumption of statement reader sophistication will no longer protect an accountant if assets are valued "unfairly" in the subjective eye of the judge or jury. In attaching liability for omission of relevant information or untrue statements the courts would consider the concepts of materiality, defendant's state of mind, degree of deception, and reliance by plaintiff. Timing of information release has also assumed much more importance due to the SEC's concept of "continuous information flow".

The accountant must be aware of these forces when operating in the area of asset valuations and any system of asset valuation adopted by DOD will have to be cognizant of these factors.

THE COST ACCOUNTING STANDARDS BOARD STUDIES

The CASB had three projects in progress during the period of research for this dissertation, which were related to it.

The first culminated in the publication of the new standard on depreciation and has been discussed in detail in Chapter II of this dissertation.

The second is entitled Current Value or Price-Level Accounting and is described as involving "... a continuing study of concepts and practices for cost measurement in times of changing price levels." 37

I spoke with a director of this project on the telephone during my active duty tour with the Air Force at Wright-Patterson, A.F. Base, Ohio on June 16, 1975. He indicated in very candid remarks that the CASB has taken a "wait and see" attitude in this area, expecting other bodies to issue some authoritative pronouncements concerning asset valuation in the near future.

At the same time he indicated that some pressure is building for the CASB to do something more definitive in this area, and that they have been doing considerable studying of valuation problems. He expressed the opinion that general price level adjustments would involve a great deal more clerical work on the part of contractors with little practical impact on negotiation results. He further stated that if forced to issue a directive in this area, the CASB will probably go with adjustment via a specific equipment or asset index which will adjust periodic depreciation charges in much the same way as the escalator clauses in DOD contracts are now used to adjust labor charges.

I also asked him what effect the SEC announcement regarding replacement cost disclosure would have on CASB policy or procedure in this area. He responded that it was too soon after the announcement to really assess its effect, but that the requirement for simple disclosure of replacement cost via an unaudited footnote did not seem to be sufficiently rigorous to use for DOD contractor negotiation on capital asset use. My own opinion is that the unaudited footnote requirement is a prelude to more detailed reporting on a replacement cost basis. In support of this, Mr. Burton's comments in prior speeches discussed in a previous section of this chapter of the
dissertation are cited, along with his recent comment that the SEC did not intend to "cook book" general price level accounting.38

Finally, the project director indicated the possibility of promulgation of an "issues paper" on the asset valuation problem in late summer or early fall of 1975.

The third project concerned the cost of capital utilized by DOD contractors. In the spring of 1974 the CASB circulated an issues paper which took a broad approach and considered a number of alternative routes to contractor capital compensation.

Responses to the paper were analyzed and alternative approaches were narrowed down to one which revolves around the idea of payment to contractors of an imputed interest on use of capital. An issues paper on factors affecting this approach was circulated on April 29, 1975 with a deadline for return of July 7, 1975.

Five factors were discussed, with questions asked of the respondents and comments solicited in each area. It was pointed out that this approach concentrated primarily on the cost of money as part of the cost of capital, and did not purport to be a complete compensatory process, but rather would be combined with the profit or fee computation via a modified set of weighted guidelines.

The first idea proposed was that any compensation for capital utilization be via a "risk free" rate of interest representing "pure time cost of money". As imputed interest, this payment would fit neither into the category of traditional "cost" nor profit or fee.

It would not be recorded as a cost in the accounting records and no implication of relationship to specific disbursements or liability incurrence is implied.

The Imputed interest would, however, be considered as a cost for the purpose of fee or profit negotiation, and measured in accordance with verifiable accounting data. Consequently, the "weighted guidelines" would be modified for exclusion of any embodied "risk free" cost of capital elements. Imputed interest payments would not consider actual interest payments and these would continue to be excluded from contract costing, as they are now under current procurement regulations.

Net book value of assets would serve as the base for computation of imputed interest and obviously would be subject to all the arbitrariness that term implies. However, this choice of a measurement surrogate is defended on the basis of its relative ease of determination. The question of adjustment for inflation's effect on asset valuation is apparently not considered in this project, but reference is made in the issues paper to the CASB project on asset valuation discussed previously in this section of the dissertation.

A third feature of the cost of capital compensation process would be a division of capital into at least two types: "Operating Capital" - based on net current assets, and "Facilities Capital" - based on net book value of fixed assets. The basic difference in emphasis would be geared to cash flows in the case of operating capital and production capital intensity in the case of facilities capital. Separate measurement would be contemplated for each type of capital.
The fourth concept proposed that identifying cash flow actually associated with separate contracts be the preferable method of measurement for operating capital compensation. In the alternative the average amount of operating capital employed by an organizational unit could be used for allocation of imputed interest to all contracts or other final cost objectives, utilizing some broad base, such as total cost.

The final factor, recognizing the difficulty of allocation of facilities capital directly to contracts, would involve the allocation of assets first to "production burden or cost centers" and subsequently an allocation of imputed interest on facilities investment to all cost objectives processed by each burden or cost center. Existing overhead bases would be used as the vehicle for the imputed interest allocation.

Apparently, the present favored surrogate for "risk free" interest is the long-term federal borrowing rate as measured by an average of bond yields on taxable treasury bonds with maturities of ten years or more. No income tax effect would be considered in determining compensation to contractors and apparently the use of one rate for both operating and facilities capital imputed interest payments would be contemplated.39

To the extent that the long-term federal borrowing rate is affected by inflation, this process will offer some relief in

compensating DOD contractors for use of capital assets during inflationary times, but its prime purpose is to give recognition to cost of capital via an imputed interest factor, and not to compensate for inflationary effects. There is considerable evidence that the long-term interest rate in general is largely influenced by inflationary expectations. However, the link between the present replacement cost of capital assets and the long-term interest rate is too tenuous to look to the process proposed by this project as a satisfactory solution to adequately compensating DOD contractors for capital asset use.

In summary, three projects of the CASB are related to this dissertation. The project on depreciation has been discussed in Chapter II, and the project on current value accounting is presently awaiting further developments or pronouncements by other authoritative bodies.

The third project involves the concept of compensation for capital via an imputed "risk free" rate of interest based on net book value of assets. Except as the long-term government interest rate fluctuated because of present and expected inflation, the proposal would not directly be affected by inflation and is not designed to be a compensatory device for inflation's effect on the replacement cost of capital assets.

THE EXPERIENCE OF FOREIGN COUNTRIES

The United States has only relatively recently begun to experience the effects of rapid inflation which have plagued many of the world's economies consistently in the last 25 years. The topic
of inflation and its disastrous effect on the relevancy of balance sheet figures was a hotbed of accounting theoretical discussion between World War I and the Great Depression and has been intermittently a viable topic since then, but due to relatively stable prices in this country, it has often taken a back seat to more pressing accounting controversies. Other countries, not afforded the luxury of freedom from rapidly rising prices, have had to grapple with the problem of capital asset valuation on a pragmatic basis. A general idea of the relative rates of inflation in selected countries versus that experienced by the United States is afforded by Exhibit III-1.

Three probable approaches to adjustments for inflation are normally considered relevant. The first deals with the idea of valuing fixed assets and inventories in terms of specific price indexes and although replacement cost determination can be done in this manner it is also done via appraisals or in combination with other methods. This method is not geared to measure or compensate for changes in the purchasing power of money except to the extent that changes in replacement costs of specific assets correspond with changes in the general price level. In fact, the change in value of a specific asset under this method could actually go in a different direction from a change in the general purchasing power of money.

This method probably represents the most effective measure of sacrifice involved in the use of assets during a particular period, and would be more equitable for use in compensating DOD contractors. It is, however, more subjective than its alternatives and would
# Exhibit 111-1

**Consumer Price Index Numbers for Selected Countries**

<table>
<thead>
<tr>
<th></th>
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</tbody>
</table>

*Source: United National Statistical Yearbook, 1971, 1960, and 1948 editions (New York: Statistical Office of the United Nations). The consumer price indices were reconverted in the above table to the base year 1937. They were originally stated as follows:*

<table>
<thead>
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<th>Edition</th>
<th>Pages</th>
<th>Base</th>
<th>Years Covered</th>
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<td>1948</td>
<td>364-369</td>
<td>1937</td>
<td>1930-1948</td>
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</table>


generally require more clerical effort to administer. It is apparently
the more common type of adjustment for inflation being made or allowed
at present. 40

A second type of adjustment for inflation involves adjusting
both assets and liabilities for changes in the purchasing power of
money. It is geared generally to a consumer oriented general type of
index such as the Consumer Price Index, or Gross National Product
Deflator, etc. It is obviously less subjective in that it does not
require individual asset analysis to establish value, but possesses
all the pitfalls of a system which measures in terms of general
changes with no consideration of the magnitude or direction of value
changes in the individual assets being valued. This has been the
approach favored on a supplemental basis by the accounting profession
in the United States. Unless a change occurs, the FASB apparently
intends to make this type of supplemental price level reporting
mandatory by 1976.

A third type of approach would be a valuation system
utilizing both specific and general price level valuation. At
present there are no countries employing this type of valuation
system, but in the absence of SEC prohibition (a possibility dis­
cussed previously in this chapter) the United States could be headed
toward something like this when general price supplemental reporting
as required by the FASB is combined with supplemental replacement

40Karen M. Frey, "Survey of Price-Level Accounting in
cost reporting for fixed assets and inventories as required by the SEC.

A summary of present price level accounting practices in the United States and selected other countries is presented in Exhibit III-2.

EXHIBIT III-2
CURRENT PRICE-LEVEL ACCOUNTING PRACTICES

<table>
<thead>
<tr>
<th></th>
<th>Fixed assets are written up to account for price-level changes either annually or on occasion</th>
<th>Inventories are written up to account for price-level changes either annually or on occasion</th>
<th>The effects of inflation upon financial statements are recognized either in the basic statements or as supplementary information</th>
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<tr>
<td>United States</td>
<td>No*</td>
<td>No*</td>
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*The governing authority requires (Yes) or does not permit (No) the use of this practice.

Source: Karen M. Frey, op. cit., p. 32.

Latin American countries are frequently mentioned in connection with the problems of runaway inflation, and Brazil is often cited as a country which has achieved some success with indexing of
business transactions. The basic concept of indexing involves, to a certain extent, an admission of willingness to live with inflation as opposed to fighting it.

It is interesting to note that Germany, which has the best track record of controlling inflation during the 1960's and 1970's, has made adjustment by index illegal. This is a byproduct of Germany's experience in the 1920's where indexing and galloping inflation contributed to a situation where workers were paid three times a day and then rushed out to convert currency into goods immediately.41

Brazil, since it enacted legislation designed to adjust historical costs for inflation's effect in 1964, has devalued the cruzeiro about once every 40 days. The idea behind this is to have continuous "crawling peg" devaluations rather than much more harsh "jolts" at less frequent intervals.42

Adjustments to all contracts and transactions having a time duration are made via an index prepared monthly by the Getulio Vargas Foundation. It is a general weighted index geared to prices in Guanabra state. A weight of six is given to the wholesale price index, three to the cost-of-living index, and one to a construction cost index.

Brazilian companies write up the value of plant, equipment, and working capital each year and depreciation is permitted on the

42 Ibid., p. 38.
revalued basis, while the "paper" gains on revaluation are not taxable if capitalized.

The political/social system of Brazil is somewhat different from that of the United States in that harsh, repressive control of prices and enforcement of the indexing system are accepted as a means of dealing with inflation. In addition, the tax structure is geared to encourage unfettered capitalism and tax brackets are adjusted and lowered annually by monetary correction. The asset valuation system as it operates there appears to be a poor substitute for more realistic systems and would doubtless find little acceptability in the present socio/political/economic environment of the United States, except as a short term alternative dictated as an admission of an inability to control rapid inflation. Unless the United States should reach a condition where long-term runaway inflation appears imminent, Brazil's experience does not appear to offer much guidance in formulation of a valuation system for DOD contractor compensation.

Both the French and Japanese have allowed asset revaluation in former times of rapid inflation only to revert to historical cost when prices became somewhat more stabilized.

France allowed revaluation of fixed assets during the period following World War II based on a series of government-published coefficients geared to wholesale price indexes for lumber, steel products and construction materials.

The Plan Comptable, the official French accounting guide considered the basis for uniform accounting, set out cost as the basis for fixed asset valuation in 1959, and that basis for
depreciation has not changed since. Although the Plan Comptable was not mandatory for all French companies prior to 1964, it was adhered to by most of them because of inherent financing and tax advantages, and apparently the asset revaluation was successful during the period in which it was allowed.

Japan enacted its Asset Revaluation Law in April of 1950 to provide for adjustment of depreciation available on long-term assets in response to extensive currency inflation following World War II. Apparently, substantially all major Japanese companies revalued fixed assets at that date in accordance with either detailed indexes provided for in the law or in accordance with current purchase or reproduction costs. The increase in value was reflected in surplus from revaluation of plant and equipment. The first enactment of the law taxed the revaluation surplus at 6% but later revisions eliminated the tax on revaluation.

In April of 1963 Japan's Joint Stock Corporation Law (Commercial Code) was revised to introduce historical cost as a basis of asset valuation. Article 285.3 specifies that basis shall


be "... the amount of bargained price of manufacturing cost minus reasonable depreciation ..., and if an unpredictable diminution of value arises, such amount shall be deducted." Article 34 of the Code still allows, as a general provision, valuation by current price as an upper limit, but other compulsory regulations requiring lower of cost or market valuation of fixed assets limit any application of current value.

Current valuation of assets in Japan appears to have been a workable proposition, but its acceptance appears to have been closely aligned to tax advantage. Since much of Japan's accounting theory and practical procedures have developed under strong United States influences after World War II, their experience in dealing with previous asset revaluation might be of particular value to the United States in the present period of rapid inflation.

Asset accounting in Great Britain has had considerably more latitude than contemporary reporting in the United States. Numerous methods of asset valuation have been allowable and combinations of valuation methods within the same company are allowable. Both general and specific adjustments of historical cost, by index, current replacement cost, realizable value of different types, and "director's valuation" have been allowed under the 1967 British Companies Act.


The Act provides that if fixed assets are valued at other than historical cost, these items of information must be furnished: years in which assets were severally valued (if known), and the several values; names of valuers; their qualifications; and valuation bases for assets valued during the current fiscal year.  

English accountants have traditionally endorsed a policy of not inhibiting accounting development with rigid standards which impose arbitrary and unfair reporting practices.

The Accounting Standards Steering Committee of the Institute of Chartered Accountants in England and Wales issued an exposure draft in early 1973 entitled "Accounting for Changes in the Purchasing Power of Money." It provided that companies continue to maintain records and issue statements in terms of historical costs, and that published reports of quoted companies include supplementary balance sheets and income statements adjusted for inflation via a general index geared to the purchasing power of money.  

The standard was scheduled to become mandatory in 1974, but due to the opposition and controversy surrounding it, the government asked for a delay in issuance. The ASSC decided to issue it as a provisional standard in May, 1974. In this status it is not mandatory, but the committee hoped it would be followed by a majority of British companies. At the same time the British government set up the Sandilands Committee which is presently studying the effects

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49 Frey, op. cit., p. 31.
of inflation on the economy, various methods of adjusting financial statements for inflation, and a determination of whether any adjustments should be made at all.

The present state and future direction of asset valuation accounting in Great Britain appears to be in about as much confusion as is the United States. Their general orientation appears to parallel that of the FASB position in endorsing general price level adjustments by index, and I suspect that any immediate developments will be closely watched by the accounting profession in the United States. The fact that inflation has been much more severe in Britain than the United States would seem to argue for greater relevance of general price level adjustments, but the fact that the Sandilands Committee is studying the question of whether general price level accounting has any usefulness at all suggests that there is sentiment in Britain to support the SEC's position of questioning its relevance.

The experience of Great Britain in asset valuation has not embraced any consistent methodology which deviated from historical cost. Consequently, the procedures and theory involved have been fractionated to the point of being ludicrous. Revisions of asset values did not have any effect for tax purposes, and I suspect this has contributed to the lack of consistency.

The lack of consistency has also given rise to a unique type of organization called The Centre for Interfirm Comparisons (IFC). Over 2,000 English companies in 75 industries have utilized its services to compare their own performances with those of other companies in the same industry. By utilizing a series of ratios
IFC prepares a diagnostic report for each subscriber company, after the company has furnished extensive background information about itself and its operations. Included in the background information are questions concerning products, plant capacity utilization, sales, order mix, distribution methods, number of employees, and considerable financial data.

IFC procedures require reporting of fixed assets at current replacement values and extensive procedures have been developed to insure uniform asset revaluation.50

A detailed study of the asset valuation procedures utilized by IFC could be of value to DOD in contractor asset compensation, since these procedures are not the by-product of etherial academic speculation, but rather the result of a process which has had to demonstrate pragmatic economic results in order to survive.

IFC furnishes its clients with tables such as that shown in Exhibit III-3. All operating assets are reported to IFC except intangibles, sublet property, property not intended to be used for current trading purposes, loose tools, consumable stores, stocks of fuel, cash and investments. Plant and equipment items are revalued in accordance with the table. Marginal cost of assets acquired in each year, which are still in use, is listed in column two. The index figures listed in column three are prepared for IFC by The London Economist's statistical department. Separate replacement cost composite indexes are constructed for each industry. Straight line depreciation is used with a 10% rate applicable to

EXHIBIT III-3
IFC PLANT AND MACHINERY REVALUATION TABLE

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost</th>
<th>Index</th>
<th>Costs at Current Prices</th>
<th>Depreciation Factor</th>
<th>Depreciated Value at Current Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1957</td>
<td>1.35</td>
<td></td>
<td></td>
<td>0.07</td>
<td></td>
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<tr>
<td>1958</td>
<td>1.42</td>
<td></td>
<td></td>
<td>0.13</td>
<td></td>
</tr>
<tr>
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<td>1.40</td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td>0.27</td>
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<td></td>
<td></td>
<td>0.93</td>
<td></td>
</tr>
</tbody>
</table>

Totals

Source:
plant and machinery, even though a 15-year life has been demonstrable on most machinery in that industry. The 10% rate reflects anticipation of more rapid technological change than has been previously experienced. Other applicable rates utilized are furniture and office equipment--10%, motor vehicles--20%, and electronic data processing equipment--20%.51

The traditional asset valuation jurisprudence of Great Britain would not appear to offer much of value to DOD because of its lack of consistency, but the experience of The Centre for Interfirm Comparisons in extracting uniformity from diverse asset accounting treatment could provide valuable insight to DOD in formulating an equitable contractor asset valuation program.

Probably the "best" examples of practical use of replacement value application to plant and equipment are observed in the Netherlands. Replacement value accounting has found wider acceptance here than in any other major western world economy, and this is in spite of its unacceptability for income tax purposes.

There are some major differences between the accounting environment in the Netherlands and the United States which have allowed an easier acceptance of replacement value by the Dutch.

The Netherlands economy has been dominated by a relatively small number of large firms, while the United States economy obviously is comprised of a large number of widely diversified industries. Consequently, financial reporting in the United States has been oriented toward a narrowing of alternative accounting

51Ibid., pp. 232-284.
practices in order to furnish the Investor with more comparable inter-
company information.

In the Netherlands, conversely, reporting has been closely
aligned with individual firm informational needs and inter-firm
comparability has not been stressed. There are no "generally
accepted accounting principles", nor is there at present or in past
history any more than a broad, mildly prescriptive, legislative
regulation of accounting.

The Dutch accounting profession, while widely respected for
its integrity, ability, and leadership in the development of forward
accounting practice and theory, is oriented toward a pragmatic
"in-service" type of professional training, and only about 10% of
the profession's licensed members are university graduates. Members
of the profession are trained primarily by the Netherlands Institute
of Accountants through a series of 12 examinations and about 10 years
of intensive part-time study combined with practice.

A tradition of fierce independence, especially from income
tax law influence, combined with the strong influence of some widely
respected professors (particularly Professor Theodore Limperg) has
created an accounting environment where replacement value accounting
has flourished.52

Replacement value as envisioned by Limperg is not an
anticipatory concept of future asset values as endorsed by Chambers,
but rather the actual cost of replacement of an asset at current

52 Gerhard G. Mueller, Accounting Practices in the Netherlands,
prices. Based on the economic principle that the same good at the same moment has the same value, Limperg argues that the use of two identical machines purchased at different costs should each be recognized at identical replacement costs, as a measure of value sacrificed in use of the machines. He envisioned a continuous stream of values flowing into and out of the firm and argues that once enmeshed in this income stream the value of an asset's use should be measured by the value or replacement cost of putting that asset back into the stream.

Professor Limperg argues that replacement cost as determined in a buying market, as opposed to a selling market, is relevant for value determination. Inherent in this view is the assumption of continuity of the firm and replacement of assets in kind. Many theoreticians would point this out as a deficiency in his theory, indicating that net realizable value of assets is a more pertinent concept from the standpoint of management decision making.

Bedford and McKeown believe that both net realizable value and replacement cost are important concepts to management, with replacement cost being more relevant in the early years of an asset's life spectrum and being gradually supplemented and then supplanted by net realizable value as an asset reaches the end of its life.54


The direct relationship between increasing age of an asset and the probability of technological obsolescence lends support to this view. They also point out the need to evaluate new assets which may provide the same services more cheaply than old assets, and the need to be aware of a rise in the value of alternative services contained in an existing asset.

Obviously, an asset valuation system adopted by DOD would have to consider this problem in dealing with contractor compensation for use of older assets.

The Philips Company (N. V. Philips Gloeilampenfabrieken), one of the largest industrial enterprises in the world, has been quite successful in adopting, with some variation, the theories of Limperg on asset replacement cost valuation. Professor A. Goudeket wrote an article in 1960 outlining the features of Philips' system of asset valuation utilizing replacement value theory. He was at that time chief internal auditor for Philips, and the company already had a history of successful integration of replacement cost at virtually all levels.55 By 1975 a number of other companies in the Netherlands had adopted replacement cost asset valuation, but Philips remains the outstanding world example of its application.

Philips' system of accounting utilizes specific index adjustment for costs of goods sold, inventories, and fixed assets and depreciation, but utilizes a general cost of living index for monetary items and creates a loss via "excess technological price

The overall goal of the accounting process is to insure the maintenance of "the purchasing power of stockholder's equity", but the methods utilized deviate considerably from the "common dollar" purchasing power adjustment of assets recommended by the AICPA in Statement No. 3 and Research Study No. 6.

The company develops its own replacement cost indexes for plant and equipment utilizing such criteria as trends in construction costs per square foot for different types of buildings and inquiries to machinery and equipment suppliers, as well as Philips' current purchases and manufacturing costs of these items. If individual machines are not categorizable in a homogenous group, they are individually revalued. There exists within the Philips organization a separate department which functions alongside the purchasing and cost accounting departments in order to follow price level trends and make this information available to the accounting department for asset revaluation.

The indexes are reviewed annually and when significant change is indicated, the values of assets are charged in plant ledgers and other records to reflect the revised valuation. The offsetting credits are charged to accounts with such titles as "Revaluation Reserve--Land, Buildings, Machinery and Equipment" and "Revaluation Reserve--Dwelling Houses", etc. At the same time the asset is revalued, accumulated depreciation is increased to reflect


the revaluation via a charge against the aforementioned reserve accounts. This particular aspect of the process deviates from Limperg's theory in that he would have the revision of prior depreciation charged against income rather than the Revaluation Reserve.

In periods of declining prices a reverse procedure is followed with one exception—in the event of complete exhaustion of the Revaluation Reserve account, further decreases are charged against income. This is strictly due to a rather arbitrary Philip's rule prohibiting debit balances in Revaluation Reserve accounts. Gynther observes this is poor theory and inconsistent, arguing that what applies on an economic upswing should also apply on a downswing. 58

The current period depreciation charge is then computed on the revised replacement value basis and reduces current period income accordingly, giving Philip's management a more effective measure of economic sacrifice involved in the use of the fixed asset.

Additional cost of maintenance of such a replacement cost system would obviously be a critical consideration in any potential adoption by DOD for purposes of contractor compensation. In a series of interviews with executives at Philip's, Morton Backer discerned that no separate study of additional costs of the system had been undertaken and that Philip's did not isolate the costs peculiar to the system. However, it was pointed out that modern accounting methods and computers have reduced these costs to a minimum. In addition the Philip's executives interviewed enthusiastically endorsed the system and felt that any additional costs of generating the

replacement cost information were far outweighed by benefits derived from the system, particularly in the areas of management decisions on resource allocation, performance evaluation, and price determination.\textsuperscript{59}

Since most DOD contractors are probably going to be forced to develop at least a rudimentary system capable of determining asset replacement cost due to the new SEC rule, the additional cost of refining the system in order to develop more sophisticated information with considerably more managerial value should clearly be investigated.

If inflation continues at a rate which mandates adjustments, and if the SEC unaudited footnote requirement is a precursor of more sophisticated replacement cost reporting, proper planning of a replacement cost system now will be of tremendous value in developing subsequent required information systems.

Summarizing, it appears that the experience of those foreign countries who have faced rampant inflation such as Brazil would offer little to DOD capital asset compensation theory or practice. Their efforts have been largely in the direction of general index type adjustments, often born of desperation economics. Additionally, the political, socio/economic environment of the United States would not generally tolerate the harsh repressive measures utilized by many of these countries.

Although Japan is not presently allowing asset revaluation, it has utilized asset revaluation based on both specific indexes and appraisals in prior times under a national asset revaluation law.

\textsuperscript{59}Backer, op. cit., p. 242.
Since much of Japan's present accounting theory and practice is a by-product of close affiliation with the United States after World War II, a more detailed study of Japan's experience could be of value to DOD in developing an asset revaluation system.

Great Britain is presently allowing asset revaluation, but no consistent pattern of methodology exists there. A unique institution in Great Britain, The Centre for Interfirm Comparisons, has developed techniques for creating uniformity and currency in asset valuation, and further investigation of its approach could give insight to DOD in formulating an equitable compensation system incorporating uniformity and replacement cost valuation.

The Philips Company in the Netherlands appears to hold most promise in offering guidance to DOD in developing an asset revaluation system based on replacement cost. It has operated this type of system on a world-wide practical basis for many years, and Philips' executives readily attest to the practicability and value of the system. Asset values are actually adjusted down to the level of plant ledger, and this would be of benefit in the area of asset value verification which would have to be a part of any DOD adopted system.

The major obstacle to be overcome by DOD in any adoption of Philips' replacement cost system would be the subjectivity of company developed indexes. In order to achieve consistency and equity in contractor compensation, there would have to be uniformity in underlying procedures for development of replacement cost indexes by different companies.

An alternative approach similar to that of Britain's Centre for Interfirm Comparisons would be to create a comparable organization
charged with responsibility for development of replacement value indexes, and to require any deviation from the indexes in asset valuation to be justified by actual experience demonstrable to contract auditors.

**PRAGMATISM, THE INDUCTIVE APPROACH AND THE CURRENT ENVIRONMENT**

The philosophical concept of pragmatism is bound up with the idea of an ongoing, developing, evolutionary world. Any discipline that hopes to progress must concede a certain amount of validity to this concept.

As Prince states:

The pragmatic approach emphasizes the real world. The objective is for all theories to square with the real world. Whenever one admits that a problem exists, he recognizes that a given theory or group of theories is not compatible with the real world--Dewey's problematic approach.60

The last statement gives a fairly adequate evaluation of the current accounting environment regarding asset use valuation procedures. The old theories and procedures clearly no longer come close to being compatible with the real world. Balance sheet figures have become largely meaningless in the face of rapid inflation, and consequently have rendered even less meaningless any sort of allocated depreciation based on historical cost.

Our asset valuation "rituals" cry out for more meaningful processes. The philosophy of pragmatism sets out experience as the

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beginning of knowledge. Yet, we are faced with only disastrous experience in asset upward revaluation in this country during the 1920's, followed by a prohibition against further acquisition of experience in asset upward revaluation since that time.

The only legitimate exercise of general asset upward revaluation has been in the theoretical treatises of academe, thereby effectively ruling out an inductively developed theory or procedure of asset valuation in this country. With the exception of the supplementary general price level reporting encouraged by APB Statement No. 3, there has been practically no opportunity for development of asset revaluation experience by major corporations in the United States.

Apparently most major corporations have not seen sufficient value in the general price level type adjustment to justify the additional cost of its computation, and yet the FASB proposes to make this type of reporting mandatory in 1976.

The deductive approach to development of asset use valuation theory has had full command of the arena for over 100 years and has resulted in a future course apparently acceptable mainly to the theoreticians rather than practitioners.

Thayer, in discussing pragmatism, points out that "Running through all nature and effecting the function of every natural activity are two principles: those of continuity and interaction."[61] The principle of continuity has been evident in asset use valuation

during the last 40 years, but the principle of interaction has purposely been thwarted in the area of asset revaluation because of fear engendered by prior unhappy experience.

Much as a child who has had a narrow escape from drowning will develop an inordinate fear of water, I believe the accounting profession in the United States has allowed the experience of the 1920's to inordinately color our reaction to asset revaluation in a negative way. In most other areas, accounting theory has been developed largely via the inductive approach, but in this one area exactly the opposite has been true.

Although it has been fashionable in certain areas of academic recently to deplore the inductive approach in the development of accounting theory and to argue strongly for deductive reasoning in development of accounting principles, I believe both approaches are essential. Quoting Flanders:

> Inductive and deductive methods are sometimes represented as mutually exclusive methods of analysis, but they are rather polar positions from which to view the scientific method. A purely deductive analysis would start with postulates and definitions and end with the logical implications of the changes in the variables ... A purely inductive analysis would start with observations of concrete data that would be generalized in terms of a principle.62

There is one notable exception to the lack of experience in the United States regarding asset valuation which departs from historical cost. Under the leadership and guidance of Pierre F. Goodrich, its late president, and with the cooperation of

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From 1954 through 1968 inflationary effects on telephone plant and depreciation expense only were presented as information supplemental to the financial statements. From 1969 to the present time, the methodology recommended in APB Statement No. 1 has been followed, with the exception that price level change effects on long-term debt and preferred stock have been reflected in the year of debt and stock retirement only.

The FASB solicited comments on its experience from Indiana Telephone Corporation and a detailed response was furnished on April 4, 1974. During the course of my research I wrote to Miss Helen Schulte, the president of the corporation, who succeeded Mr. Goodrich at his death, and she very graciously responded and furnished me a copy of the report made to the FASB.

It is interesting to note that until 1964 Indiana Telephone Corporation adjusted asset values via a specific index made for the telephone industry and ITC by Earl Carter, a registered professional engineer. The index was a "reproduction new" replacement cost type considering supply and demand, technological improvements, and obsolescence.

There is no mention in the report of dissatisfaction with this index, only the observation that in 1964 a change was made to the Gross National Product Implicit Price Deflator in order to measure the overall change in the general price level. In fact, the positive statement is made, "This specific index made for the telephone
industry reflected these other considerations" (supply and demand, technological improvements and obsolescence). 63

The change from specific replacement cost to general price level adjustments coincided approximately with the publication in 1963 of Accounting Research Study No. 6, which obviously took a dim view of adjustment via specific index for financial statement reporting. I believe it would be fair to infer that the change was made primarily to conform to the recommendations of ARS No. 6, rather than due to a dissatisfaction with, or inability to obtain, replacement cost indexes.

A much stronger endorsement of general price level accounting adjustments coupled with a denunciation of specific adjustments was made by Archie Monroe, Controller of Exxon Corporation. Exxon has conducted some experiments in application of the principles contained in a pre-publication draft of APB Statement No. 3 primarily with its affiliate, Imperial Oil Limited of Canada, and Exxon's predecessor, Humble Oil & Refining Co.

Citing the premise that "return on investment is the most useful and meaningful end use of price-level statements," he judges replacement cost or current value asset accounting to be too subjective for practical use. Among the questions he considers are replacement in kind, replacement with more expensive but more efficient assets, no replacement at all, net exit value, and

dismantlement costs. He does not go into great detail regarding the extent to which Exxon actually pursued replacement cost, but apparently the bulk of its experiments centered around general price level adjustments, and I get the impression that replacement cost valuation was rather summarily dispatched, so attention could be devoted to the practical mechanics of gathering general price level adjustment data.

Exxon did develop a short-cut method of layering asset acquisitions by year involving the use of additions and disposals at the summary level on an assumed Fifo basis, thereby avoiding the analysis of thousands of records. Further investigation of this procedure could give valuable insight to DOD in the practical mechanics of restructuring contractor asset records in any revaluation process adopted.

In summary, this section has looked at some ideas of pragmatism in relation to asset valuation theory and practice in the United States. The unfortunate experience of the 1920's has engendered a theory development based primarily on a deductive approach and largely devoid of any current practical experience.

The general price level supplementary adjustments recommended by APB Statement No. 3 are largely a result of that approach, and have not been enthusiastically accepted by the practicing accounting profession.

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The Indiana Telephone Corporation appears to be the sole notable exception to a lack of practical experience. It utilized replacement cost asset valuation in supplementary reporting until 1964 and then simultaneously with the publication of ARS No. 6 switched to general price level adjustments. Apparently a desire to conform to ARS No. 6 rather than dissatisfaction with the replacement cost index prompted the change.

Exxon Corporation conducted some experiments in asset revaluation reporting in connection with its Canadian affiliate, Imperial Oil Limited of Canada. Apparently, replacement cost valuation was rather summarily dismissed in favor of concentration on application of general price level adjustments.

An adequate development of accounting theory and practice demands both the inductive and deductive approaches. The requirement of replacement cost reporting by the SEC will, I believe provide the impetus to correct the imbalance in approach to theory and practice in this area of asset valuation, and allow a development of knowledge based on experience as idealized in the pragmatic philosophy.

SUMMARY

This chapter has examined the experience of various groups in dealing with inflationary effects on asset accounting. Tentative conclusions were also drawn as to benefit to be derived from their experience in adoption of any asset revaluation system by DOD for purpose of contractor compensation.

An interesting departure from historical cost in DOD contractor jurisprudence occurred when a line of Renegotiation Board
cases were successfully appealed to the Tax Court. They involved primarily the allowance of restated asset values in relation to excessive profit decisions under the Renegotiation Acts of 1942 and 1951. The Boeing and North American case imputed a value to an intangible labeled as manufacturing "know-how" equal to the value of all other assets combined. However, the court doubled net worth rather than asset book value in order to render decisions of no excessive profits, based on a comparison with the unadjusted return rates of 50 contemporaneous companies. The Offner case followed next, again allowing the existence of the intangible manufacturing know-how, but following a more theoretically correct course of adding the book value of the assets to net worth rather than increasing net worth by some multiple of itself.

The last case in the decision line ignored the question of unrecorded intangibles in favor of adjustment of allowable rates of return due to relative change in the mix of contractor versus government-owned capital assets.

The importance of these cases to any proposed DOD asset revaluation proposal lies in their precedent of allowing the existence of asset values different from the historical cost/ allocation depreciation basis. The deviation from historical cost was not really refuted in the last case in the line, and the asset revaluation process was apparently ignored primarily due to the difficulty of valuing intangibles. The cases do not offer much in the way of practical guidance in asset valuation procedures and indeed evidence some possible misunderstanding of rudimentary accounting procedures on the part of the Tax Court. The obvious lesson here is
that any DOD asset valuation system must be clearly delineated if it is to survive the ministrations of arbitrators who may be well grounded in law or administrative discipline, but lacking in understanding of accounting processes and theory.

Next the Internal Revenue Service, the Securities and Exchange Commission, and the current legal environment were examined.

Various IRS concepts of "fair market value" were discussed and evaluated in the light of related Internal Revenue Code provisions, regulations, rulings and cases. The IRS experience in current valuation of assets is oriented to judicial interpretation and does not appear to offer much to DOD in formulating an asset valuation system for contractors.

The SEC's increasingly active role in development of accounting theory and practice was noted, and its traditional approach of adherence to historical cost in asset valuation was discussed. The apparent distaste for general price level adjustments on the part of SEC Chief Accountant Burton was discussed along with his apparent affinity for replacement cost.

The SEC's decision to require reporting replacement cost of fixed assets by means of an unaudited footnote was not announced with a great deal of fanfare, but I believe it represents the most significant development in asset valuation reporting in the last 50 years in the United States. My own feeling is that this procedure is the precursor of full scale replacement cost statements, and SEC's Burton has implied this.

Consequently, any DOD system of asset revaluation will have to deal with this concept in the future.
The current legal environment was discussed next, along with the trend to shift responsibility for determination of "fair" asset reporting away from the professional accountant and into the hands of the layman. Factors surrounding liability for failure to report "fair" value of assets were discussed, and the non-availability of reliance on "generally accepted accounting principles" as a defense was noted. Lack of statement reader sophistication and timing information release were also discussed.

An awareness of all these factors will be important to a DOD asset revaluation system, but the assumption that the present legal environment has abandoned historical cost and generally accepted accounting principles in favor of current value reporting would be unwarranted.

The three CASB studies related to this dissertation were then discussed. The first, dealing with depreciation, was discussed in Chapter II, and the second covering current value accounting is apparently awaiting developments by other authoritative bodies. A telephone interview with the project director was discussed along with his assessment of probable future direction of the project. The third study which deals with a proposed method of compensation of contractors for capital use was discussed in detail.

The proposed method of utilizing compensation via imputed "risk free" interest rates would be a step toward equitable compensation, but it is geared to a "cost of money" concept rather than a direct measure of inflationary effects.
It would be based on book value of assets, and except as inflation affected the long-term government interest rate, the procedure would not offer adjusted compensation for inflation.

The experience of various foreign countries in adjusting asset valuation for inflationary effects was next explored.

Those countries which had suffered the most chronic rates of inflation apparently had least to offer in guidance to a DOD asset valuation system, since their adjustments were often based on a general consumer index type approach tied to excessively repressive controls not generally tolerable in a more democratic society.

Japan apparently successfully utilized an asset valuation system based on a national law. Since much of Japan's accounting theory and practice are a by-product of its close association with the United States since World War II, a detailed study of Japan's experience could benefit DOD in development of an asset valuation system.

The experience of Great Britain has not been consistent enough to be of much value to DOD, but it has developed The Centre for Interfirm Comparisons whose techniques and experience in creating uniformity and current values for assets should be studied further.

The experience of the Netherlands and in particular the Philips Company were explored last and show most promise of offering useful pragmatic guidance to DOD in developing an asset valuation system based on replacement cost. The choice of replacement cost has been given much more authority since the SEC's announcement that it will require replacement cost fixed asset reporting in unaudited footnote form.
Since most DOD contractors will have to develop at least a rudimentary system to meet this requirement, it appears that development of a well-organized replacement cost system utilizing the Philips Company's approach would integrate well with both DOD and SEC requirements. In addition, the development of more sophisticated replacement cost statements in the future, if required by the SEC, would be greatly facilitated.

Finally, this chapter looked at some aspects of the philosophy of pragmatism and the inductive and deductive approaches to theory development in relation to the current asset valuation environment.

The paucity of pragmatic experience in asset revaluation in the United States was discussed, along with the single notable exception of Indiana Telephone Corporation's experience. This was followed by some discussion of Exxon's experiments, and it was noted that Exxon rather summarily dismissed replacement cost apparently while ITC utilized it very successfully prior to a change to general price level adjustments to conform to recommendations in ARS No. 6.

The final conclusion of the chapter was that both inductive and deductive approaches to development of asset valuation theory and practice are necessary to adequately cope with inflation.
CHAPTER IV

"COST" VERSUS "PROFIT"

This chapter examines some aspects of a peculiar communication problem which has arisen in connection with an attempt on the part of DOD to compensate its contractors for at least a part of the cost of funding capital acquisition.

With the introduction of Defense Procurement Circular No. 107 in December of 1972, an attempt was made to offer the contractor compensation for increased capital funding costs via allowance of a profit formula element calculated on capital utilized. Practically no use was made of this provision even though it was intended to be very attractive to contractors.

Apparently the reluctance to utilize this DPC No. 107 procedure was related to the label of "profit" placed on the compensation element. Traditionally "cost" in a negotiation process is fairly well defined and not nearly as subject to volatility as is the concept of "profit". In addition there is evidence that contractors feared displacement or reduction of other profit formula elements if this capital compensation element was allowed as part of "profit".

The traditional accounting concepts of "cost" and "profit" are compared and contrasted to economic concepts of the same two terms, and some general conclusions are drawn as to their semantic orientation. Along with this the communications concepts of "two-valued"
versus "multi-valued" and "intensional" versus "extensional" orientations are discussed.

Finally, DPC No. 107 is discussed in terms of its semantic orientation and the proposed revised capital compensation procedures outlined in the CASB project on capital compensation, previously discussed in Chapter III of this dissertation, are examined.

ARISTOTELIAN LOGIC AND "TWO-VALUED" ORIENTATION

The philosophic system of Aristotle has had great influence on the development of western civilization and, consequently, on our communication processes and thought patterns. Among the traits of an "Aristotelian orientation" have been a two-valued "certainty" of "fact" and "reality" in viewing events, people, places and things.

Three basic principles underlie this orientation: the law of identity (\(A = A\)), the law of the excluded middle (all things are either \(A\) or not \(A\)), and the law of non-contradiction (nothing is both \(A\) and not \(A\)).

The natural consequence of this orientation carries over subtly into the way in which we categorize words or phrases communicated to us, or those we communicate to others. We tend to view events, people, places and things in an "either/or" context, and perhaps even more so in accounting where the basic accounting equation often leads us to view transaction elements as either a "debit" or "credit" type entry in connection with a decrease or increase in an

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asset, or a liability, or a capital element, or some combination of these things.

There is a certain security in the illusion that particular terms have universal meaning, or that a term applied to a particular phenomenon clearly distinguishes it from other phenomena. Thus we imagine in the best Aristotelian tradition that the term "cost" sets limits on that class of accounting phenomena which will clearly exclude them from that category of accounting phenomena recognizable as "profit". We seek to reinforce this illusion by "defining" terms so that all can clearly "see" that about which we speak.

Thus using Aristotle's approach we could state that: cost is cost; a thing is clearly either cost or not cost; and, finally, nothing can be cost and not cost at the same time. The same sort of process could be used to help us sort out our thinking about "profit". Unfortunately, this sort of thought process does often lead us into decisions based on "logic", where in actuality our decisions have been based on a set of rules governing consistency in the use of language, rather than determination of statement accuracy.

Alfred Korzybski, who devoted much of his life to studying the effects of Aristotle's philosophic system on the thought processes of western man, developed a revision of Aristotle's system to make it applicable to man's orientation to "life" all about him. Korzybski viewed Aristotle's system as a more or less satisfactory methodological approach on a macroscopic level for scientific work in Aristotle's time.²

Both Korzybski and Hayakawa would agree that two-valued logic is an invaluable device in vocabulary order creation and maintenance. Conversely, each would agree that two-valued orientation in attempting to discern and describe reality is often fatal to the communication process. Both would also argue for a multi-valued orientation characterized by an ability to perceive objects or events in terms of multiple values. The concept of a range of values, distinctions, and possible courses of action is inherent in this orientation.

The difficulty of achieving a multi-valued orientation in communication is obvious. We want to label things, people, events, etc. in order to be able to feel comfortable about what effect they will have on our own existence. The remark is sometimes heard that a supervisor is hard on his subordinates but "at least you always know where you stand with him." Or conversely, a supervisor is derided for vacillation in relations with subordinates; i.e., "you never know what his mood will be, one day sweetness and light, the next complete adversity for no apparent reason."

We seem to prefer harsh "reality" many times to a kinder nebulousness. This seems to have been the case in connection with the compensatory device employed in DPC No. 107. The intention was to offer the contractor compensation for the funding of capital, but when the device employed was labeled "profit", it was immediately rejected as not being in that category. Contractors apparently were not willing to expand their definition of "profit" to take a multi-valued orientation and include the compensatory device proposed.

The alternative (and apparently there must always be the other side of the coin) would have been to label the compensatory device as
"cost". Taking Aristotle's approach we could have said "cost is cost", and a compensatory payment for funding of capital would have been excluded. Further if a thing is clearly either cost or not cost, then we would have to exclude the compensatory device because it does not fit the classical concept of manufacturing cost, and finally if it is not cost, it can't be cost at the same time.

Thus Aristotle's logic would have led us to the conclusion of the device not being cost. The two-valued orientation would have led us further to the point where the contractors stated "the device is not profit, therefore, it must be cost," with DOD insisting just as aggressively the opposing viewpoint that "the device is clearly not cost, therefore it must be profit."

This is, of course, exactly what happened with the predictable results of DOD promulgating the procedure and the contractors steadfastly refusing to accept it.

This section, in summary, has looked at some features of the Aristotelian philosophy which have led much of our western world thinking to be couched in terms of an "either/or" orientation, which could be labeled "two-valued". Along with this the idea that accountants in particular are wont to classify events, places, transactions, etc. in a unique context, and that a latitude of values is uncomfortable for us was explored.

Beyond this it was noted that DPC No. 107 was cast in a two-valued mode which really left no room for acceptance of the opposing point of view by either contractors or DOD.
"INTENSIONAL" AND "EXTENSIONAL" ORIENTATION

There appears to be a universal tendency on the part of men to seek imprisonment of reality in their own description of it. As Hayakawa observes, one of the principle tasks human beings concern themselves with is that of protecting themselves from the world by screening out disagreeable information. Coupl...
group. Yet we often make the assumption that a term as used by the
sender of a communication has exactly the same meaning in the hands
of the receiver. Hayakawa has observed this "habitual confusion of
symbols and things symbolized" and countered with the admonition
"the word is not the thing." This idea is particularly important
when the "thing" we are trying to communicate about is an abstract
concept with no physical characteristics, such as "cost" or "profit".

This distinction between the reality of things as they exist
and the "reality" of subjective interpretation has given rise to the
concepts of "extensional" and "intensional" meanings. Hayakawa states
"the extensional meaning of an utterance is that which it points to in
the extensional (physical) world", i.e., that which words stand for.
Intensional meaning of a word or expression is "that which is sug­
gested (connoted) inside one's head."\(^4\)

The importance of this distinction lies in the realization
that where utterances have extensional meanings agreement can be
reached (the invoice price of this lathe is $20,500); while statements
which exhibit only intensional meanings may create unresolvable ever­
lasting arguments (declining balance depreciation is "better" than
straight line depreciation).

The latter statement would be labeled by Hayakawa as a
"non-sense" argument, in that no sense data can be collected about the
utterances.

\(^4\)Ibid., pp. 28-29.

\(^5\)Ibid., p. 58.
Guthrie points out the need for operational definitions in the case of basic concepts and accounting principles underlying financial statements of a business enterprise. Just as "weight" has no existence apart from the operation to measure, so also concepts such as "cost" or "profit" have no real meaning outside of the operations involved in measuring them. Yet we persist in treating complex meanings as though they were simple or could be completely characterized by a simple symbol.

The one word/one meaning fallacy is easily exploded by observing that the Oxford English Dictionary lists 14,070 different meanings for 500 of the most common English words, or a ratio of about 28 meanings to each word.

The idea that in any communication process only certain characteristics of an event can be abstracted in attempting to describe that event is also important. Thus an automobile sitting in the street might be viewed by the casual observer as an asset in the classical accounting sense; while the owner, well aware of its thirst for petroleum, and proclivity to have mechanical difficulty and costly repairs, might view the same automobile as a liability in the colloquial sense. If it is that difficult to communicate about an observable physical phenomenon, how much more difficult it is to communicate about ethereal concepts such as "cost" or "profit". It is impossible to say "all" about anything.

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Thus, an extensional orientation is important in attempting to communicate about accounting concepts. There must first be a realization that accounting is nothing if not a useful discipline. A concept such as "cost" or "profit" is not like gold waiting to be mined. It has developed because it was useful to men in their economic relationships, and as in any social environment, the meanings of these concepts can expect to undergo some change with the passage of time and the interactions of the forces being described.

Failure to recognize this quality of a non-static "process" reality and the intensional orientation of those who assume an easy conformity of their subjective views and reality, or their subjective views and the subjective views of others, results in the type of communication breakdown experienced by DPC No. 107.

In summary, this section has looked at the concepts of intensional and extensional orientations in attempting to communicate about people, places, things, events, etc. The extensional orientation points to the thing being described as it exists in the real world, while the intensional orientation focuses on the subjective meanings of words connoted in a particular individual's head.

The idea that concepts such as "profit" or "cost" can have meaning only in connection with the process for their measurement was then explored, along with the human tendency to habitually confuse the symbol and the thing symbolized.

Finally, the intensional orientations of both DOD and contractors were observed as being contributors to the failure of the capital compensatory device in DPC No. 107.
ACCOUNTING AND ECONOMIC CONCEPTS OF "COST" AND "PROFIT"

Some distinctions between the accounting concept of cost and related economic cost concepts were made in the discussion of "cost of capital" versus "capital asset cost" in Chapter II.

This section will not purport to be an exhaustive dissection of the two different approaches to "cost" and "profit", but rather a discussion of some of the relevant features of the two approaches in order to compare their relative "two-value" and "multi-value", and "intensional" and "extensional" orientations.

It is interesting to note that most pragmatically oriented accounting texts dealing with cost and cost accounting do not waste many words on the explanation of the term "cost". This is perhaps a classic case of "symbol worship" as Hayakawa would describe it.

Witness the following statement in a relatively recent text on management cost accounting applications: "In accounting for merchandising enterprises, we learned that the term cost is synonymous with the term acquisition price."

In the sense of providing an operational definition to allow for proceeding with the business at hand, which in this case is teaching managerial techniques using cost accounting, the symbol is certainly an adequate surrogate for the process involved.

The problem generated is, of course, the subtle acceptance of this working definition as an all-encompassing, everlasting,

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extensional concept which has been written in the sky by the Great Bookkeeper. Thus when we encounter a process which does not fall into the category of "acquisition price" (such as capital funding charges) we press it against our intensional criteria for "cost", find it lacking, and summarily reject it, without ever questioning the criteria. This is a natural consequence of habitually seeking to classify transaction elements into categories which conform to the two-value oriented double entry accounting system.

It would imply a strong two-valued orientation on my part to make the simplistic assumption that the definition of cost previously described is representative of the only accounting treatment of this concept. Accountants have often in the past exhibited a multi-valued orientation by engaging in lively debate over the nature of cost. Thus, the following statement is found in a 1947 cost accounting text:

The writer, believing that the primary purpose of cost accounting is to aid management in controlling costs is, therefore, willing to include interest as a cost, in those cases in which management would be aided, but prefers to exclude it in those cases in which it does not seem necessary for good control.8

The more recent emphasis on mathematical and economic discipline infusions into accounting have led to general adoption of an approach to cost, at least in theory, which is much more multi-value oriented. George Staubus in a 1971 in-depth treatment of cost and cost accounting concepts defines cost as "... a sacrifice; a measurable cost is the relinquishment of a measurable asset or the

creation of a measurable liability." Utilizing five different bases for classifying economic events, Staubus went on to categorize nine different types of costs.⁹

Even with the recent introduction of more emphasis on a multi-valued, extensional orientation, the traditional and prevalent accounting concepts of cost are apparently oriented toward the two-valued, intensional approaches. Those accounting executives who have been steeped in this tradition will, I believe, reflect this orientation and a small part of the research questionnaire will be addressed to this question.

While accounting deals with the formulation and communication of information about primarily economic events occurring in society, it has traditionally focused on the business entity and indeed heartily endorses the "business entity" concept as basic credo in segregating activities to be reported on out of the general milieu of events occurring in the world. Its insistence on integrity of the "balancing" of the double entry system and articulation of the various financial statements have all contributed to its Aristotelian orientation in the area of cost concepts.

Economics (and how strong is the tendency to say "on the other hand" or some similar phrase) has focused largely on society in general, ascribing no great virtue to precise articulation of numbers at the expense of ability to describe economic relationships. This has at times led to a mutual disdain of each other's discipline by

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the accountant and the economist. Witness the statement of Stephen Gilman: "Fortunately the economists, unlike the lawyers, do not have the power to make their opinions coercive."10

Even where economics has concentrated on the individual firm, its concepts of "cost" have deviated from the general "acquisition" or historical cost concepts usually embraced by accounting.

The economist considers that a firm's actual expenditure or money outlays constitute only a part of the total cost picture. The economic concepts of alternative cost, and explicit and implicit costs, play important roles in his thoughts about cost.

The alternative cost doctrine, or opportunity cost doctrine, utilizes a definition of costs of production of a particular product as "the value of the foregone alternative products that resources used in its production could have produced." Firm resource costs are the values of the resources in their best alternative uses.11

Explicit costs are firm outlays for resources bought or hired and these correspond roughly to the accountant's concept of expenses. Implicit costs of production are costs of self-owned, self-employed resources such as owner's return on investment, sole proprietor's "salary", etc. All of these concepts do not feel the constriction of the requirement to balance or articulate in the same way as the accountant's cost concepts within the double entry system do. They


are much more closely attuned to a consideration of "value" than they are to a measurement geared to dollar outflow or liability incurred.

Consequently, the economist's concepts of "cost" are much more geared to a multi-valued "process" view of reality which recognizes the inability to say "all" about anything. He is also less prone to the intensional orientation that would assume his concept of costs, and the symbols employed for them corresponded to identical concepts and symbols in the minds of his communicatees.

The accounting concept of "profit" is not nearly so rigidly constrained as is "cost". Obviously the number of variables and alternative allowable treatments are much greater in "profit" determination than in "cost" determination. Chambers, in fact, once calculated a possibility of 30 million alternative figures for "net income" determined under generally accepted accounting principles.  

The interrelationship between the going concern, matching, and realization principles in accounting income determination was explored in Chapter II and at first blush appears to be multi-value oriented due to the number of available alternatives in income calculation. Further examination, however, reveals their structure to be that of a series of intermeshing (hopefully) processes largely couched in terms of a two-valued orientation.

Thus the realization principle draws a line called "point of sale" in most instances and says beyond that line lies income; prior to crossing it, none exists. We recognize that between the

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alternatives exists a hazy area where some theorists would like to point to the production and marketing processes as actual generators of income, not just precursors of the magic moment of title passage, but we are loathe to incorporate that into a formal system. After all, Aristotle has pronounced "a thing cannot be income (expense, asset, liability, etc.) and not be income (expense, asset, liability, etc.) at the same time."

The going concern principle tells us to disregard realizable value of capital assets in favor of cost allocation unless we note positive existence of evidence that a firm is destined to be short-lived. We feel uncomfortable in the nether world of "what if?". Certainly, a business entity is either going to continue in existence for the foreseeable future, or it is not going to do so, for Aristotle has said it is so.

The matching principle relies heavily on the realization principle to determine the points in time when the "magic coach" of cost turns into the "pumpkin" of expense. Thus the "genie" of electricity cost used to produce a manufactured inventory item remains bottled up in that product until redeemed by the consumated sale and released to play its part in the process of accounting income determination. Again, a thing cannot be a cost and an expense at the same time; cost is cost; expense is expense; and cost is not expense nor is expense cost per Aristotle.

All of this points up the constant problem of the accountant—trying to represent a multi-valued "process" reality of economic relationships within the framework of a double entry system which has as prime requisites order, articulation, and mathematical integrity.
In utilizing these concepts, the accountant often under the guise of "generally accepted accounting principles" reflects his intensional orientation by using terms such as "conservatism", "fair presentation", "realization", "consistency", etc. under the assumption that they will be universally understood by the sophisticated recipient of his communications. Briloff points out that studies have indicated the meanings of terms such as these are widely misunderstood even by sophisticated users and hearers of the terms.\textsuperscript{13}

Although the accountant's concept of "income" or "profit" is somewhat more multi-value oriented than his concept of "cost", it is still largely two-value and intensionally oriented.

The economist, unlike the accountant, has developed a number of different theories about the concept of income. He does not regard "income" and "profit" as synonymous. Canning states economic income in a general sense consists of scarce services which "proceed, ultimately from material objects, but under no circumstances are material things income; these belong to a wholly distinct though related category."\textsuperscript{14} Profit, conversely, deals with wages, interest, rent, and distributive shares of income.\textsuperscript{15}

\begin{itemize}
  \item \textsuperscript{14} John B. Canning, \textit{The Economics of Accountancy}, (New York: The Ronald Press Company, 1929), p. 146.
\end{itemize}
Boulding reinforces this idea of multiple definition of "profit" thus:

The concept of profit will quite rightly differ depending upon the purpose for which we need it. The definition of profit for tax purposes, for instance, may differ considerably from the definition which is required for other forms of decision making. What we need here is not a single definition of profit applicable to all cases, but a spectrum of definitions in which the relationship of the various concepts is reasonably clear and in which the definition is fitted to the purpose for which it is to be used.  

Hicks' definition of income is probably one of the most widely quoted and best known: "... a man's income is 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."  

Obviously, the economist is much more closely attuned to a multi-valued orientation in describing what he perceives as the "process" reality of "profit", and much less likely to assume that what is connoted in his head as the vision of the "profit" concept is universally understood and accepted by all.

One of the purposes of this comparison of the accountant and the economist is to show that the multi-value/two-value, extensional/intensional orientation of the receiver of a message will condition his understanding and receptivity to the message. DPC No. 107 was a message sent to receivers who were by and large oriented to the two-valued, intensional context of messages expressed in the double entry format. Failure to perceive this orientation and to understand that

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the compensatory device proposed by DPC No. 107 was primarily geared to a multi-valued, extensionally oriented economics concept had the predictable result of seeing the receiver of the message try to force it into a two-valued, intensionally oriented context. Since the device did not fit into this context it was clearly rejected.

In summary, this section has looked at some accounting and economic concepts of "cost" and "profit" and drawn some conclusions as to their multi-value/two value, and extensional/intensional orientations.

The examination revealed the accountant's concepts to be in general more two-value/intensionally oriented than their economic approximates. The traditional requirements of order, articulation, and mathematical integrity inherent in the accountant's double entry format of expression point him in the two-valued/intensional direction.

Finally, it was noted that DPC No. 107 was a message couched largely in terms of a multi-valued/extensional economic concept, but directed at an unprepared two-valued/intensionally oriented group of receivers accustomed to placing messages received in an accounting context. The predictable result was incomprehension and rejection.

DEFENSE PROCUREMENT CIRCULAR NO. 107-- ACTUAL AND PROPOSED

DPC No. 107, as originally issued, is like most similar government documents, a communication which is couched in directive language. It is largely a practical explanation of "how to" with very little emphasis on "why". It is beyond the scope of this dissertation to
examine and critique all the technical instructions in the document aimed at determination techniques for contractor capital employed, allocation of operating capital to profit centers, etc. There was apparently no communication problem involved in the computational techniques, only in the convincing of contractors to exercise their option to employ these techniques.

It should perhaps be pointed out here that Defense Procurement Circulars are recurring publications of DOD in order to update the Armed Services Procurement Regulation and other directive material. DPC No. 107 was devoted largely to the "Contractor Capital Employed Policy" which we are discussing, but it also contained directive material in six other unrelated areas. These other areas are, of course, excluded from any consideration in this dissertation, and any reference to DPC No. 107 here should be understood to be related only to Item IV—Contractor Capital Employed Policy.

DPC No. 107 begins its treatment of the new policy with a section labeled "Policy Evaluation Period". There is intimation of change, but much of the language which follows leads the reader to believe this will be nothing more than a minor change to "business as usual".

In actuality the new policy deviates substantially from traditional methods of determining profit objectives, and for the first time specifically recognizes a compensation element for contractor capital employed. Section 3-808.7 says "Establishes a revised method for determining profit objectives under certain contracts by specifically recognizing contractor capital to
be employed in contract performance." The use of the word revised lends itself to the idea of easy transition, nowhere is it emphasized that this is a new, entirely different, type of concept, and no explanation is really given at this stage of what the policy is trying to accomplish or what the theoretical nature is of the compensation element.

The next paragraph reassures the reader concerning continuity of compensation policy, thus "Rather than constituting the implementation of a new policy, the publication of this regulation represents a continuation of policy development that began approximately three years ago." 

The section goes on to point out that all aspects of the regulation are subject to change with greater experience and understanding of the impact of the policy during the test period. Beyond that the section sets up criteria for election of the policy and solicits suggestions for changes. This hardly sets the stage for a completely new policy which will determine exactly half of the adjusted profit objective percentage.

Section 3-808.7(a) under the heading General states:

On certain contracts (see paragraph (b) below), the weighted guidelines profit objective shall be adjusted to include recognition of the estimated amount of operating and facilities capital a contractor will employ in contract performance. This adjustment is designed to correct inequities and disincentives that can occur when a weighted guidelines profit objective based solely upon cost is used in negotiating


19 Ibid., p. 5.
contracts for which the ratio of required contractor investment to contract cost varies over a wide range. The recognition of capital is achieved through the use of a Contract Capital Index (CCI) as explained in (d) below.20

Section (d) goes on to elaborate on the mechanics of the index computation, and only here, by way of a technical description does the contractor first perceive that the new policy will determine 50% of the profit objective. The CCI is geared to contract risk and to a "capital turnover rate", computed by dividing estimated contract cost by total capital used in performing the contract. Exhibit IV-1 illustrates the table used for the CCI computation and Exhibit IV-2 illustrates DD Form 1547, used in the computation of total profit objective under DPC No. 107.

There is a saying among tax practitioners that "you can find more tax law on an income tax form than in any other place." DD Form 1547 doesn't live up to that promise in the same way tax forms often do. There are only two short "instructions" at the top of the form and the rest of the form is devoted to computational mechanics of arriving at the total profit objective percentage.

Thus DPC No. 107, with a minimum of orientation, thrust upon the contractor a multi-value concept of capital compensation, which should have been considered in an extensional format. Instead, it was cast in the category of "profit"--a concept most of the contractors probably viewed with an intensional orientation geared to two-value interpretation.

20Ibid., p. 6.
## EXHIBIT IV-1

### CONTRACT CAPITAL INDEX TABLE

<table>
<thead>
<tr>
<th>Capital Turnover Rate</th>
<th>Capital Risk Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>1.2 &amp; below</td>
<td>8.3</td>
</tr>
<tr>
<td>1.3</td>
<td>7.7</td>
</tr>
<tr>
<td>1.4</td>
<td>7.1</td>
</tr>
<tr>
<td>1.5</td>
<td>6.7</td>
</tr>
<tr>
<td>1.6</td>
<td>6.3</td>
</tr>
<tr>
<td>1.7</td>
<td>5.9</td>
</tr>
<tr>
<td>1.8</td>
<td>5.6</td>
</tr>
<tr>
<td>1.9</td>
<td>5.3</td>
</tr>
<tr>
<td>2.0</td>
<td>5.0</td>
</tr>
<tr>
<td>2.2</td>
<td>4.5</td>
</tr>
<tr>
<td>2.4</td>
<td>4.2</td>
</tr>
<tr>
<td>2.6</td>
<td>3.8</td>
</tr>
<tr>
<td>2.8</td>
<td>3.6</td>
</tr>
<tr>
<td>3.0</td>
<td>3.3</td>
</tr>
<tr>
<td>3.3</td>
<td>3.0</td>
</tr>
<tr>
<td>3.6</td>
<td>2.7</td>
</tr>
<tr>
<td>4.0</td>
<td>2.5</td>
</tr>
<tr>
<td>4.5</td>
<td>2.2</td>
</tr>
<tr>
<td>5.0</td>
<td>2.0</td>
</tr>
<tr>
<td>6.0</td>
<td>1.7</td>
</tr>
<tr>
<td>8.0</td>
<td>1.3</td>
</tr>
<tr>
<td>10.0</td>
<td>1.0</td>
</tr>
<tr>
<td>15.0</td>
<td>.7</td>
</tr>
<tr>
<td>20.0 &amp; above</td>
<td>.5</td>
</tr>
</tbody>
</table>

Interpolate when extracting the Contract Capital Index.

**Source:**

EXHIBIT IV-2
WEIGHTED GUIDELINES PROFIT/FEE OBJECTIVE

INSTRUCTIONS: 1. See ASPR 3-808 for determination of assigned weight factors.
2. See ASPR 3-811 for documentation of profit objective.

1. RFP/RFQ or Contract No. 2. Contractor 3. Contract Type

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Government's Cost Objective</th>
<th>ASPR 3-808 Weight Range</th>
<th>Assigned Weight</th>
<th>Weighted Profit/Fee (Col. bxd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Materials:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchased Parts</td>
<td>$</td>
<td>1% to 4%</td>
<td>%</td>
<td>$</td>
</tr>
<tr>
<td>Subcontracted Items</td>
<td></td>
<td>1% to 5%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Other Materials</td>
<td></td>
<td>1% to 4%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Engr Direct Labor</td>
<td></td>
<td>9% to 15%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Engr Overhead</td>
<td></td>
<td>6% to 9%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Mfg Direct Labor</td>
<td></td>
<td>5% to 9%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Mfg Overhead</td>
<td></td>
<td>4% to 7%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Other Costs</td>
<td></td>
<td></td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>General and Administrative</td>
<td></td>
<td>6% to 8%</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>$</td>
<td></td>
<td>%</td>
<td>$</td>
</tr>
</tbody>
</table>

5. Composite Profit/Fee on Cost Input to Total Performance (Col. e x Col. b)

| Cost Risk                     | ASPR 3-808.5(c)          | 0% to 7%                | %              |
| Performance                   | ASPR 3-808.5(d)          | -2% to                  | %              |
| Selected Factors              | ASPR 3-808.5(e)          | -2% to                  | %              |
| Special Profit                | ASPR 3.808.6             | 0% to                   | %              |
|                               | & 7(j)                   | +8%                     |                |
## EXHIBIT IV-2 (Continued)

<table>
<thead>
<tr>
<th>Cost Category</th>
<th>Government's Cost Objective</th>
<th>ASPR 30808 Weight Range</th>
<th>Assigned Weight</th>
<th>Weighted Profit/Fee (Col. bxd)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>c</td>
<td>d</td>
<td>e</td>
</tr>
</tbody>
</table>

10. Cost-Based Profit/Fee Objective  
   (Lines 5 thru 9)  %

11. Contract Capital Turnover Rate  DD Form 1861 x

12. Contract Capital Index  ASPR 3-808.7(1)  %

13. Capital-Adjusted Profit Objective  Line 12 + 50% of Line 10  %

14. Special Profit  (Replaces line 9 if applicable)  ASPR 3-808.7(1)  %

15. TOTAL PROFIT OBJECTIVE  (Line 13 + Line 14)  %

Date Prepared by Signature

Source:

Defense Procurement Circular No. 107, op. cit., p. 16.
The CASB project on cost of capital, which was discussed in detail in Chapter III, is using DPC No. 107 as a starting point for revision of the concept involved. The issues paper on this project goes into much detailed discussion of the theoretical nature of the proposed compensation device to replace that of DPC No. 107.

In line with this, the new device has been labeled "Imputed Interest on Tangible Capital Assets". A proposed redrafted DD Form 1860 is included in the issues paper and a copy of this is included here as Exhibit IV-3. The issues paper did not include a redrafted DD Form 1547. While the redrafted DD Form 1860 does clearly label the compensation device "imputed interest", there is nothing in the proposed instructions for the form (not illustrated) which offers any explanation of the term "imputed interest", or the concept behind the term. The issues paper discusses definitions of "Facilities Capital" and "Tangible Capital Assets" under the heading of "Terminology", but nowhere is it implied that the successor to DPC No. 107 will elaborate on the term "imputed interest" or point to what the "reality" of the concept is.

The issues paper itself does impart the idea of a clear distinction between "imputed interest" and the traditional concepts of both "cost" and "profit". It states:

Thus, our approach is in terms of 'imputed interest'. In line with this concept, imputed interest should be regarded as separate and distinct from the two generally recognized basic elements used in determining a cost-cased contract price, namely, allowable contract cost and profit or fee.21

EXHIBIT IV-3
TANGIBLE CAPITAL ASSETS IMPUTED INTEREST FACTORS COMPUTATION

<table>
<thead>
<tr>
<th>Profit Center Facilities Capital Projection</th>
<th>Contractor: Profit Center:</th>
<th>Address:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor Fiscal Year:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Imputed Interest Rate Applicable to Facilities Capital</td>
<td>2. Allocation and Direct Distribution</td>
<td>3. Allocation of Undistributed</td>
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<tr>
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</table>

Source:

"Issues Related to a Possible Cost Accounting Standard Cost of Money as Part of Cost of Capital," op. cit., p. 66.
As mentioned in Chapter III, the issues paper does, however, propose treating the imputed interest as "cost" for purpose of fee determination, although it would not be recorded in the books as a cost, and its measurement would not be geared to any actual disbursements for interest. Thus it states "... our proposed imputed interest cost should be determined with reference to verifiable accounting data measuring contract capital utilization and would, therefore, be recognized as a cost in determining contract price" (emphasis supplied).^22

Apparently, since placing the compensation procedure in the category of "profit" wasn't acceptable to contractors, the CASB will now try to label it "cost" under the assumption this will be palatable to the contractors. While the issues paper goes to great pains to distinguish the "imputed interest" from traditional contracting concepts of "cost" and "profit", the CASB apparently still feels that the "imputed interest" must be categorized as either one or the other.

I believe that because the approach to "imputed interest" is also being cast in a two-value/intensional orientation on the operational level, it will make contractors somewhat uncomfortable, although that discomfort may be overcome in order to take advantage of the compensation process. "Cost" in this instance has a favorable connotation to the contractor since it implies a basis for reimbursement, but viewed in the light of efficiency determination, "cost"^22Ibid., p. 3.
becomes an adverse factor; and it will be interesting to observe the contractor's reaction to a sequel to DPC No. 107 when it is issued, if "imputed interest" is labeled "cost".

My own recommendation would be to formulate any successor to DPC No. 107 in a multi-value/extensional format by neither labeling the "imputed interest" as "cost" nor "profit". Some elaboration on the concept of "imputed interest" should, I believe, be presented on the operational level rather than assuming that the sophistication of the readers will assure universality of understanding of the concept. Finally, it should be made clear that this procedure is not a casual transition occurring to "business as usual" capital asset compensation, but a completely new and different (to DOD contracting) concept which does not fit into the two-value/intensional context of traditional concepts of accounting "cost" or "profit".

In summary, DPC No. 107 is a directive document issued at the operational level. It takes a low-key "business as usual" approach in introducing what is a completely new capital compensation device, and puts the label of "profit" on the device. Thus it casts in a two-value/intensional orientation a concept which requires a multi-value/extensional orientation.

Contractors have been unable to fit the new device into their thinking about the traditional contracting concept of profit and have rejected it.

The CASB in its issues paper on "Cost of Money as Part of Cost of Capital" is proposing "imputed interest on tangible capital assets" as a device to replace DPC No. 107. The issues paper clearly delineates this concept from traditional contracting concepts of
"cost" and "profit", but indications are that "imputed interest" will also be introduced at the operational level cast in the two-value/intensionally oriented concept of "cost" in contract fee determination.

My own observation is that although contractors may utilize the device, they will probably feel uncomfortable about it. Finally, a recommendation is made that "imputed interest" be labeled neither "cost" nor "profit", but that it be introduced with a multi-value/extensional orientation as a completely new concept in DOD contracting with adequate elaboration of the concept on the operational level.

SUMMARY

This chapter initially treated the philosophic system of Aristotle and its influence on the communication processes and thought patterns of western man. The observation was made that this orientation leads to a two-valued certainty of "fact" and "reality" in viewing events, people, places and things.

Aristotle's three laws--of identity, the excluded middle, and non-contradiction--were discussed, and the tendency of the accountant to be two-value oriented due to operating consistently in a double entry format was noted. The terms "cost" and "profit" were then introduced to highlight the observation that an Aristotelian orientation would take comfort in the illusion that they represented two distinct classes of accounting phenomena easily discernible from each other.
Next, the work of Korzybski and Hayakawa was discussed along with the desirability of a multi-valued orientation embodying the ability to view objects or events in terms of a range of values, distinctions, and possible courses of action. Korzybski and Hayakawa both recognized the value of two-valued logic in vocabulary order creation and maintenance, but both also recognized the fact that a two-valued orientation in attempting to discern and describe reality is often fatal to the communication process.

Finally this section observed that DPC No. 107 was cast by DOD in the context of a two-valued concept of "profit" which left no room for an opposing viewpoint by contractors.

The concepts of extensional and intensional orientations were then introduced. Extensional meaning of an utterance is that which it points to in the extensional world—that which words stand for. Intensional meaning of a word or expression is that which is suggested (connoted) inside an individual's head. Agreement can be reached on utterances with extensional meaning, while intensional meanings can create unresolvable arguments.

Concepts such as "cost" or "profit" have meaning only in connection with processes for their measurement, and this was noted along with the human tendency to habitually confuse symbols and the things they represent. The intensional orientation of both DOD and contractors was pointed out as contributing to the non-acceptance of DPC No. 107 by contractors.

Some accounting and economic concepts of "cost" and "profit" were then explored and the conclusion was drawn that in general the accounting concepts were more two-valued/intensionally oriented than
were the economics concepts. The observation was also made that DPC No. 107 dealt with a multi-value/extensionally oriented concept, but was cast in a two-value/intensional orientation.

The last segment of this chapter discussed DPC No. 107 in the light of some details of its semantic orientation. Its directive nature and "business as usual" tone were observed as factors in its failure to generate acceptance of a completely new concept of contractor compensation.

The proposed successor to DPC No. 107 and its embodied concept of "imputed interest" were then discussed. The observation was made that although the CASB issues paper does explore in detail the distinction between "imputed interest" and the traditional contracting concepts of "cost" and "profit", apparently the intent is to introduce "imputed interest" on an operational level with little or no elaboration on the term and cast in the two-value/intensional context of "cost".

A final recommendation was made that the "imputed interest" device be labeled neither "cost" nor "profit" and that it be introduced on the operational level with a multi-valued/extensional orientation as an entirely new concept in compensation of DOD contractors.
CHAPTER V

DESIGN AND ANALYSIS OF THE QUESTIONNAIRE

Controllers of major United States corporations were surveyed via written questionnaire at the end of January, 1975. An attempt was made to discern trends in the direction and magnitude of their experience in, and attitudes toward, capital asset revaluation. In addition, some questions on the questionnaire were designed to give some indication of their semantic orientation, particularly in relation to the terms "cost" and "profit".

The corporations consisted of two separate populations, one drawn from the index of 100 companies receiving the largest dollar volume of military prime contract awards in 1973 and the other being a random selection of 100 Fortune top 500 U. S. corporations, excluding any corporations in the first group. A comparison of responses by group was inherent in the questionnaire design to allow for detection of significant differences in response.

The questionnaire was designed to provide insight into the following specific queries:

1. Has there been a significant increase in attempts at capital asset use revaluation in the United States due to inflation in 1973-1974?

2. Were revaluation attempts geared to general price level indexes, specific industry price level indexes, engineering or other appraisals, or a combination of these factors?
3. Which indexes (GNP, CPI, etc.) were more predominately used for adjustment?

4. Where engineering estimates and appraisals were utilized for revaluation, were they predominately internal or external?

5. Which depreciation methods are most predominately used and has there been any significant shift in methods used in 1973-1974?

5. Has there been an increase in importance of capital asset use revaluation in general, and in relation to materials and labor, and other overhead in 1973-1974?

7. In what areas would an acceptable capital asset use valuation procedure be most and least beneficial?

8. What sources of information about capital asset revaluation are regarded as most valuable?

9. What is the relative acceptability of industry-sponsored capital asset use revaluation, and government sponsored revaluation in the areas of income taxes and governmental contracting?

10. Would an advantageous compensation adjustment for a revalued capital asset be labeled "profit", "cost return", neither of the two, a combination of both, or a part of current replacement value?

11. Are the terms "cost", "profit", and "fair market value" viewed with a general two-valued/intensional orientation?

CONSTRUCTION OF THE QUESTIONNAIRE

The questionnaire was designed to include two series of questions. Questions 1 through 18 in Part I were each couched in terms of five possible answers, with the respondent asked to indicate
the most applicable answer only to each question by a single check mark. Questions 1 through 12 in Part II were cast in a format which allowed the respondent to answer, by a single check mark in each of two columns, the most appropriate answer either in two different time periods (prior to 1973, and 1973-74) or as applied to two different concepts (i.e., income taxes and governmental accounting).

The heading of the first page of the questionnaire defined the term "capital asset" as it was to be used in the questionnaire and pointed out the general instructions that all answers were to be in terms of internal consideration for production contract negotiations rather than formal external financial reporting.

The questionnaire, transmittal letter, and stamped return envelope were mailed to controllers of selected corporations in January, 1975, with a follow-up letter and duplicate questionnaire copy being mailed to non-responders in May, 1975. Copies of the questionnaire and both cover letters are included in Appendix A.

SELECTION OF SAMPLE FIRMS

One population surveyed consisted of firms listed in Defense Procurement Circular No. 119 on the Index of 100 Companies Which Received the Largest Dollar Volume of Military Prime Contract Awards in Fiscal Year 1973.¹

Because of the relative ease of a complete survey of the population, it was decided to include all corporations listed on the

Index in the survey with the exception of four corporations listed as non-profit type entities. The assumption was made that the input from non-profit institutions would not be valid for a survey concerning capital asset use valuation. Accordingly, a total of 96 firms were selected for inclusion in the survey from this population. This population is designated as "Group I" in the survey and that term will be used to refer to it in subsequent discussion.

The second population is drawn from corporations listed in Fortune Directory of the 500 Largest Industrial Corporations for the year 1973, excluding any corporations that are included in Group I.² A total of 64 Group I corporations are among the Fortune 500, consequently, the second population was drawn from the remaining 436. The second population is designated and will be referred to in subsequent discussion as "Group II."

A complete sample of the 100 corporations in Group II was included in the survey. Selection of Group II corporations was made by assigning a number to each potentially eligible corporation in the Fortune 500 and then using a table of random numbers to select corporations for inclusion in the group.

ANALYSIS OF QUESTIONNAIRE RETURNS

Questionnaire responses are summarized in Appendix B.

A total of 54% or 52 usable questionnaires of Group I were returned. In Group II the usable response was 45 questionnaires returned (45%). A relatively small number of questionnaires were

²Fortune, LXXIX (May, 1974), pp. 256-257.
returned unanswered, usually with a polite explanation that because of limited personnel, time constraints, etc., it was company policy not to participate in such research efforts.

Responses to individual questions were coded for computer entry including identification to either Group I or Group II. Any Part I question answer which evidenced more than one check mark was eliminated and any Part II question answer which evidenced more than one check mark in a column had that column's answer eliminated.

Question number 12 in Part II appeared to confuse a number of the respondents who listed more than one check mark in either the "least" or "most" columns. Column 2 of Question 9 in Part II was also left unanswered by many respondents, apparently because there had been no previous encounters with "Donated Assets" by their corporations.

Beyond that, questions were apparently clear in meaning to the respondents and were generally answered in accordance with the questionnaire instructions.

The Nicholls State University Computer Center analyzed the questionnaire responses via the BMD04-D U.C.L.A. Health Sciences Computing Facility Program and other NSU generated programs to give a variable frequency count and percentage analysis. Along with this, a computed chi-square and related degrees of freedom analysis was generated to compare the conformity of the two populations in answers to each question on the questionnaire, and to compare responses to Questions 2 through 8 in Part II, dealing with changes between the time periods 1973-74, and the period prior to that time.
If the hypothesis that the responses of Group I would differ significantly from those of Group II is postulated, with a desired confidence level of 95%, it appears that it would have to be rejected and the alternative hypothesis accepted. As indicated in Exhibit V-1, out of 18 questions in Part I there was a significantly different pattern of response at the 95% confidence level, using the critical chi-square value, on only three questions. In Part II there was a significantly different pattern of response at the 95% confidence level on only one question for both time periods plus one question for only the 1973-74 time period.

The three questions in Part I in which a significant difference appears, as indicated by asterisks, are Questions 4, 6, and 7. As would be expected, non-acceptance of replacement cost for governmental contracting would be a much more significant deterrent for Group I than Group II; and cost reimbursement sales to government agencies would be relatively much more important to Group I than Group II.

Finally, there appears to be a trend toward heavier production orientation vis-a-vis sales on the part of Group I. A natural inference would perhaps be that capital asset use costs would be more important to Group I, but without a knowledge of capital vs. labor intensity, it would be hard to legitimately draw that inference. Other questions in the survey do not evidence statistically significant differences in relative importance of capital asset use to support that contention.
EXHIBIT V-1

QUESTIONNAIRE RESPONSE CHI-SQUARE VALUES \( (N-1) \)
GROUP I/GROUP II COMPARISON

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\*Significant

Critical Values of Chi-Square -- 95\% Confidence Level

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\begin{array}{c|c}
X^2 & \text{Degree of Freedom} \\
\hline
7.82 & 3 \\
9.49 & 4 \\
11.07 & 5 \\
\end{array}
\]

Source:
Questionnaire Survey of Corporations.
A pattern of heavy orientation to straight line depreciation on the part of Group II corporations as compared to more relative emphasis on declining balance and sum of the years digits depreciation methods for Group I corporations emerges from Question 2 of Part II. In light of the pragmatic considerations dictating method choice of depreciation discussed in Chapter II, this would seem consistent with the contracting advantage to be gained by use of accelerated methods by Group I corporations vis-a-vis the lack of this incentive on the part of Group II corporations.

Question 9 in Part II would seem to indicate a much more pronounced pattern of valuing donated assets at zero on the part of Group I corporations; but due to the relatively small number of responses to this question, as pointed out previously, it is doubtful that much significance should be attached to this relationship.

The hypothesis that responses to Questions 2 through 8 in Part II were significantly different for the period 1973-74, as compared to the period prior to 1973, would have to be rejected, and again the alternative hypothesis accepted at a desired confidence level of 95%.

An analysis of Exhibit V-2 reveals only one significant chi-square value, at the 95% confidence level, in the entire group of questions considered. The chi-square analysis is based on a comparison of responses by both Groups I and II to Questions 2 through 8, Part II of the questionnaire. Significant differences in answers given for the time period 1973-74 (column 2) as compared to answers given for the period prior to 1973 (column 1) are reflected by chi-square values in excess of the critical chi-square value at the related degrees of freedom.
EXHIBIT V-2

QUESTIONNAIRE RESPONSE CHI-SQUARE VALUES (N-1)
COLUMN 1/COLUMN 2 COMPARISON
QUESTIONS 2-8, PART 2

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*Significant

Critical Values of Chi-Square -- 95% Confidence Level

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<td>9.49</td>
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Source:

Questionnaire Survey of Corporations.
The response of Group II corporations to Question 8 in Part II revealed a marked increase in percentage of corporations (44.2% to 72.7%) which conducted informal studies of capital asset use revaluation in 1973-74 as compared to the period prior to 1973. It also evidenced a strong decrease (34% to 25%) in the same time period of corporations in the same group which undertook no investigation of capital asset revaluation at all.

If the desired confidence level is dropped to 90% ($X^2 = 9.24, 7.78, 6.25$ and 4.61 respectively for 5, 4, 3, and 2 degrees of freedom) only Group II's response to Question 7 in the time period comparison additionally exceeds critical chi-square values for either the population or time period comparisons.

However, in Part I, Questions 1, 2, 5, 9, and 15, and in Part II, Question 5, Column 1, computed chi-square values approach the critical value for related degrees of freedom in the population response comparison. Only Group I's response to Question 6 in the time period comparison shows any additional indication of approaching critical chi-square values for related degrees of freedom.

In summary, there appear to be significant differences between responses of Group I and Group II in relative importance of non-acceptance of replacement cost in government contracting as a deterrent to its use, relative importance of cost reimbursement sales to government agencies, relative weight of production versus sales orientation, and relative use of straight line depreciation versus declining balance and sum-of-the-years digits methods. An indicated difference in relative percentage of firms which value donated assets at zero was questioned because of the smaller number of responses to the question.
Additionally, there appears to be a difference approaching significance between the responses of Groups I and II in the areas of relative importance of capital asset use costs in general, and compared to materials and labor, in capital asset age structure, "profit" versus "cost" or "replacement value" orientation, relative importance of "inside" versus "outside" engineering studies and appraisals, and relative acceptability of industry-sponsored capital asset revaluation.

**Amount of Capital Asset Revaluation Attempts**

The first question posed in the Introduction of this chapter sought some evaluation of the relative magnitude of capital asset revaluation attempts during 1973-74. Questions 7 and 8 of Part II related to an evaluation of this question.

Question 7 indicated that both Groups I and II showed a trend toward increased exploration of capital asset use revaluation. Group I corporations who had done no exploration at all dropped from 42.9% to 29.4% while Group II showed a much more pronounced drop from 44.4% to 20%. Corporations who had performed moderate exploration increased from 16.3% to 23.6% in Group I and 22.2% to 35.6% in Group II. Finally, both Group I and Group II corporations showed small percentage increases in more extensive explorations.

Question 8 indicated a marked increase in informal studies of capital asset use revaluation in Group II from 44.2% to 72.7% and also an increase in Group I from 43.7% to 54.0%. There were no significant increases in other types of investigations.
In summary, it appears that there was an increase in the relative percentage of companies which explored capital asset use revaluation on a moderate basis, primarily via informal studies.

Index/Appraisal General Orientation

Question 3 of Part II was designed to give some indication of whether capital asset costs had been adjusted by general or specific indexes, engineering studies and/or appraisals or a combination of these methods. The majority of corporations in Group I and Group II had made no adjustment of capital asset costs at all prior to 1973. There was a small increase in the direction of revaluation via the use of general price indexes in 1973-74, and some indication of a small increase in the use of revaluation via a combination of the methods in 1973-74 by Group I corporations.

Index Type Predominance

Question 4 of Part II was oriented toward providing an indication of which type of indexes had been used by corporations adjusting capital asset historical cost via index. Again the vast majority of corporations indicated no adjustment via index. Of those corporations which adjusted by index, the GNP Deflator was the most widely used (4.3% and 9.5% for Groups I and II respectively in 1973-74). Group I corporations showed some tendency to adjust via a sub-index of the CPI, WPI, or GNP Price Deflator indexes or index other than those mentioned above.
Internal Versus External Engineering
Estimates and/or Appraisals

Question 5 of Part II provided some insight into relative use of internal versus external engineering studies and/or appraisals. Once again, most corporations did not adjust historical cost by either method. Of those corporations who did adjust, Group I indicated no use of internal appraisals and external engineering estimates, while Group II indicated no use of outside appraisals.

Depreciation Method Use

An indication of variation in patterns of depreciation method use was provided by Question 2 of Part II. As would be predictable, there was an infinitesimal indication of method change in 1973-74 as compared to the period prior to 1973. The effect of APB Opinion No. 20 which has clearly brought method change to a standstill in financial reporting apparently is having a consistent effect in recognition of capital asset use for internal purposes also.

The significant difference in pattern of method use previously pointed out is evident from a comparison of relative percentages of use in 1973-74 of straight line by Group I corporations (44.0%) as compared to Group II (88.4%). Declining balance and sum of the years digits methods are used by 22.0% and 30% respectively of Group I corporations as compared to 9.3% and 2.3% of Group II corporations.

The observations here again seem to reinforce the idea that adoption of depreciation methods has been geared to pragmatic benefits to be derived from use of the method chosen, not to attempts to correlate assumed relative decline in utility to method choice. Again,
the new CASB depreciation standard's insistence on attempts to measure flow of asset services in particular periods seems doomed to be an exercise in futility.

Relative Importance of Capital Asset Use Revaluation

Questions 1 and 6 in Part II were posed in order to gain some insight as to relative increase in importance of capital asset revaluation in general and in relation to materials and labor, and other overhead in 1973-74 as compared to the period prior to 1973.

In Question 6 response the percentage of corporations which felt that the difference between capital asset historical cost and current replacement value was "not too important" fell from 32.7 and 40.5 for Group I and Group II respectively prior to 1973, to 18.3 and 35.8 respectively for the same groups in 1973-74. For the period prior to 1973, 4.1% and 2.4% of Group I and Group II corporations respectively felt this difference was "critical" as compared to 10.2% and 7.1% respectively for the same groups in 1973-74. For the period prior to 1973, 12.2% of Group I corporations thought this difference was "very important" as compared to 24.5% with that outlook in 1973-74.

While the difference in responses on a period comparison basis was not considered statistically significant at the 95% level for either group, it approaches significance much more closely for Group I than Group II. A possible explanation for this might be the fact that Group I corporations are directly compensated for use of capital assets by DOD, while compensation for Group II corporations
comes in the form of revenue generated by sales of products produced by the capital assets. The difference is much more visible to the DOD contractor who receives compensation via depreciation on capital asset historical cost while at the same time being well aware of the price he is currently paying to acquire similar new capital assets.

Questions 1, 2, and 3 in Part I were designed to give some indication of current relative importance of capital asset use costs. Question 1 gave a pattern of response which indicated slightly more importance was placed on capital asset use costs by Group I respondents than by Group II respondents, but that both groups leaned in the direction of importance as opposed to unimportance of capital asset use.

Question 2 indicated that both groups rated capital asset use costs as being somewhat less important than costs of materials and labor. Again, Group II respondents replies indicated they placed less importance on capital asset use costs relative to materials and labor than did the respondents in Group I.

Capital asset use costs were rated as slightly more important than other overhead items by both Groups I and II in Question 3, but a definite trend of difference in relative importance between the two groups was hard to detect as is indicated by the much lower chi-square value for this question.

The pattern of response to Question 1 by Group I corporations indicated a slightly larger proportion of responses reflecting an increase in importance of capital asset use value compared to both materials and labor, and other overhead than the proportion of
responses indicating a decline in importance relative to these two areas. There appeared to be slight edge in increase of capital asset use value relative to other overhead items as compared to materials and labor. Corporations in Group II reflected the same general pattern of response except that none of the group reported a considerable decrease in importance in capital asset use value compared to other overhead, while at the same time 13.4% reported capital asset use value decreased considerably in comparison to materials and labor.

Areas Benefited "Most" and "Least" by Capital Asset Revaluation

As explained previously, Question 12 in Part II, which was designed to provide an insight into the question of which of five different areas would be benefited "most" and "least" by an acceptable capital asset revaluation procedure, was apparently widely misunderstood by respondents. The five areas offered for designation as benefited "most" and "least" were union negotiations, income taxes, internal transfer pricing, governmental contracting, and dividend policy defense. Some respondents apparently assumed each area had to be put into either the "most" or "least" category, and responded by putting a check mark in either column by all five terms. Those columns which evidenced more than one check mark were eliminated from the response compilation. This reduced sample size considerably, but in columns 1 and 2 in both groups total responses exceeded the 30 usually considered a minimum for statistical inference.

Clearly, both Groups I and II felt that the income tax area would benefit most from an acceptable capital asset revaluation
procedure (68.5% and 85.6% respectively). As would be expected, governmental contracting was selected by Group I as the second choice in terms of area to be benefited most (22.8%). Dividend policy defense was selected by 8.6% of Group II respondents as the area to benefit most. None of the other areas were felt to be the "most benefited" by a significant number of respondents.

Union negotiations were selected as the most prevalent "least benefited" area by Group I corporations (44.4%), followed by dividend policy defense (30.6%). Group II respondents logically tabbed governmental contracting as the area of least benefit most often (50%), followed by union negotiations (28.1%). The fact that both groups felt little benefit would be derived in union negotiations is interesting and probably is a reflection of the fact that union negotiations appear in this country to be tied more to cost of living than employer ability to pay.

**Relative Value of Information Sources and Method Preferability**

Question 2 in Part I offered five possibilities as information sources on capital asset use valuation, and the overwhelming response was oriented toward the experience of outside appraisers and the respondent corporation's own internal experience. There was little variation in response between Group I and Group II with Groups I and II listing the experience of outside appraisers as most valuable, 46.0% and 50.0% respectively, and internal experience 38.0% and 41.0% respectively. There was little enthusiasm for the Internal Revenue Service as an information source and practically none for litigation, as would be expected. The experience of highly inflated foreign
economies was rated as most valuable source by 10.0% and 4.5% of Groups I and II respectively.

The phrase "highly inflated" may have created an unintentional bias in the question. My own observation, as made in Chapter III of this dissertation, would be that the experience of "highly inflated" foreign economies has little to offer, but the practical experience of some of the more moderately inflated economies could be one of the more valuable sources of information on asset revaluation.

One of the problems alluded to previously was that of reconciling the orientation of the legal profession to that of the accounting profession in the development of a capital asset revaluation system. The discussion of the Renegotiation Board cases in Chapter III illustrated an apparent misunderstanding of accounting concepts by the judiciary. Along with this, I have personally heard accountants at times express chagrin at their perception of what happens to accounting concepts in the hands of attorneys administering them.

Question 13 in Part I was designed to offer some insight into the relative weights of asset revaluation as an accounting problem vis-a-vis a legal problem. The implication being, of course, that this would have some correlation with the relative value of the expertise of the legal profession versus that of the accounting profession in developing a capital asset revaluation system.

Both groups' responses indicated a pattern of regarding asset revaluation as more of an accounting problem than a legal one, but still with an appreciation of the legal problem involved. It is interesting to note that the orientation of Group I was more
pronounced toward viewing asset revaluation as a legal problem than was Group II's orientation. Obviously Group I would have more experience with government regulation and this lends credence to the response pattern.

Questions 12 and 17 in Part I were oriented to obtaining some indication of revaluation methodology preference. In response to Question 12, interestingly, both groups showed a marked preference for across the board revaluation via an industry index as compared to other revaluation methods of subjective experience, independent appraisal, and across the board revaluation via a general index.

The pattern of response was similar for both groups, with both showing appreciation for the usefulness of a combination of suggested methods.

Question 17 indicated a preference of both groups for economic adjustment of "cost" as a means of recognition of inflationary effects on capital asset use in governmental contracting and income taxes. Adjustment of "profit" was chosen as least preferable by both groups. Neither group regarded substitution of leasing costs of assets for depreciation as a very desirable concept as indicated by a 4.1% and 0.0% response by Groups I and II respectively.

Acceptability of Industry and Government Sponsored Revaluation

Question 15 in Part I and Question 10 in Part II were designed to provide some insight into relative acceptability of industry sponsored asset revaluation, and government sponsored revaluation for income tax and governmental contracting purposes.
The response of Group I to Question 15 indicated a pattern of more tolerance and acceptability for industry sponsored capital asset revaluation than did the response pattern of Group II. The percentage of Group I endorsing industry sponsored capital asset revaluation "in periods of rapid inflation" was 40.9% as compared to 28.6% for Group II. Acceptability of industry sponsored revaluation "only as a 'last resort' inflation period alternative" was evidenced by 42.9% of Group II respondents as compared to only 18.9% of Group I respondents. Finally, 13.6% of Group I respondents found industry sponsored revaluation acceptable in "fairly stable economic periods" as compared to only 5.7% for Group II.

Answers to Question 10 indicated a fairly consistent pattern of response for both Groups I and II weighted toward acceptance of government sponsored capital asset revaluation in both income taxes and governmental contracting. Group I respondents indicated 45.7% and 47.3% acceptance of the concept of government sponsored revaluation "with some reservations" in the areas of income taxes and governmental accounting respectively as compared to 43.3% and 44.1% for Group II respondents. "Enthusiastic welcome" of the same related concepts was indicated by 28.3% and 26.1% of Group I as compared to 31.7% and 26.5% of Group II respectively.

About the same relative percentages of respondents in Group I and Group II felt that government sponsored capital asset revaluation should be "rejected completely" in income taxes and governmental contracting (8.7% and 10.9% for Group I, versus 9.8% and 11.8% for Group II).
Capital Asset Revaluation
Advantage "Label"

An idea of the "label" to be attached to a significant tax or contracting advantage via capital asset revaluation, and whether that same "label" would be applied to compensation for use of a fully depreciated asset was provided by answers to Questions 8 and 9 in Part I.

Responses to both Questions 8 and 9 by both groups exhibited no clear preference for a label to attach to either a tax or contracting advantage arising from capital asset revaluation or compensation for a fully depreciated asset.

About the only clear relationship was a rejection by both groups for both types of compensation of the label of being "neither cost return nor profit". This could be inferred as evidence of a two-valued orientation which says that the respondents felt constrained to put a particular "label" on the concept and accordingly were uncomfortable with the compensations being neither "cost return" nor "profit". If this is a bona fide observation, then it would seem to support the suggestion in Chapter IV of this dissertation that DOD not label its new "Imputed Interest" compensation device as either "cost" or "profit". If the contractor feels enough discomfort about the concept as a result of not being able to categorize it as either "cost" or "profit", then perhaps he will investigate the concept more rigorously and his increased knowledge will lead to a smoother implementation.
"Cost", "Profit", and "Fair Market Value" View Orientation

Questions 10 and 16 in Part I and Question 11 in Part II were aimed at providing some idea of the relative two-valued/intensional orientation of respondents toward the terms "cost", "profit", and "fair market value".

Responses to Question 10 indicated a pattern of concentration in the areas of "fair market value" being considered "defineable within broad limits" and "defineable by negotiated agreement". Practically none of the respondents felt the term was "defineable within precise limits", or "easily defineable within precise limits". Group I respondents who felt the term was "incapable of precise delineation" accounted for 7.7% of the responses in that group, while the percentage for Group II was 15.6%. By far, the most prevalent choice was "defineable by negotiated agreement". This would seem to indicate a recognition by the respondents that the term evokes a hazy concept which does not exist independently of operations to measure it, and perhaps again a desire to define the concept or label it in order to feel comfortable about its place in our system of symbols and its effect on us individually.

In contrast to the responses about "fair market value", the response pattern in Question 11 was perhaps more oriented toward evidence that the concepts of "cost" and "profit" were a little more clearly defined in the view of the respondent. In Group I, 18% of the respondents felt that the terms "cost" and "profit" were both "very clear--no deviation" as opposed to 1.9% and 0.0% of the same group who felt that "fair market value" was "defineable within precise
limits" and "easily defineable within precise limits". Additionally, the pattern of response gave some indication that the term "cost" was felt to be a little more clearly defined in the mind of the respondent than the term "profit". Only 2.0% of Group I and 7.0% of Group II felt the terms "cost" and "profit" were "not too clear".

Question 16 gave a response pattern which was more heavily weighted toward "cost" being "clearly opposite" to "profit" (35.3% and 31.6% for Groups I and II respectively). Surprisingly, of Groups I and II, 15.7% and 21.1% respectively felt that "cost" "can't be absolutely delineated from 'profit'.'\)

The responses to all the questions designed to give insight into the two-valued/intensional orientation of viewers about the terms "cost", "profit" and "fair market value" were far from conclusive. They evidenced a more multi-value/extensional orientation than I would have hypothesized, but obviously the individual respondents are products of an educational process which has exposed them to many things never dreamed of by Aristotle.

Overall, the respondents seemed to be a little more two-value/intensionally oriented about the concept of "cost" than they were about "profit", and more so about "profit" than they were about "fair market value". Along with this there was evidenced some reluctance to place a compensation device such as "imputed interest" beyond the bounds of being either "cost" or "profit".

Feasibility and Future Investigation Expectations

Beyond the question posed for insight at the beginning of this section, two additional questions were asked of respondents which
required a value judgment and a prediction. Questions 13 and 14 of Part I asked an opinion as to feasibility of capital asset revaluation and a prediction of future explanation of the concept of capital asset revaluation by the respondent.

The pattern of response to Question 13 indicated remarkable congruity for both groups as evidenced by the computed chi-square value of .47. The bulk of corporations who had experience or had performed research in this area concluded that capital asset revaluation "needs considerable experimentation to be useful." Only 6.0% of Group I and 9.3% of Group II concluded capital asset revaluation "is feasible at this time".

Question 14 gave some indication that both groups (22.0% and 15.9% for I and II respectively) planned at least a moderate increase in future investigation of capital asset revaluation. No respondents indicated that they planned a decrease in investigation but a total of 38.0% of Group I and 36.4% of Group II indicated investigation would be "discontinued or not engaged in".

SUMMARY

This chapter dealt with design and analysis of the research questionnaire mailed to controllers of some major United States corporations in January, 1975, with a follow-up mailing to non-respondents in May, 1975. The questionnaire was an attempt to discern trends in direction and magnitude of the controllers' experience in, and attitudes toward capital asset revaluation. Beyond that, it also included some questions related to semantic orientation of the
controllers, particularly with regard to the terms "cost" and "profit".

Some eleven specific queries were posed for possible answers from the questionnaire responses, along with a value judgment response as to potential feasibility of capital asset revaluation, and predictions of future investigative activity by responding corporations. The eleven queries are enumerated at the beginning of this chapter and are not repeated in this summary, except by way of a summary of questionnaire responses as related to each query.

Construction of the questionnaire was discussed next. The format of 1-18 questions in Part I to be answered by a single check mark out of five possible choices, and 1-12 questions in Part II to be answered by a single check mark in each of two columns was highlighted. The questions in Part II were designed to allow for an answer for a single question in two different time periods, or a single question related to two different concepts. The time periods involved 1973-74 and the period of time prior to that.

Selection of firms to be included in the survey was discussed next. The populations involved in the survey were drawn, one from the Index of 100 Companies which received the Largest Dollar Volume of Military Prime Contract Awards in Fiscal Year 1973, and the other from the Fortune Directory of the 500 Largest Industrial Corporations for the year 1973 less any corporations included in the first group.

The first population, designated "Group I", was comprised of 96 of the "top 100" DOD contractors. The four corporations excluded were non-profit entities whose nature, it was assumed, would preclude
valuable input into a survey primarily related to capital asset use. The second population, designated "Group II", was a random selection of 100 firms from the Fortune 500 as modified above. All members of both populations were included in the survey.

Analysis of questionnaire responses was presented next. Responses in Group I totaled 52 or 54% and in Group II totaled 45 or 45%. This was considered adequate for inference about the populations. It was pointed out that where a question contained more than one check mark in a column, that answer was eliminated from the response tabulation.

Question 12 in Part II of the questionnaire, dealing with areas to be benefited "least" and "most" by an acceptable capital asset revaluation process apparently was confusing to some respondents, and some respondents eliminated answering column two of Question 9 in Part II apparently because it dealt with "donated assets", and they had no experience in this area. Beyond that, most questions appear to have been understood and answered in accordance with instructions.

Responses were coded, identified to each group and entered into the computer which analyzed for numerical count, percentage relationships and chi-square values.

A chi-square analysis on relative conformity between answers of Group I and Group II was performed for each question on the questionnaire. Significant chi-square values at the 95% confidence level were discerned on only three out of 18 questions in Part I and three answers (1 1/2 questions) out of 12 questions in Part II. The significant chi-square values appeared on questions where the difference in populations could be known intuitively. A general
conclusion was reached that there was not significant difference
between population one and population two in responses to most of the
questions concerning capital asset revaluation nor semantic orientation.

Another chi-square analysis was performed on Questions 2-8
in Part II related to conformity of responses to these questions
between the two different time periods 1973-74 and prior to 1973.
Only one chi-square value exceeded the critical level at 95% confidence
level out of a possible 16. The conclusion was drawn that no
significant difference existed between responses to Questions 2-8 in
terms of the time period comparison.

Beyond that, each separate query posed in the introduction to
this chapter was discussed in light of responses to questionnaire
questions related to it.

The conclusion was drawn that there had been an increase in
the relative percentage of corporations exploring capital asset use
revaluation, primarily via the format of informal studies.

The next discussion pointed out that most corporations had
made no adjustment to historical cost at all in 1973-74, but those
that did apparently favored an adjustment by general index or a
combination of general and specific indexes, engineering estimates
and/or appraisals. A further discussion in answering the next
query noted that of those corporations which adjusted by general
index, there was a preference for the GNP Implicit Price Deflator.
Along with this, a tendency was noted for some Group I corporations to
adjust historical cost via a sub-index of the CPI, WPI or GNP
Deflator or other index.
Group I indicated no use of internal appraisals coupled with external engineering studies, and Group II indicated no use of outside appraisals in a very small indication of revaluation by either method.

Depreciation method adoption was discussed next, and a definite pattern of heavier orientation to straight line methodology by Group II as compared to declining balance and sum of the years digits methods by Group I was noticed. The ASPR requirement of method conformity for book, tax and cost center reporting can be seen here as creating this significant difference between Groups I and II in pattern of method adoption.

An increase in the relative importance of capital asset use to both Group I and Group II corporations was then discussed and the observation was made that Group I apparently felt the increase in importance more strongly because of the direct relationship between depreciation of capital assets and compensation by DOD to the contractors.

In a test of areas to be benefited "most" and "least" by an acceptable capital asset revaluation procedure, income taxes won easily as the "most" benefited area with governmental contracting as the second choice for "most" benefited by Group I corporations. Group I respondents selected union negotiations as "least" benefited and Group II corporations selected, predictably, governmental contracting as the "least" benefited category.

Next the relative increase of importance of capital asset use as compared to materials and labor, and other overhead was discussed. There appeared to be a slight edge in increase of
importance of capital asset use relative to other overhead items as compared to its importance relative to materials and labor.

The relative value of five different information sources concerning capital asset revaluation was considered next and the experience of outside appraisers was regarded as most valuable followed by the internal experience of the respondent corporations. Internal Revenue Service experience was not regarded to be of much value, and litigation, predictably of no value. The experience of "highly inflated" foreign economies ranked a distant third behind outside appraisers and internal experience. However, it was pointed out that experience of moderately inflated economies would probably be of great value in formulating an asset revaluation system.

The relative value of the legal profession's expertise was discussed next and both groups apparently regarded the asset revaluation problem as being primarily an accounting problem, but both evidenced recognition of the part the legal profession will play in any asset revaluation system development and more importantly implementation.

Revaluation methodology preference seemed to be oriented toward across the board revaluation via an industry index, but there was also a notable recognition of the value of a combination of suggested methods.

Economic adjustment of "cost" was chosen as most preferable method of compensation for inflation as opposed the least preferable method of adjusting "profit".

Group I indicated a higher tolerance for industry sponsored capital asset revaluation than did Group II, but both groups leaned
about equally more in the direction of increased tolerance for government sponsored capital asset revaluation in the areas of income taxes and governmental accounting.

No clear preference for a "label" to attach to a tax or contracting advantage via capital asset revaluation or compensation for a fully depreciated asset was shown by either group, but there was a marked rejection of the idea that either process was "neither cost return nor profit". Some observations were made about the two-valued Aristotelian orientation and the discomfort caused when concepts cannot be placed in particular categories.

The semantic orientation of the terms "cost", "profit", and "fair market value" was discussed next and responses were inconclusive, but indicated an ascending order of two-value/intensional orientation of "fair market value", followed by "profit" and finally by "cost".

Finally, potential feasibility of capital asset revaluation was discussed along with plans for future exploration of the capital asset revaluation concept. The great portion of responding corporations felt that based on their experience, capital asset revaluation needed "considerable experimentation in order to be useful" and most planned at least a moderate increase in future investigation of capital asset revaluation.
CHAPTER VI

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS
FOR FURTHER RESEARCH

This study developed out of the writer's assignment as an Air Force Reserve officer to the Air Force Business Research Management Center (Headquarters United States Air Force), Wright-Patterson Air Force Base, Ohio. The AFBRMC was created in 1973 and charged with the responsibility of coordinating Air Force research in the areas of defense procurement and improvement of general business practices within the Air Force.

The six Reserve officers selected for initial staffing were each offered research topics from a comprehensive list compiled by AFBRMC. Under the general topic of "Inflation", a sub-topic entitled "Determining What Methods are Employed by Civilian Contractors to Contract in the Economy Characterized by Rapid Price Escalation" was selected and further refined into the topic of this study.

Because of the inhibiting influence of "generally accepted accounting principles", the Internal Revenue Service and primarily the Securities and Exchange Commission, the techniques of recognizing the use of capital assets in the United States have been primarily limited to historical cost allocation via "systematic" and "rational" depreciation methods. Consequently, the accounting environment in this country has been almost totally devoid of pragmatic experimentation in asset revaluation.
The injection of rapid inflation into this sterile atmosphere has created a universal problem of meaningless historical asset values compounded by arbitrary allocation methods of depreciation. The resultant current change to expense representing the "price tag" for use of capital assets bears no resemblance to the economic sacrifice involved in their use.

The commercial manufacturer is able to compensate somewhat for this difference between historical cost of capital asset use and its present replacement value via increased charges for the goods produced by the capital assets. The DOD contractor in dealing with cost-reimbursement type contracts does not have this option. Consequently, a period of rapid inflation which sees his compensation for capital asset use based dollar for dollar on asset historical cost can cause inequity in the defense contracting process. If inflation remains severe enough for a long period of time the inequity can cause disruption of vital contracting relationships necessary for adequate defense procurement. DOD has recognized this possibility in the area of materials and labor via use of economic "escalator" clauses, but at present has no similar procedure for recognition of increased cost of using capital assets in the productive process, hence the need for a response to this problem.

The assumption was made that the rapid inflation in the United States during the last two years has stimulated increased activity in the area of asset revaluation, and that some knowledge of this current environment would be essential to development of any equitable DOD asset revaluation system. Consequently, the study set out to look at the magnitude, direction, and type of recent
response to the effect of inflation on capital asset use recognition in this country. The methodology involved consisted of a questionnaire directed to controllers of some major U. S. corporations. One group consisted of 96 of the top 100 DOD contractors (excluded were four non-profit entities), and the other group was comprised of 100 corporations selected at random from the Fortune 500, excluding any corporations in the first group.

In addition, some insight into the semantic orientation of the respondents, and in particular toward the terms "cost" and "profit", was sought. This was related to a peculiar communication problem in connection with an attempt on the part of DOD to offer a compensation element to contractors for capital funding costs, where the element had been labeled "profit", but did not fit that traditional accounting image and was rejected.

Along with the questionnaire and its analysis, a thorough study was made of the concept of capital asset use, current recognition of inflationary effects, and some semantic and philosophic considerations of "cost" versus "profit" in connection with Defense Procurement Circular No. 107. This phase of the research was considered to be of equal importance with the questionnaire and was used in support and analysis of the questionnaire and its responses, and to draw final conclusions for the study. A summary of the research in each of these areas and of the general results of the questionnaire follows.
SUMMARY

Capital Asset Use

The initial step in approaching a study of capital asset use valuation was to research the concept of capital asset use from its inception up through the present development of theory and application in the United States. This phase of the research also included the adoption of a definition of the term "capital asset" as it was to be used in the questionnaire and in subsequent study of the problem. The definition corresponded with that of "tangible capital asset" in Defense Procurement Circular No. 111.

The concept of periodicity was discussed and the distinction between revenue expenditures and capital expenditures was used as a starting point. The related lack of importance of periodicity and the absence of a necessity for attaching an interim value to capital assets in ancient accounting was noted. Along with this, the growing importance of periodicity and its consequent capital asset use valuation problems as business and manufacturing entities began to take on attributes of continued existence and widely held ownership was then explored.

Some asset valuation concepts were then explored, and the economics concept of "cost of capital" was contrasted with the accounting concept of "capital asset cost". A detailed explanation of the former term and its measurement were set beyond the dissertation's scope.

Historical cost versus replacement cost was then examined, and the relative merits of the latter as a value surrogate were noted.
Depreciation as a valuation versus an allocation concept was examined next, and the strong link between the going concern, matching and realization principles and depreciation as an allocation process was noted. The irrelevancy of depreciation method choice to decline in utility, and the pragmatic motivations of alternative method choice were explored and compared to some observations about the Lifo inventory costing method. Finally, the effect of APB Opinion No. 20 on method consistency was discussed and the conclusion drawn that its "consistency by fiat" did little for the depreciation concept.

The treatment of depreciation under the generally accepted accounting principles, the Internal Revenue Code, and the Armed Services Procurement Regulation was then compared and contrasted. The pragmatic approach of the tax code which either clearly "allows" a particular depreciation method to a particular asset, or doesn't, was contrasted with the pious euphemisms of generally accepted accounting principles which look to the nebulous criteria of "systematicity" and "rationality" of method. It was then noted that the ASPR in the past has nodded respectfully in the direction of generally accepted accounting principles, but has basically required of any depreciation method that it adhere to Internal Revenue Service acceptability.

The final step in exploration of the concept of capital asset use was to examine the new Cost Accounting Standards Board depreciation standard which became effective July 1, 1975. The controversial nature of some of its provisions was noted, including that of attempting to correlate periodic depreciation charges with a
"reasonable" measure of asset service potential expiration in each accounting period, and its requirements for justification of estimated useful life and supporting records.

Summarizing, the 1975 DOD contractor finds himself limited to depreciation as an allocation process based on historical cost in attempting to recognize capital asset use. Current attempts at recognizing the effects of inflation, including a very significant recent development by the Securities and Exchange Commission, are explored in the next stage of this study, but at the present time have not yet altered the basic pattern of capital asset use recognition outlined above.

Three influences weigh on the DOD contractor in applying allocative depreciation theory and practice: generally accepted accounting principles, the Internal Revenue Code and its interpretation via regulations, rulings, and case jurisprudence, and finally the Armed Services Procurement Regulation which looks to the new Cost Accounting Standards Board depreciation standard for depreciation procedure as of July 1, 1975. In satisfying these three areas of influence, the contractor must choose allocative depreciation methods which are "systematic" and "rational", "allowable" and which reflect a "reasonable" approximation of asset service potential in each accounting period, reflect a reasonable correlation of estimated useful life and salvage value with actual experience, and finally which are supported by adequate asset records.

Satisfying all of these demands has to be a frustrating and costly experience, made all the more frustrating by the realization that the end result is still the product of an arbitrary allocative
process. A final ironic note is added with the realization that the historical costs being allocated lose increasing import with the passage of time and changes in general and specific price levels.

Asset Valuation in Today's Environment

The next step in the research process involved a comprehensive look at forces in the current environment which are both contributing to, and attempting to cope with, the pressure for recognition of inflationary effects on capital asset use valuation. Conclusions were also drawn as to potential benefit of their experience to DOD.

To set the stage for this phase, an examination was conducted into the nature of four Renegotiation Board cases, appealed to the Tax Court, which had allowed deviation from historical cost in valuing contractor assets for purposes of a decision relative to "excess profits". The importance of the cases, of which the Boeing and North American Companies cases are most relevant, is not that they revolutionized asset compensation, but rather that they set a precedent in recognizing deviation from historical cost.

The companies involved contended a value for an unrecorded asset labeled 'Manufacturing Know-How', which the Court recognized and rather arbitrarily valued as being equal to the combined values of all other company assets. The demise of the procedure came in the last case when the Court altered its emphasis to a change in compensation formula according to DOD/contractor capital asset ownership mix, completely ignoring the contractor's argument about unrecorded assets. The last case did not reject the concept of deviation from historical cost; it merely alluded to the difficulty
of valuing intangibles. No practical capital asset revaluation experience could be drawn from these cases. In fact, there was evidence of misunderstanding of some basic accounting concepts on the part of the Tax Court, which highlights the need for active coordination between the accounting and legal areas in developing and administering a capital asset revaluation system.

Internal Revenue Service and Securities and Exchange Commission experiences were then examined, along with asset valuation trends in legal jurisprudence.

The Internal Revenue Code, its rulings, regulations and case decisions all deal with a nebulous concept of asset valuation labeled "fair market value". An exhaustive evaluation of the theory and application of this concept led to the conclusion that it was defined largely in terms of judicial interpretation and litigation. An attempt to apply this asset valuation concept to DOD contracting would apparently only result in a morass of judicial and administrative frustration. The relatively "easy" solution to asset revaluation by DOD of conformity to Internal Revenue Service procedure is not a viable alternative here.

The Securities and Exchange Commission's attitude toward, and regulation of, asset valuation revealed a traditional pattern of being probably the single most effective negative influence on asset valuation which deviated from historical cost/allocation depreciation. A recent reversal away from the pattern of being a passive/negative influence to that of being an active/positive influence in asset valuation was explored. The recent announcement of the SEC that it intends to require replacement cost reporting on inventories and fixed
assets via an unaudited footnote is, in my opinion, the most significant event in asset valuation in the United States in the last forty years, and is very important to some major conclusions of this study.

Examination of recent experience of the courts in dealing with asset valuation discerned a trend of recognizing "fair" asset value reporting in liability and regulatory jurisprudence, and of placing much of the discretion for determining criteria for "fairness" in the hands of the layman (including judges, juries, etc.) rather than the professional accountant. No conclusion is reached that the legal profession is abandoning the historical cost concept, but it will be important for DOD to be cognizant of the above trend in developing any asset revaluation system.

The three Cost Accounting Standards Board studies which had impact on this research were examined and evaluated. The study which resulted in the new depreciation standard was evaluated and is reported on in this summary's treatment of the concept of capital asset use. The second relevant study dealing with current value accounting is apparently awaiting developments by other authoritative bodies, and finally the third study which deals with the concept of compensating contractors for capital funding costs was evaluated. Some conclusions about the "label" to be put on the device which is basically related to the economic concept of "imputed interest" are developed in a subsequent part of this summary.

The experience of foreign countries in asset revaluation was explored next. Those countries which experienced runaway inflation, such as Brazil, have little apparently to offer DOD in designing an
asset revaluation system, since their revaluation attempts are often tied to a consumer oriented general price index which requires authoritative and repressive measures generally unsuited for a democratic society. The experience of Japan and that of a unique institution in Britain named The Centre for Interfirm Comparisons could be of benefit to DOD in developing a capital asset revaluation system.

I believe the most promising source of input for DOD in development of a capital asset revaluation system would be the experience of the Philips Company in the Netherlands, which has operated a viable, practical capital asset revaluation system, based on replacement cost, for a number of years. The system has demonstrated the ability to function efficiently in providing information for management decisions and obviously this feature would be critical to any DOD adoption as cost of an asset revaluation system could hardly be justified merely to satisfy DOD reimbursement procedure.

DOD contractors will be faced with the requirement of developing at least a rudimentary replacement cost system to satisfy the SEC footnote requirement, and I believe proper planning at this stage for a more sophisticated system is very important. Development of a replacement cost valuation system, similar to that of the Philips Company, which could justify its existence in terms of value of management information provided, would be a significant step forward.

The philosophic orientation of the current capital asset valuation environment was explored next, and the paucity of
Inductively derived pragmatic theory and practice was noted. In most other areas accounting has traditionally been accused of emphasizing the inductive approach to theory development to the detriment of a deductive approach. However, in capital asset valuation theory the exact opposite has been true. In a hypersensitive reaction to the asset overvaluation of the 1920's, accounting in the United States has frowned on the practical experimentation which is absolutely essential to development of any inductively derived asset valuation theory.

Academe has provided the only legitimate arena for development of new valuation concepts, and the results in terms of general price level supplementary adjustments have not been very palatable to practitioners. Indiana Telephone Corporation, one notable exception to this trend, utilized a specific price level adjustment geared to a replacement cost index derived for them and the telephone industry by a registered professional engineer. ITC eventually switched to general price level reporting, but did so, I believe, primarily to conform to Accounting Research Study No. 6 rather than as a result of dissatisfaction with the replacement cost concept.

The final conclusion of research in this area was that both inductive and deductive approaches are essential to development of asset valuation theory and practice necessary to cope with inflation.

"Cost", "Profit" and Defense
Procurement Circular No. 107

The next stage of research dealt with the peculiar communication problem encountered by DOD in the introduction of a new capital compensation device via employment of a profit formula element
calculated on capital utilized. DPC No. 107, introduced in December, 1972, was utilized in less than one percent of all cost reimbursement contracts let since that time. The compensation concept employed was basically related to the idea of an economic cost of funds, which neither fits into the traditional accounting concepts of "cost" nor of "profit".

The idea that much of western world thought processes are influenced by the Aristotelian philosophic system which orients toward an "either/or" two-valued way of viewing people, places, things and events was explored. Along with this the ideas of Hayakawa and Korzybski relative to the desirability of a multi-value and "extensional" orientation were examined. The extensional meaning of a word is that which it stands for in the real world, while the intensional meaning is that which is connoted in an individual's head.

DPC No. 107 was analyzed in light of its relative orientation and some economic and accounting concepts of "cost" and "profit" were explored. A general conclusion was reached that accounting concepts of both "cost" and "profit" are more two-value/intensionally oriented than are their economic counterparts. The observation was made that DPC No. 107 presented the economic concept of "cost of capital", basically a multi-value/extensional concept in terms of a format oriented toward the more two-value/intensionally oriented concept of accounting "profit".

The CASB issues paper on a successor to DPC No. 107 was discussed, and its proposal to introduce the concept of "inputed interest" as "cost" on the operational level was examined. Finally, the suggestion was made that any successor to DPC No. 7 not label
the proposed "Imputed interest" computational device as either "cost" or "profit", but that it rather be introduced on the operational level as a completely new compensational concept.

Questionnaire Analysis and Results

The final phase of the research program, the research questionnaire, was responded to by 54% of the defense contractor corporations and 45% of the group chosen from the Fortune 500. The questionnaire consisted of 30 questions designed to offer insight into the current asset valuation environment and some insight into semantic orientation of respondents, particularly toward the terms "cost" and "profit". Answers to all but Question 12 of Part II related to a "least" and "most" benefited area of an acceptable capital asset revaluation procedure appeared to have been understood and answered in accordance with instructions.

Answers were coded and analyzed by computer for frequency response, percentage relationships and chi-square analysis for population response congruity and time period congruity on some questions. The two groups of respondents did not evidence significant difference in response except to general questions where this difference could be intuitively inferred. Thus responses to both asset valuation questions and semantic orientation did not appear to offer any significant difference between the groups.

Eleven specific queries were formulated for possible answers by the questionnaire, along with an elicited opinion concerning feasibility of capital asset revaluation and a projection of future plans for asset revaluation exploration by each respondent.
corporation. The eleven queries are set out in the beginning of Chapter V and are not repeated here specifically. Responses to the queries are analyzed in detail in Chapter V and summarized at its conclusion. Accordingly, they will be summarized in terms of only essential elements here.

In general there was found to be increased exploration of asset use valuation via informal studies during 1973-74. Adjustment to historical cost was not often made, but when it was, it came in the form largely of general price index use with a preference for the GNP Implicit Price Deflator. Accelerated methods of depreciation were predominately used by DOD contractors as opposed to straight line method use by the other group of respondents.

Increased importance of capital asset use was evident in both groups, but more heavily evident in DOD contractors. Income taxes was chosen as the area to be benefited "most" by an acceptable capital asset revaluation procedure followed by governmental contracting for DOD contractors. Capital asset use value increased slightly more related to other overhead items as compared to materials and labor.

Experience of outside appraisers, followed by internal corporate experience, was chosen as the most valuable source of information for capital asset revaluation. Internal Revenue Service experience was regarded as relatively worthless. The experience of "highly inflated" foreign economies was judged relatively unimportant but the observation should again be made that moderately inflated economies can offer very valuable experience.
Asset revaluation was judged to be primarily an accounting versus a legal problem, but recognition of the importance of the part the legal profession will play in any asset revaluation system was evident in the questionnaire response.

Economic adjustment of "cost" and across the board revaluation via industry index, with room for a combination of methods, was judged preferable to other alternatives.

Government sponsored capital asset revaluation in the areas of income taxes and government contracting seemed to be more tolerable than did industry sponsored general capital asset revaluation.

Neither group of respondents showed a clear preference for a "label" to attach to a contracting or tax advantage via capital asset revaluation, but both clearly rejected the label "neither cost nor profit", perhaps evidencing the discomfort caused when concepts cannot be "properly" categorized under a two-valued Aristotelian orientation. The semantic orientation of the respondents toward the terms "fair market value", "profit" and "cost" in that order was judged to be increasingly two-value/intensional.

Finally, most respondents felt capital asset revaluation needed "considerable experimentation in order to be useful" and most planned some increase in the level of future investigation.

CONCLUSIONS

Four major conclusions are drawn as a result of the combined research via questionnaire and examination of the areas of capital asset use, the current environment, and a study of Defense Procurement Circular No. 107. These are enumerated below and followed by
recommendations for further research. A number of minor conclusions and observations in support of the major conclusions are made at various points through the dissertation.

**Critical Lack of Pragmatic Capital Asset Use Revaluation Experience**

There appears to be a critical lack of pragmatic capital asset use revaluation experience in the United States today. Further, there appears to be no significant difference between DOD contractors and other major corporations in this pattern of lack of pragmatic capital asset revaluation experience. The negative effects of the malexperience of the 1920's in asset value overstatement have conditioned the accounting profession, and the forces which influence accounting practice and theory, to frown on any attempts to introduce deviation from historical cost-allocation depreciation.

The inhibiting influence of the Internal Revenue Code, generally accepted accounting principles and particularly the Securities and Exchange Commission are reflected in an accounting history in the United States almost totally devoid of notable capital asset revaluation attempts since the 1920's. Even in the face of recent relatively high rates of inflation, most corporations responding to the questionnaire indicated no actual adjustment of historical cost in recognizing capital asset use. Of those who did attempt a revaluation, it was largely geared to the professionally "safe" procedure of adjustment via a general price index in conformity to Accounting Research Study No. 6 and Accounting Principles Board Statement No. 3. This condition stands in stark contrast to the traditional pattern of inductively derived accounting theory based on a synthesis of pragmatic current experience.
Importance of Capital Asset Use
Revaluation to the United States
and the Department of Defense

The development of an adequate process of capital asset use
revaluation is of tremendous importance to the United States and to
the Department of Defense. A noticeable shift occurred in the
questionnaire response pattern of corporations away from regarding
capital asset use revaluation as "not too important" toward a pattern
of regarding it as "critical" and "very important". This shift was
more pronounced in the group of Defense Contractor Corporations.
The importance of the concept of capital asset use revaluation is
also reflected in the trend away from "no investigation" of the
concept towards increased experimentation and research at the present
time, and plans for an increased level of research into the concept
in the future.

Various professional bodies have recognized the need for
revaluation by launching intensive research studies into the problems
of price-level accounting, and the Securities and Exchange Commission
has given its concern concrete form by requiring replacement cost
reporting on inventories and fixed asset.

A relatively large percentage (approximately 30%) of both
groups of respondents to the questionnaire indicated they would
"enthusiastically welcome" government sponsored capital asset
revaluation in the areas of income taxes and governmental accounting,
while almost half of each group said they would accept it "with some
reservations".

The question of whether capital asset revaluation will come
to be is moot—it already has via the SEC requirement for selective
replacement cost reporting. The Department of Defense is rather faced with the option of being a leader in the implementation and development of capital asset use revaluation or choosing to accept revaluation concepts and procedures developed by others.

Desirability and Feasibility of Replacement Cost as Value Surrogate in Capital Asset Revaluation System

Replacement cost is both highly desirable as a value surrogate and its use feasible in a Department of Defense pragmatic capital asset revaluation system. Of the various pragmatic alternatives available for a capital asset revaluation system, replacement cost is most directly related to a measure of current economic sacrifice. Appraisers have worked extensively with this concept and their value as an information source was readily recognized by most respondent corporations.

The Securities and Exchange Commission is now requiring the generation and reporting of replacement cost via unaudited footnote, and this bodes to be the precursor of more extensive replacement cost reporting. Development of at least a rudimentary replacement cost system is mandatory now, due to the SEC reporting requirement, and the economic benefits of managerial information provided should justify development of a more sophisticated system.

The experience of the Philips Company in the Netherlands with pragmatic and effective use of a replacement cost asset valuation system over an extensive period of time, on a world-wide basis, gives ample proof of the feasibility of such a system. The experience
of this company should be drawn upon heavily in development of a DOD capital asset revaluation system.

Importance of "Labeling" and Orientation to Capital Funding Compensation Device

The new "imputed interest" concept for compensating DOD contractors should not be "labeled" either "cost" or "profit", but rather should be introduced with adequate orientation at the operational level as a completely new concept in contractor compensation. Any successor to Defense Procurement Circular No. 107 should be cast in a multi-value/extensional format which does not place the new compensation device in the traditional accounting concept of either "cost" or "profit", but rather which points to it as something new and different from traditional accounting concepts. It should not be assumed that a "business as usual" initiation to the concept at the operational level will insure acceptance.

RECOMMENDATIONS FOR FURTHER RESEARCH

The sudden and dramatic shift in relative importance of capital asset use revaluation, coupled with the fact that pragmatic experimentation in this area has so long been a futile exercise, make it a fertile and broad area for research. The decision by the SEC to reverse its long-standing prohibition against reporting which deviates from historical cost, via its requirement of replacement cost reporting (albeit informal) opens a vast new arena in which researchers can conduct experimentation.

For the Department of Defense, emphasis must lie on development, in as short a time as is consistent with required levels of
performance, of a system which will serve as a basis for evaluating "fair" compensation of contractors for capital asset use in inflationary periods. In addition, the system should serve as a basis for generating SEC required replacement cost figures, and furnish acceptable information for management decisions in order to justify the expense of its operation.

Any DOD capital asset revaluation system would also obviously have to articulate with the new CASB depreciation standard, and the practical problems in such a merger also offer much material for research.

Finally, it is once again strongly recommended that any attempt at development of a DOD capital asset revaluation system start with a comprehensive evaluation of the replacement cost system of the Netherlands' Philips Company. Since that system has stood the test of time in adapting to multiple reporting requirements exacted on a world-wide basis, it has to be a rich source of information for the Department of Defense researcher.
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BIBLIOGRAPHY

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APPENDIX A
LETTERS OF TRANSMITTAL
Mr. XXX
Controller
XXX Corporation
Address

Dear Mr. XXX:

The current condition of rapidly escalating inflation is forcing the accounting profession to actively consider solutions to many problems, including that of placing a current price tag on the use of tangible capital assets.

Because of your expertise and practical experience, I am very interested in your views relating to this problem.

Responses to the enclosed questionnaire will form the basis for part of my accounting Ph.D. dissertation at Louisiana State University at Baton Rouge.

If I may impose on your good will and valuable time for a few minutes, I ask you to please complete the questionnaire and return it via the attached, stamped, self-addressed envelope. The questionnaire is designed to be answered quickly with a minimum burden placed on you.

I can offer nothing in return but the satisfaction of having aided an attempt to interject current practical experience into the study of a critical theoretical problem, and the sincere thanks of a grateful academician.

Obviously, the confidentiality of your individual response will be protected, and its use limited to development of statistical tables which in no way will identify individual respondents.

Again my thanks; your response will be a great help to me, and I will do my best to insure that your time investment pays dividends to the accounting profession.

Sincerely,

Joseph V. Fairchild, Jr., M.B.A., C.P.A.
Assistant Professor of Accounting
Mr. XXX
Controller
XXX Corporation
Address

Dear Mr. XXX:

Recently you should have received a short research questionnaire concerning your experience and views on placing a price tag on capital asset use.

I realize the timing may have been unfortunate due to year-end closing pressure on most controllers during this period of the year.

Assuming you may not be under quite so much pressure now, I ask you to please reconsider responding to the questionnaire enclosed.

Your experience can furnish a valuable input into this research, and your response is vital to its success due to the relatively small size of the research sample group.

Again, my sincere thanks to you for taking your valuable time to respond to this request. Confidentiality of your response will of course again be assured and your individual response greatly appreciated.

Sincerely,

Joseph V. Fairchild, Jr.
Assistant Professor of Accounting
QUESTIONNAIRE
***QUESTIONNAIRE***

**Definition:** The term "capital asset" is defined for purposes of this questionnaire as follows: assets that have physical substance, more than minimal value, and are expected to be held by an enterprise for continued use or possession beyond the current accounting period for the services they yield.

**Instructions General:** All answers should be in terms of your own internal consideration for production contract negotiations rather than for formal external financial reporting.

**Part I**  Please check only one most appropriate answer for each question.

1. We consider capital asset use costs to be:
   A. critical  B. very important  C. important  D. not too important  E. unimportant

2. Compared to materials and labor, capital asset use costs are:
   A. much more important  B. more important  C. of equal importance  D. less important  E. unimportant

3. Compared to other overhead items, capital asset use costs are:
   A. much more important  B. more important  C. of equal importance  D. less important  E. unimportant

4. Our most powerful deterrent to use of current replacement value for capital assets would be:
   A. determination difficulty  B. non-acceptance for governmental contracting  C. non-acceptance for income taxes  D. union resistance  E. divergence from "generally accepted accounting principles"

5. Our capital asset age structure is more heavily weighted toward:
   A. 0-5 years  B. 5-10 years  C. 10-15 years  D. 15-20 years  E. over 20 years

6. In general we are:
   A. heavily sales oriented  B. more heavily sales oriented than production oriented  C. about equally sales and production oriented  D. more heavily production than sales oriented  E. heavily production oriented

7. To us, cost reimbursement type sales to government agencies are:
   A. most important  B. very important  C. important  D. not too important  E. inconsequential

8. Compensation for use of a fully depreciated capital asset should be considered:
   A. all "profit"  B. part of current replacement value  C. return of economically adjusted "cost"  D. neither "cost" return nor "profit"  E. a combination of "cost" return and "profit"
9. A significant tax or contracting advantage via capital asset revaluation should be regarded as:
   A additional "profit"  B part of current replacement value
   C return of economically adjusted "cost"  D neither "cost" return
   nor "profit"  E a combination of "cost" return and "profit"

10. I regard the term "fair market value" as:
    A incapable of precise delineation  B defineable within broad limits
    C defineable by negotiated agreement  D defineable within precise
    limits  E easily defineable within precise limits

11. The most valuable source of information about capital asset use revaluation would be:
    A experience of highly inflated foreign economies  B Internal
    Revenue Service valuation experience  C litigation involving asset
    value  D our own internal experience  E experience of outside
    professional appraisers

12. I would prefer a revaluation system oriented to:
    A subjective experience of each company  B opinions of independent
    appraisers  C across the board revaluation via an industry index
    D across the board revaluation via a general index  E a combination
    of the above procedures

13. As a result of our research and/or experience in 1973/74 we conclude capital asset revaluation:
    A is feasible at this time  B is feasible if required in the future
    C needs considerable experimentation to be useful  D will probably
    never be feasible  E no research or experience

14. Our present plans call for future investigation of capital asset revaluation to be:
    A vastly accelerated  B moderately increased  C continued at about
    the same scale  D reduced  E discontinued or not engaged in

15. Industry-sponsored capital asset use revaluation should be accepted:
    A under no circumstances  B only as a "last resort" inflation period
    alternative  C in periods of rapid inflation  D in periods of
    moderate inflation  E in fairly stable economic periods

16. The concept of "cost":
    A is clearly opposite to "profit"  B is not always clearly
    distinguishable from "profit"  C could be confused with "profit"
    D requires detailed analysis to distinguish from "profit"
    E can't be absolutely delineated from "profit"

17. Our preference for recognition of inflationary effects on capital asset use value in income taxation or contracting would be:
    A an economic adjustment of "cost"  B a "profit" adjustment based on
    an index  C a combination of the above factors  D more rapid
    depreciation plus an "interest" allowance on capital investment
    E substitution of present leasing cost of assets for depreciation
18. The difficulties encountered in capital asset use revaluation would be:
A. primarily a legal problem  B. more a legal than an accounting problem  
C. about equally distributed between legal and accounting problems  D. more an accounting than a legal problem  
E. primarily an accounting problem

Part II Please check only one most appropriate answer in each column.

<table>
<thead>
<tr>
<th>Column 1</th>
<th>Column 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. During 1973/74 the importance of capital asset use value compared to:</td>
<td></td>
</tr>
<tr>
<td>Increased considerably</td>
<td>A</td>
</tr>
<tr>
<td>Increased moderately</td>
<td>B</td>
</tr>
<tr>
<td>Remained about the same</td>
<td>C</td>
</tr>
<tr>
<td>Decreased moderately</td>
<td>D</td>
</tr>
<tr>
<td>Decreased considerably</td>
<td>E</td>
</tr>
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</table>

2. We valued capital asset use primarily via:
Prior to '73   1973 & '74

<table>
<thead>
<tr>
<th>Method</th>
<th>Prior to '73</th>
<th>1973 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straight line depreciation</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Declining balance method</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>&quot;Machine hours&quot; or other use-oriented method</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Sum of the years digits method</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Other depreciation method</td>
<td>E</td>
<td>E</td>
</tr>
</tbody>
</table>

3. We adjusted capital asset historical cost via:
Prior to '73   1973 & '74

<table>
<thead>
<tr>
<th>Method</th>
<th>Prior to '73</th>
<th>1973 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>General price index</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Industry price index</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Engineering estimates and/or appraisals</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Combination of above methods</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>No adjustment made</td>
<td>E</td>
<td>E</td>
</tr>
</tbody>
</table>

4. We utilized primarily the following index:
Prior to '73   1973 & '74

<table>
<thead>
<tr>
<th>Index</th>
<th>Prior to '73</th>
<th>1973 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Price Index</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Wholesale Price Index</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Gross National Product Deflator</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Sub-index of one of the above</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Other index</td>
<td>E</td>
<td>E</td>
</tr>
<tr>
<td>No adjustment made by index</td>
<td>F</td>
<td>F</td>
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</table>
5. We adjusted capital asset historical cost via:

<table>
<thead>
<tr>
<th></th>
<th>Prior to '73</th>
<th>'73 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our own engineering estimates and/or appraisals</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Outside engineering estimates and/or appraisals</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Our engineering estimates and outside appraisals</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Our appraisals and outside engineering estimates</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>No adjustment via engineering estimates and/or appraisals</td>
<td>E</td>
<td>E</td>
</tr>
</tbody>
</table>

6. We considered the difference between capital asset historical cost and current replacement value as:

<table>
<thead>
<tr>
<th></th>
<th>Prior to '73</th>
<th>'73 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Very Important</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Important</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Not too important</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Unimportant</td>
<td>E</td>
<td>E</td>
</tr>
</tbody>
</table>

7. We explored capital asset use revaluation:

<table>
<thead>
<tr>
<th></th>
<th>Prior to '73</th>
<th>'73 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extensively</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Fairly extensively</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Moderately</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Very little</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Not at all</td>
<td>E</td>
<td>E</td>
</tr>
</tbody>
</table>

8. Our investigation of capital asset use revaluation took the form of:

<table>
<thead>
<tr>
<th></th>
<th>Prior to '73</th>
<th>'73 &amp; '74</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal research projects and company wide experiments</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Formal research projects and selected experiments</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Formal research projects only</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Informal studies</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>No investigation</td>
<td>E</td>
<td>E</td>
</tr>
</tbody>
</table>

9. Our use of these assets is valued at:

<table>
<thead>
<tr>
<th></th>
<th>Fully Depreciated Assets</th>
<th>Donated Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
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10. Government sponsored capital asset revaluation offering significant advantages in these areas should be:

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11. The meaning of these concepts is:

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12. An acceptable capital asset use revaluation procedure would benefit us in:

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APPENDIX B
## Questionnaire Responses

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VITA

Joseph Virgil Fairchild, Jr., son of Georgiana Bourgeois Fairchild and the late Joseph Virgil Fairchild, was born on November 26, 1933 in New Orleans, Louisiana. He attended elementary school in Franklin, Louisiana and graduated as valedictorian of Hanson High School in 1951.

In the fall he enrolled at Louisiana State University in Baton Rouge, from which he graduated in 1956 with a Bachelor of Science degree in geology. He then was employed as a geologist until he entered the Air Force in March of 1957.

The next three years were spent as an Air Force Intelligence Officer. During this period he served two years in Japan, where he attended Sophia University in Tokyo on a part-time basis. In February, 1960 he returned to the United States, was released from the Air Force, and resumed employment as a geologist.

In September, 1960 he enrolled in Graduate School at Louisiana State University and spent the next two and one-half years there, graduating in January, 1963 with a Master of Business Administration degree in accounting. During this time he married Judith Champagne of Franklin, Louisiana.

Following graduation he worked as an associate accountant in the Internal Auditing Department of a major oil company until June, 1964 when he was employed by L. A. Champagne & Company, Certified Public Accountants in Baton Rouge, Louisiana.
He spent the next five years in Baton Rouge and became a general partner in the firm. During this time period a daughter, Georgiana, and a son, Joseph B., were born.

In 1969 he resigned his partnership to establish his own practice, and at the same time accepted a position as Assistant Professor of Accounting at Nicholls State University, Thibodaux, Louisiana. In 1971 he enrolled in Graduate School at Louisiana State University in the Ph.D. in Accounting program. With the exception of a one-year sabbatical leave in 1973, he has taught continuously at Nicholls since 1969.

Mr. Fairchild is presently an Associate Professor of Accounting at Nicholls, where in 1972 he was named "Outstanding Teacher in the College of Business Administration" in a yearbook student poll, and was named to "Outstanding Educators of America" in 1973.

He has maintained active status in the Air Force Reserve, in which he holds the rank of Major, and in 1974 was one of six Reserve officers selected to staff the newly-formed Air Force Business Research Management Center. Out of this assignment developed the research study which is the subject of this dissertation.
Candidate: Joseph Virgil Fairchild, Jr.

Major Field: Accounting

Title of Thesis: COMPENSATION FOR USE OF CAPITAL ASSETS DURING PERIODS OF RAPID INFLATION: AN EVALUATION OF DEPARTMENT OF DEFENSE PROCEDURES VERSUS CURRENT COMMERCIAL PRACTICE

Approved:

Clarence L. Dunn
Major Professor and Chairman

James E. Truax
Dean of the Graduate School

EXAMINING COMMITTEE:

N. C. Aper
Raymond Leach
Daniel S. Kyle
George W. Fair

Date of Examination:

August 5, 1975