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THESIS

FINANCIAL ACCOUNTING CONCEPTS
AND DOD/DON
FINANCIAL REPORTING PRACTICE

by

Robert C. Barrieault

March, 1993

Thesis Advisor:

Douglas Moses

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Financial Accounting Concepts
and DoN/DoD
Financial Reporting Practice

by

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Lieutenant, United States Navy
B.S., New Hampshire College, 1987

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of the requirements for the degree of

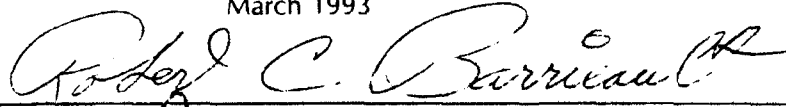
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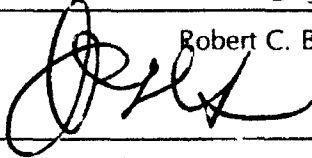
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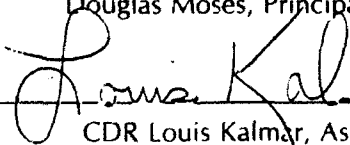


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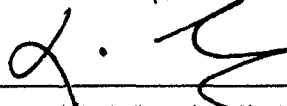
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ABSTRACT

The objective of this thesis is to assist financial management students at the Naval Postgraduate School to relate the concepts learned in Financial Accounting (MN2150) and Financial Reporting and Analysis (MN4159) to the applications in the DoN/DoD. To accomplish the objective this thesis identified nine basic financial accounting/reporting concepts broadly relevant to all organizational accounting/reporting systems, identified specific DoN/DoD applications of those concepts, and documented the relevance of the concepts to DoN/DoD practice in a series of essays.

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I. INTRODUCTION

A. BACKGROUND

The Military has recently suffered from many problems. Of these, shrinking resources and increasing workload have stretched manpower to its limits. The Military now has problems staffing its financial offices adequately enough to insure quality work. In addition, the Department of Defense (DoD) budget is coming under increasing scrutiny and is constantly being shrunk to accommodate other national needs. Fewer financial managers are being asked to do more with fewer dollars.

Military finance is currently going through an evolution to solve its many problems. One of the needs is to continue and build upon the education of its financial managers. Of the many programs employed to accomplish this, one is the Financial Management (837) program at the Naval Postgraduate School. This program provides financial managers with training in Financial Management, a specialty code, and a Masters Degree. The instructors and students at the Naval Postgraduate School have a need for information relevant to the Department of the Navy (DoN)/ Department of Defense (DoD) financial accounting/reporting systems.

B. OBJECTIVE OF THE RESEARCH

The objective of this thesis is to assist financial management students at the Naval Postgraduate School to relate the concepts learned in Financial Accounting (MN2150) and Financial Reporting and Analysis (MN4159) to the real world of DoN/DoD financial management. To accomplish the objective this thesis identifies basic financial accounting/reporting concepts broadly relevant to all organizational accounting/reporting systems, identifies specific DoN/DoD applications of those concepts, and documents the relevance of the concepts to DoN/DoD practice in a series of essays.

C. ORGANIZATION OF THE THESIS

The main thrust of this thesis is to document links between basic accounting/reporting theories taught in the classroom and that of DoN/DoD. First, this thesis identifies the DoN/DoD financial accounting/reporting systems or practices where the basic concepts come into play. Second, this thesis documents the link, explaining the relevance of the concept to the operation of the DoN/DoD system or practice. These stated goals are satisfied through a series of short essays designed for use in MN2150 or MN4159 classes. The areas of coverage include;

1. Financial Reporting
2. Ratio Analysis for a Ships Store
3. Timing Issues

4. Inventory Accounting and Standard Pricing
5. Depreciation
6. Proprietary versus Fund Accounting
7. Assets Valuation and Write Offs
8. Present Value
9. Liability Valuation

Essays related to each of these are contained in Appppendices.

D. RESEARCH METHODOLOGY

The idea for this research was generated by Professor Douglas Moses to fill a void in Naval Postgraduate School financial accounting courses. Commercially availible teaching material focuses on private sector corporate accounting and is not oriented to DoN/DoD accounting systems or problems. Hence a question is often raised: How do these corporate accounting concepts apply to DoN/DoD? To answer this question, a decision was made to develop a series of short essays designed to link traditional teaching material ot the world of DoN/DoD. Upon the two of us meeting we discussed possible topics for essays in this thesis. The list provided in section C of this chapter shows the final topics decided upon.

An initial tentative list of accounting concepts, around which essays would be developed was decided upon prior to my participating in Professor Moses' MN4159 class. During the class we discussed the Corporate Accounting applications of

these accounting concepts. As part of this thesis and the course requirements, four other students and myself attempted to identify DoN/DoD applications of the concepts.

After the course, I proceeded with refining and developing the essay topics, working with CDR Kalmar to ensure the accuracy of the information, then working with Professor Moses to smooth out the essays into both presentable form and laymen terminology.

The plan for this research was to utilize both field and archival research methods. Field research was engaged in to allow the researcher to personally observe the real world DoN/DoD accounting/reporting systems. Included in this approach was the use of personal interviews with DoN/DoD financial managers.

The bulk of the research was performed using the Archival method. This approach was utilized to review documents and regulations that are currently available. A complete list of the documents reviewed is listed below.

1. Clyde P. Stickney, Roman L. Weil and Sidney Davidson Financial Accounting: An Introduction to Concepts, Methods, and Uses 6th ed.
2. Edward B. Deakin and Michael W. Maher Cost Accounting 3rd ed.
3. John W. Buckley, Marlene H. Buckley and Hung-Fu Chiang Research Methodology & Business Decisions
4. Department of the Navy, Navy Comptroller Manuals, Volumes 1-8, NAVSO P-1000.
5. Practical Comptrollership, Naval Postgraduate School, Monterey, California.

6. SECNAVINST 7000.14A, 14 MAR 1973, Subject: Economic Analysis and Program Evaluation For Resource Management.
7. Department of the Navy, Bureau of Medicine and Surgery, Equipment Managers Manual, NAVMED P-5132.
8. Anderson, John, LT, SC, USN, "Withdrawal from Subic...: A Restructuring of WESTPAC Supply, The Navy Supply Corps Newsletter, Volume 55, No. 4, July/August 1992.
9. Excerpts from a Congressional Research Service review of ship's store operations conducted in May 1991 and figures from FY-91 operations.
10. Operations Managers for ship's store operations stated the most important ratios indicating a ship's stores health are gross margin and stock turn. Mr. W.L. Moore, Code SS01, Operations Managers for Ships Store Operation, Stanton Island, New York, Phone (718) 390-3840, 31 August 1992.
11. Figures were extracted from Moody's Industrial Manual and ships store operation analysis summaries.
12. A Glossary of Terms Used in the Federal Budget Process United States General Accounting Office, Revised January 1993.

E. PROBLEMS ENCOUNTERED

As noted in the background section, there is a rapidly changing environment that the financial manager must perform within. This created the research problem of changing rules and regulations during the writing of the essays. The biggest influence upon the research was the continuing development of the Defense Business Operations Fund (DBOF). To this date the only published document available to this researcher for review is the DEFENSE BUSINESS OPERATIONS FUND IMPLEMENTATION PLAN, dated March 01, 1992.

The appropriate revisions have been incorporated into the essays. However, DBOF is still in its initial planning and development stages. As the changes firm themselves up, the appropriate changes will need to be incorporated into the essays.

F. FUTURE PROJECT SUGGESTIONS

To help assist students and instructors further it is highly recommended that followup studies be conducted to write essays covering areas not included in this thesis. Possible topic titles include:

1. Direct and Indirect Labor
2. Labor Fringe Benefits
3. Actual Costs vs. Applied Costs
4. Overhead Application Rates
5. Budgeting
6. Standard Cost Systems
7. Leasing Options
8. Capital Investments

A followup study should be performed to update the current essays contained in this thesis. As changes to DBOF and DoD accounting systems constantly occur, the information in these essays will become outdated.

APPENDIX A

A. DEPRECIATION

1. DEFINITION

Within the Department of the Navy, depreciation is defined as the decline in tangible capital asset value of an item due to the wear and tear, age, inadequacy, and obsolescence of the item, but without a loss of its substance. Depreciation is the portion of cost calculated to have expired for any accounting period.¹

2. CONTEXT

Depreciation accounting is primarily of importance to Navy Industrial Fund (NIF) activities. Navy industrial activities include the majority of the Navy's depot maintenance facilities such as shipyards, air depots and ordnance facilities. Public works centers, research facilities, the Military Sealift Command (MSC), data automation centers and printing facilities are also Navy industrial activities. These activities are funded by a revolving fund. The activities keep accounts much like a private business does, except that these activities budget to

¹Department of the Navy, Navy Comptroller Manual, Volume 3, Chapter 6, pp. 119-121, Jan 1992

break even. Costs are billed out to customers (direct and indirect), and in theory, provide for reimbursement of the total operating costs incurred.²

3. PURPOSE

Unlike the civilian application, where its usage has various tax-related ramifications, the Navy accounts for and uses depreciation for much different purposes. The Navy accounts for depreciation on a memorandum basis. That is, depreciation is considered a cost of production that is only used to determine the total cost of work in producing a product or service. A portion of the depreciation included in total costs is applied to each Naval Industrial Fund customer order for work or services performed for activities outside of the Department of the Navy as a means of recovering these costs.³

Depreciation is currently used only by Navy industrial activities. These activities are allowed to compute depreciation on buildings, other structures, utilities, and industrial plant equipment. A non-industrial activity doing work for a non-Navy activity would not charge depreciation in its cost.

²Practical Comptrollership, Naval Postgraduate School, Monterey, California.

³Department of the Navy, Navy Comptroller Manual, Volume 3, Chapter 6, pp. 119-121, Jan 1992

4. CALCULATIONS

Like private sector corporations, depreciation calculations in the Navy rely on conventions and assumptions regarding life and value. The next few paragraphs discuss these.

a. Scrap Value

Depreciation of an asset is based upon its total original cost of acquisition in the Navy definition. Scrap or salvage value is not considered in the calculation because the Navy obviously does not have to consider the tax implications of depreciation.

b. Method

The Navy utilizes the straight-line method of depreciation based upon the estimated life of the asset.⁴

c. Date of Acquisition

The Navy has two methods of determining when it begins to accrue and recognize depreciation of a plant asset. One is when the Navy is in "normal" peacetime operations, the other is when there is a period of very rapid expansion or contraction. During normal operations, all industrial plant equipment is assumed to have been acquired on 1 October of the fiscal year following the actual date of acquisition. The amount of monthly depreciation for an asset is computed

⁴Department of the Navy, Navy Comptroller Manual, Volume 3, Chapter 6, pp. 119-121, Jan 1992

annually on 1 October for the entire fiscal year. In other words, an asset can be acquired anytime during the previous fiscal year and it will not begin to be depreciated until the beginning of the next fiscal year. During periods of rapid expansion or contraction, the method used in normal operations may result in the understatement (expansion) or overstatement (contraction) of depreciation if the previous assumption that all Navy industrial plant equipment acquisitions occur and begin to depreciate on 1 October. In periods of rapid expansion or contraction, the Defense Finance and Accounting Service (DFAS) will issue an opinion, on a case by case basis, that an industrial activity requires more frequent depreciation calculations, accrual, and expending in order to prevent over/under-statement of depreciation and its subsequent adverse effect upon the total costs charged to customer orders.⁵

d. Life

The Navy utilizes a standard table which provides the estimated lives of various types of industrial plant assets in order to ensure a standard time length of estimated asset life in determining the straight-line depreciation schedule for the asset. Industrial activities may be allowed to shorten the length of estimated life for an asset as shown

⁵Department of the Navy, Navy Comptroller Manual, Volume 3, Chapter 6, pp. 119-121, Jan 1992

in the tables. They may not, however, lengthen asset lives without approval, nor depreciate more than the current book value of the asset at the time the length of its estimated life is changed. In other words, whenever estimated asset life for depreciation purposes is changed, a Navy industrial activity cannot over depreciate the asset as a result.

e. Circumstances of Acquisition

Navy industrial activities calculate depreciation depending upon the circumstances under which they acquire plant assets. The three most common circumstances are when 1) new plant equipment is acquired from a commercial source, 2) new or used plant equipment is received by one Navy or Department of Defense industrial activity from another, 3) new or used plant equipment is transferred from a DoD non-industrial activity to an industrial activity.⁶

When plant equipment is acquired from a commercial source, its rate of depreciation is determined by dividing its acquisition cost by the time length of its estimated useful life.

When plant equipment is received by one industrial activity from another, depreciation varies based upon whether or not the estimated remaining life of the asset is changed by the receiving activity. If the estimated life is not changed,

⁶Department of the Navy, Navy Comptroller Manual, Volume 3, Chapter 6, pp. 119-121, Jan 1992

then the un-depreciated cost of the asset is simply divided by the estimated remaining asset life in months to yield the monthly depreciation rate. If the estimated life is changed by the receiving activity, the un-depreciated cost is divided by the new estimated remaining life in months to yield a new monthly depreciation rate.

Finally, when plant equipment is transferred from a non-industrial activity to an industrial activity, the depreciation calculations for the industrial activity become somewhat more complicated. First an assumed remaining undepriciated cost must be determined. To do this the number of months the asset would have been depreciated at an industrial activity if originally purchased by them is multiplied by the quotient of the original cost of the asset divided by the assets new estimated life in months. The product of this is the amount the asset would have been depreciated at an industrial activity. This amount is then subtracted from the original cost of the plant asset to yield the un-depreciated cost of the asset. Once the un-depreciated cost is determined, the asset can be depreciated using the normal straight-line method.⁷

⁷Department of the Navy, Navy Comptroller Manual, Volume 3, Chapter 6, pp. 1119-121, Jan 1992

5. FUTURE

A short word about the near-future use of depreciation in Department of Defense (DoD) accounting-- Under the Defense Business Operations Fund (DBOF), depreciation will be considered an expense of all DBOF activities, not just industrial activities. Depreciation will be allocated to "outputs" or products that the activity "produces" and all "costs" will therefore be reflected in the unit prices charged to customers who require these products. Also under DBOF, any DoD acquisition costs normally capitalized by civilian businesses for assets such as buildings, other structures, utilities, and industrial plant equipment will be capitalized and depreciated. Their depreciation expenses will become an operating cost which will be charged against outputs/products.

APPENDIX B

A. INVENTORY ACCOUNTING AND STANDARD PRICING

1. DEFINITION

In the Department of the Navy, the Navy Stock Fund is used to purchase and hold inventories of supply items. Inventory accounting and standard pricing is used to value the material and supply inventories of the Navy Stock Fund. Inventory accounting acts as a method of financial control over the receipt, issue, and pricing of these materials and supplies.¹ The method of standard pricing used in the Navy Stock Fund has little relation to any Generally accepted accounting principles (GAAP).

2. PURPOSE

One of the major purposes of inventory accounting is to allow the Navy to perpetually, determine its total investment in inventories and to be able to compile the value of this investment at any given time. This is used particularly for accountability reporting to the Executive and Legislative branches of the federal government.

Navy stock points such as Naval Supply Centers/Depots are responsible for compiling and submitting financial

¹Department of the Navy, Navy Comptroller Manual, Volume 8, Chapter 5, pp. 1-6, Dec 1991

inventory accounting reports to Defense Accounting Offices (DAOs). This information is further compiled at the DAOs reporting up the chain-of-command including the above-mentioned federal government branches.²

3. CONTEXT

There are actually four different stock funds under the control of the DoD (the Army, Department of the Navy, Air Force, and the Defense Stock Funds managed by the Defense Logistic Agency (DLA)) and another stock fund (outside DoD) which is managed by the General Services Administration (GSA) which provides support to Navy units.

The Commander, Naval Supply Systems Command is tasked with the responsibility for administration and management of the Navy Stock Fund (NSF). The Defense Logistic Agency has the procurement and supply management responsibility for a considerable number of high demand type items. In 1987, the Navy Stock Fund and the Marine Corps Stock Fund merged in the Department of the Navy Stock Fund (DONSF). Even though they are part of the same fund, the allotment and inventory accounting systems are maintained separately at the operating level, the budget project level, and at the administering office levels (Naval Supply Systems and Commandant of the

²Department of the Navy, Navy Comptroller Manual, Volume 8, Chapter 5, pp. 1-6, Dec 1991

Marine Corps). The two portions of the DONSF are combined at the Department level for reporting to higher levels.³

4. SETTING PRICES FOR INVENTORY

The key mechanism in the Navy inventory accounting system is its inventory pricing policy. The Naval Supply Systems Command (NAVSUP) determines and promulgates pricing policy and criteria for inventory items managed within the Department of the Navy supply system. Basically, the use of standard net prices for repairables is a tool by which the Navy supply system accounts for, takes inventory of, or sells

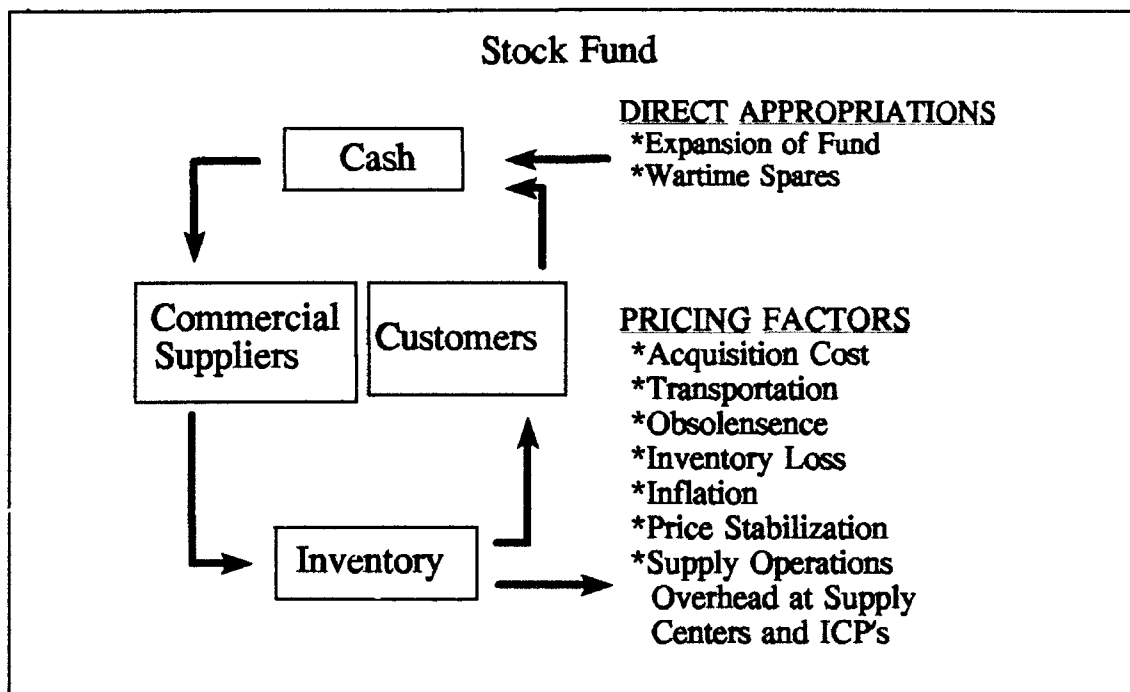


Figure 1 Funding Flow of Stock Fund

³Practical Comptrollership, Naval Postgraduate School, Monterey, California

it's supply stocks. The objectives of the pricing policy are twofold: 1) to establish standard prices for the purpose of inventory accounting, and 2) to ensure no profit or loss occurs to the legislative appropriation funding of the DBOF (supply). The Navy prices its stock items based upon acquisition cost, transportation costs, obsolescence, inventory loss, inflation, price stabilization, and the supply operations overhead at the supply centers and ICP's as shown in Figure 1 to maintain approximately the same real worth.⁴

Simply stated, prices used in Navy inventory accounting are determined by considering all the previously mentioned items. NAVSUP revises all prices annually on 1 October and publishes updates monthly.⁵

Note how inventory valuation in the Navy Stock Fund differs from inventory valuation in the private, profit-making sector.

In the private sector, GAAP requires valuation at cost. This serves a necessary purpose: in the private sector we need to measure profit and thus need to value inventory at cost so that the cost can be compared (matched) against selling price (revenue) to measure profit.

⁴Practical Comptrollership, Naval Postgraduate School, Monterey, California

⁵Department of the Navy, Navy Comptroller Manual, Volume 8, Chapter 5, pp. 1-6, Dec 1991

In the stock fund, profit measurement is not a central goal. Prices are set not by a market but by the judgement process (including the factors mentioned above). And valuing inventory at these standard prices adequately serves the need to a) control the inventory physically and b) value transfers of inventory from one agency to another. Cost flow assumptions such as LIFO and FIFO become unnecessary since all inventory is valued at the same standard price and profit measurement is not a goal.

5. CONCLUSION

In summary, Navy stock points perpetually inventory all materials and supplies so that they know "how many" of an item are on the shelf at a given time. For financial inventory accounting purposes, they value their inventory items at the standard price in effect at that given time. Inventory accounting tracks and reports the monetary value of materials and supplies on a "snapshot" basis and prices are adjusted to ensure no profit or loss occurs within the appropriation DBOF (supply). Cost Flow assumptions are not relevant because DoD does a valuation of prices, not cost.

APPENDIX C

A. PRESENT VALUE

1. DEFINITION

In accounting, present value techniques are used to determine what tomorrow's dollar is worth today, at some known discount rate. The use of the net present value method is a means of determining whether or not a capital investment decision should be made. To calculate the net present value, the present value of all cash outflows is subtracted from the present value of all cash inflows.

$$\text{Net Present Value} = \text{Cash Outflows} - \text{Cash Inflows}$$

2. PURPOSE

The net present value method is utilized in Navy accounting for capital investment budgeting decisions. There are scarce resources available for capital investments, therefore the determination of efficiency and effectiveness is essential. The use of "Economic Analysis and Program Evaluation" techniques are utilized in the capital investment budgeting decisions.¹ We will look at the net present value

¹SECNAVINST 7000.14A, 14Mar73, Subject: Economic Analysis and Program Evaluation for Resource Management

method as it relates to these government long-term capital budgeting decisions.

3. PROPERTY CLASSIFICATIONS

When we speak of long-term, it is the same as long-term in basic accounting, more than one year. The major area in which government long-term capital budgeting decisions are utilized is Plant Property acquisitions. Plant Property is generally defined as having a useful life of more than two years. There are four classifications of Plant Property:

1. Real Property,
 - a. Plant Property Class I: Land
 - b. Plant Property Class II: Buildings, structures, utilities
2. Personal Property (Capital Equipment)
 - a. Plant Property Class III: Equipment other than Industrial Plant Equipment (IPE)
 - b. Plant Property Class IV: Industrial Plant Equipment

4. GUIDANCE

The concepts of economic analysis and program evaluation constitute an integral part of the Planning, Programming, and Budgeting System (PPBS) of DoD.²

An economic analysis is required for proposals which involve a choice or trade-off between two or more options even when one of the options is to maintain the status quo or to do nothing. SECNAVINST 7000.14A provides the Navy guidance for conducting an economic analysis. Economic analysis's are applied as appropriate in making these relative comparisons or

²SECNAVINST 7000.14A, 14MAR73, Subject: Economic Analysis and Program Evaluation for Resource Management

trade-offs among alternatives--considering cost, schedule, and performance. Closely tied to the analysis of the relative need of a project is the consideration of alternative ways to accomplish a project.

A complete economic analysis\program evaluation is considered as one of the inputs required to make a proper decision concerning the use of DoD resources, not as the complete decision making process itself.

SECNAVINST 7000.14A outlines nine steps that are to be considered and contained in the Economic Analysis for decision making. They are:

1. Objectives
2. Assumptions
3. Alternatives
4. Cost Analysis
5. Benefit/Output Analysis
6. Ranking Alternatives
7. Risk/Uncertainty Analysis
8. Constraints
9. Sensitivity Analysis

Most of the nine steps listed above are somewhat self explanatory, however, item four, the Cost Analysis step, because of it's relevance here, deserves more explanation.

To perform a cost analysis as outlined in SECNAVINST 7000.14A, the analysts needs to: 1) identify all costs associated with alternatives, grouping those costs into specified categories, 2) specify the periods associated with each cost and 3) discount the costs to determine a net present value. Details concerning these steps are contained in the

instruction, but the discounting procedure is a direct application and extension of present value techniques.

5. PRESENT VALUE

It is likely that cash-flows will be different for each year of the economic life of the investment. For example, start-up costs may be large whereas operating costs may be small during the first year or two and increase during the middle and later years of a project. Recognition of the timing of cash-flows and restating both the differential investment and recurring costs of the alternatives to their present value is important and accomplished through discounting. After estimates of cash-flows have been developed for each alternative, the present value (discounting) technique is used to discount costs and benefits.³

Implicit in the net present value approach is the idea that interest is a cost which is related to all Government expenditures. The policy of considering interest as a cost is based on the premise that no public investment should be undertaken without explicitly considering the alternative use of the funds which it absorbs or displaces.

One way for DoD to assure this is to adopt a discount rate policy which reflects private sector investment

³SECNAVINST 7000.14A, 14MAR73, Subject: Economic Analysis and Program Evaluation for Resource Management

opportunities foregone. A discount rate of ten percent is required by SECNAVINST 7000.14A and represents an estimate of the average rate of return on private investment before corporate taxes and after adjusting for inflation.⁴

6. CONCLUSION

The aim of the evaluation process described by SECNAVINST 7000.14A is to determine the Net Present Value of a capital budget decision. Is it a more economical investment for the future to continue with the status quo, or to make a capital investment? Such questions must be answered by comparing current investment in assets with future cost savings. The time value of money as reflected in present value calculations is central to the answer.

⁴SECNAVINST 7000.14A, 14MAR73, Subject: Economic Analysis and Program Evaluation for Resource Management

APPENDIX D

A. TIMING ISSUES

1. ACCRUAL ACCOUNTING VS. OBLIGATIONAL ACCOUNTING

In Accrual Accounting, revenue is recorded when it is earned. There may be a difference between the time when revenue is earned (and recognized in the accounting records) and when it is collected in cash. The cash may flow in before or after the revenue is recognized as earned. The same is true of expenses, they may also be recognized before or after a corresponding cash out-flow has taken place. By reporting revenues when earned and expenses when incurred, accrual Accounting serves its purpose of measuring period income well.

DoD, being a non-profit governmental entity, has no need to measure income. Its accounting system is designed instead to assist in controlling the expenditure of funds, hence the system is designed to track different stages in the funding/expenditure cycle. In short, instead of accrual accounting to measure profit, DoD uses obligational accounting to track funds. Within this system the timing of appropriations, obligations, and expenditures is of concern.

2. APPROPRIATION CLASSES

By definition, an appropriation is a statute that provides budget authority for Federal agencies to incur

obligations and to make payments out of the treasury for specified purposes.

Some of the various categories of the Department of the Navy (DoN) appropriations include:

1. Operations and Maintenance Navy (O&M,N)
 - Finances the cost of on-going operations.
2. Military Personnel, Navy (MPN)
 - Finances the cost of active duty Navy personnel.
3. Procurement, Marine Corps (PMC)
 - Finances the cost of Marine Corps ammunition, tracked combat vehicles, weapons, guided missiles, communication/electrical equipment, support vehicles, engineer equipment, and other equipment for Marine general purpose forces.
4. Other Procurement Navy (OPN)
 - Finances the procurement, production and modernization of equipment not otherwise provided for.
5. Shipbuilding and Conversion Navy (SCN)
 - Provides for the construction of new ships and the conversion of existing ships.
6. Military Construction, Navy (MCON)
 - Provides installation and facilities for DoN.
7. Research, Development, Test and Evaluation, Navy (RDT&E,N)
 - Finances the cost of the scientific research, development, test and evaluation of new and improved weapons systems and related equipment for both the Navy and Marine Corps.

Appropriations can be categorized in at least three different ways:

1. As to purpose (either expense or investment)
2. As to duration (annual or multiple years)
3. As to level of funding (either incremental or full)

The expense-type appropriations finance the cost of ongoing operations, and within DoN, are normally broken down into two main subcategories of Operations & Maintenance, Navy (O&M, N) and Military Personnel Navy (MPN). The investment-type appropriations are used for investment as opposed to ongoing operations and the two main areas are procurement and military construction.

3. OBLIGATIONAL AVAILABILITY PERIODS

An obligational availability period is the period of time during which one may legally encumber a specified sum of money which will require an expenditure in the future. Appropriations have specific obligational availability periods or duration which can be grouped as either annual, multiple year, or continuing/no year. Annual/one year appropriations are available for incurring obligations only during the fiscal year specified in the Appropriation Act (e.g., O&M,N). Multiple year appropriations are available for incurring obligations for a definite period in excess of one fiscal year (e.g., OPN). Continuing/no year appropriations are available for incurring obligations for an indefinite period of time (e.g., DBOF, revolving funds). Other appropriations, such as

Shipbuilding and Conversion (SCN), have an obligational availability of five years.¹ Obligational availability periods for DoN appropriations are as follows:

- | | |
|---|---------|
| 1. Military Personnel, Navy (MPN) | 1 year |
| 2. Operation and Maintenance, Navy (O&M,N) | 1 year |
| 3. Research, Development, Test & Eval (RDT&E) | 2 years |
| 4. Procurement, Marine Corps (PMC) | 3 years |
| 5. Other Procurement, Navy (OPN) | 3 years |
| 6. Shipbuilding and Conversion, Navy (SCN) | 5 years |
| 7. Military Construction, Navy (MCON) | 5 years |

4. FUNDING LEVELS

Allotments are the method by which funding (budgeted money) is passed from higher echelons to project and inventory managers where it is actually spent.²

The terms fully and incrementally funded are related to obligational availability periods. In the case of O&M,N, MPN, and RDT&E the funding is provided incrementally, with each year's appropriation, normally one year. In the case of PMC, OPN, SCN, and MCON the funds are made available in one fiscal year, but can be obligated for the entire life of a

¹Department of the Navy, Naval Comptroller Manual Volume 7, Chapter 4, pp 2-3.

²Department of the Navy, Naval Comptroller Manual Volume 7, Chapter 5, pp 131-132

project, even though the project may take multiple years to complete.

Another way of stating this is to say that full funding generally pertains to multiyear activities, such as the construction of Navy ships, whether or not all of the funds are obligated in the first year. It differs from incremental funding under which budgetary resources are provided annually only for the amount expected to be obligated during the year.³

The relationships between appropriations categories, obligation classes, duration and level of funding are summarized in figure 1.

5. EXPENDITURE AVAILABILITY PERIOD

Expenditures are made to satisfy obligations. (Or in other words, payments are made to satisfy existing liabilities.) Expenditures may occur to satisfy obligations during the obligational availability period. But obligations may be outstanding at the end of an obligational availability period. Upon the completion of obligational availability period (1-5 years, depending on the appropriation) an expenditure availability period begins. The expenditure availability period is the period during which the satisfaction of outstanding obligations takes place. This

³A Glossary of Terms Used in the Federal Budget Process, United States General Accounting Office, Revised January 1993

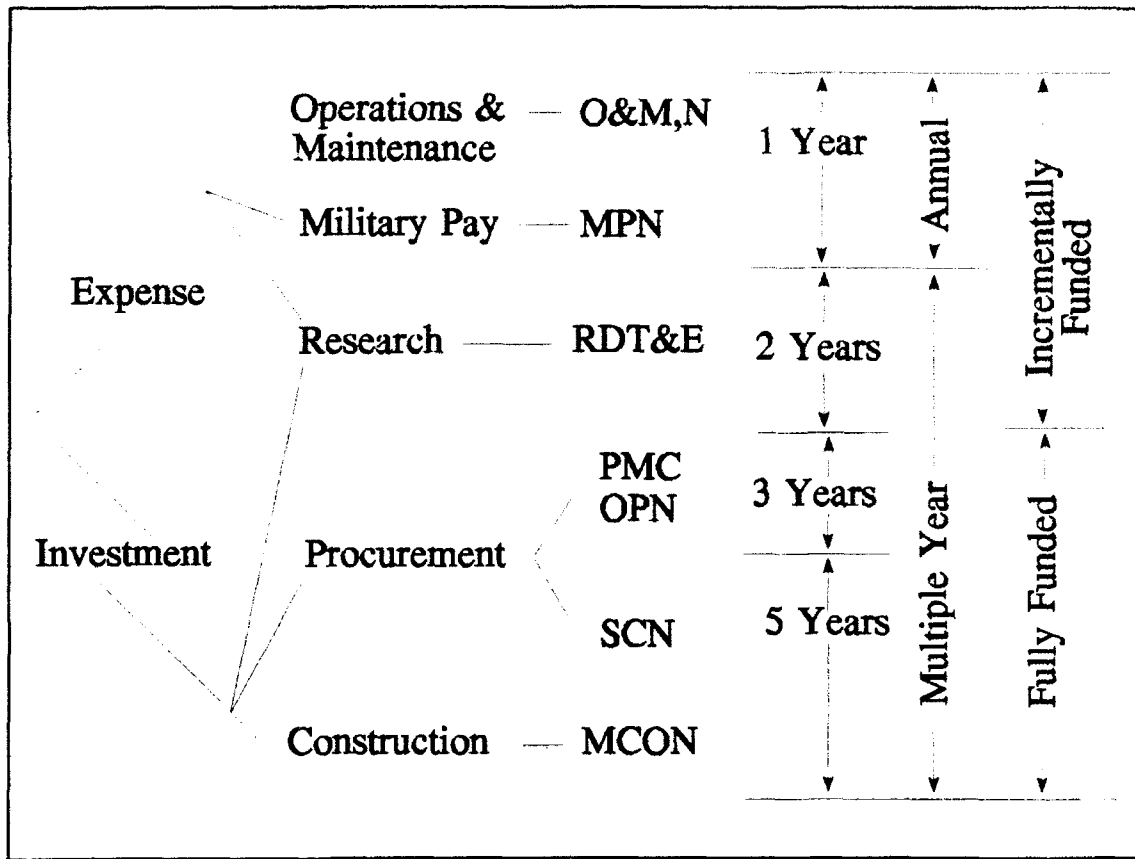


Figure 1 Appropriation Timing

period lasts five years (for all appropriations), during which time detailed accounting records must be maintained and no new obligations may be created.

6. CONCLUSION

In this essay we discussed several elements of DoD's Obligational Accounting. We described some of the appropriation classes, discussing how they may be categorized, followed by the explanations of obligational and expenditure availability periods.

APPENDIX E

A. ASSETS VALUATION AND WRITE OFFS

1. INTRODUCTION

All assets owned by the Department of Defense (DoD), including material in transit and material held by private contractors or other Federal Government agencies are grouped into one of five (5) major categories. The five categories of assets controlled by DoD are:

1. Receivables
2. Property
3. Cash Resources
4. Foreign Currencies
5. Advances and Prepayments¹

2. DEFINITION

This essay will concentrate upon the first two categories of assets.

The first major category of DoD assets, Receivables, involves amounts due to the Federal Government. Separate accounts for major categories of receivables are maintained and most DoD receivables are considered current or short term. Specific procedures for handling uncollectible accounts

¹Department of the Navy, Naval Comptroller Manual Volume 1, NAVSO P-1000, July 1983, pp a1-a7.

receivable exist, appropriate estimates are made and disclosed in footnotes to activity financial reports.²

DoD Property is the second major category of assets. Encompassing plant property from class I (land), class II (buildings, structures, and utilities), class III (equipment, non-IPE), class IV (industrial plant), ships and aircraft, as well as inventories of materials, and supplies, this category is easily the largest and most complex.³

DoD assets in each of these categories may be written off, written down, or disposed of in the course of transacted events. No assets will undergo such action without proper authorization, regardless of the asset category.⁴

3. RECEIVABLES

For receivables, each command maintains the records of receivable accounts on a Voucher For Disbursement and/or Collection (NAVCOMPT Form 2277). This form is prepared locally and processed by the Navy Regional Finance Center or the Navy Finance Center responsible for the local command. Each command maintains a Funded Accounts Receivable Ledger (NAVCOMPT Form 2028) and an Unfunded Accounts Receivable Ledger (NAVCOMPT Form 2026).

²Naval Comptroller Manual Vol 1, pp a1-a7

³Naval Comptroller Manual Vol 1, pp a1-a7

⁴Naval Comptroller Manual Vol 1, pp a1-a7

For receivables, amounts of less than \$100 can be written off to zero by the authority of the Commanding Officer.⁵ Amounts larger than \$100 must be referred to the General Accounting Office (GAO) through the commands higher echelon. When GAO determines an amount of the total that is uncollectible, the local command will be informed of that amount which is to be written-off to zero.

Foreign indebtedness other than Foreign Military Sales (FMS) will be submitted to Navy Regional Finance Center, Washington, DC. Uncollectible amounts of \$10,000 and under may be compromised, terminated, or suspended upon approval by the Comptroller of the Navy. Compromise, termination, or suspension of uncollectible claims over \$10,000 will require the concurrence of the Director, Defense Security Assistance Agency and the Assistant Secretary of Defense (Comptroller).⁶

4. PROPERTY

For property, the Authorized Accounting Activity (AAA) for each command maintains the official property records. When changes in the records must occur, reports are made to the AAA to reconcile the records using the Reconciliation of

⁵NAVCOMPT Manual Volume 3, NAVSO P-1000, Chapter 9, pp. 138-1 to 138-2

⁶NAVCOMPT Manual Volume 8, NAVSO P-1000, Chapter 6, pp 123

Plant Account (NAVCOMPT Form 167). This may result in an asset being partially or fully written-off.⁷

From a purely accounting standpoint, losses and disposal are reflected as reductions of the appropriate material value using specific identification where possible and at average acquisition cost when specific identification is not possible.⁸

Detailed write off procedures for this diverse category are beyond the scope of this paper. However, general guidelines for writing off routine property and equipment involve the Defense Reutilization and Marketing Office (DRMO).

5. PROPERTY EXAMPLE

An example of DRMO's role in the write off of DoD assets can be best shown through the recent draw down and removal of U.S. Naval Forces from the Republic of the Philippines. Upon closure of the U.S. Naval Station at Subic Bay, the decision was made by Navy officials to leave behind Navy property for disposal by DRMO. Everything from office furniture, Morale, Welfare and Recreation (MWR) supplies, and Navy Exchange vehicles to Naval Supply Depot stock was recommended for disposal and subsequent accounting for by the

⁷NAVCOMPT Manual Volume 3, NAVSO P-1000, Chapter 2, pp 99-122

⁸NAVCOMPT Manual Volume 1, NAVSO P-1000, pp a1-a7

DRMO process.⁹ Under treaty requirements with the Philippine Government, a Right of First Refusal review was granted to the Philippine officials for all material identified for turn-in as excess to U.S. Government needs. The Philippine Government was afforded the opportunity of purchasing this excess property before items were offered for sale on the open market by DRMO.¹⁰ In all cases involving disposition of excess property, DRMO acts as the salvage and accountable agent for DoD.

⁹Anderson, John, LT, SC, USN, "Withdrawal from Subic...: A Restructuring of WESTPAC Supply, The Navy Supply Corps Newsletter, Volume 55, No. 4, July/August 1992, pp 30-32

¹⁰Withdrawal from Subic...

APPENDIX F

A. LIABILITY VALUATION

1. DEFINITION

The Department of Defense (DoD) accounting structure currently recognizes five (5) major categories of liabilities. Each liability category is recorded by the local activity comptroller in the period in which it is incurred. Likewise, liabilities are removed in the period in which they are liquidated. DoD recognizes liabilities as representing amounts actually owed by the government under contractual or other arrangements. Furthermore, liabilities are accounted for regardless of whether funds are available or authorized for their payment.¹

Liabilities reported on financial statements generated at a local level are subsequently rolled up to the DoN level, then possibly further to the DoD level. Consistency, or compatibility, of classification systems provides a basis for comparison.

DoD policy requires each service to maintain separate accounts for each major liability category so as to identify how they relate to various activities under the cognizance of

¹Department of the Navy, Naval Comptroller Manual Volume 1, NAVSO P-1000, July 1983, pp a1-a7

the activity comptroller.² The five major liability categories recognized by DoD are:

1. Contingent Liabilities,
2. Liabilities Under Contract Work,
3. Liabilities Under Working Fund Advances,
4. Liabilities Under Lease-Purchase Contracts,
5. Liabilities for Unused Annual Leave.

2. CONTINGENT LIABILITIES

The first of these major categories, Contingent Liabilities, is used to account for liabilities such as possible employee or contractor earned incentives. The criteria normally found to produce the contingency is a clause in a contract that may be enacted, therefore the funds must be reserved.³ Appropriate records are maintained and material amounts disclosed and explained in activity financial reports to fulfill the requirement for full disclosure by DoD activities.⁴

3. LIABILITIES UNDER CONTRACT WORK

Liabilities Under Contract Work is the second major liability category provided for under DoD policy. These

²Department of the Navy, Naval Comptroller Manual Volume 1, NAVSO P-1000, July 83, pp a1-a7

³Department of the Navy, Naval Comptroller Manual Volume 2, chapter 2, pp 16, section 2a(1)

⁴Department of the Navy, Naval Comptroller Manual Volume 1, NAVSO P-1000, July 83, pp a1-a7

liabilities are incurred as a result of a product or service being provided to an activity. Examples of liabilities accounted for within this category include contractor construction of facilities and goods or equipment manufactured to DoD specifications. This type of liability is recognized and recorded by the activity comptroller when delivery is made or billing is rendered.

4. LIABILITIES UNDER WORKING FUND ADVANCES

The third major liability category, Liabilities Under Working Fund Advances, is most commonly associated with revolving fund advances. Amounts received as working fund advances by DoD activities from other agencies are accounted for as liabilities until job completion by the DoD activity. These liabilities are analogous to unearned revenue reported by private sector firms.

5. LIABILITIES UNDER LEASE-PURCHASE CONTRACTS

Liabilities Under Lease-Purchase Contracts comprise the fourth major category of DoD liabilities. This type of liability occurs when a DoD activity agrees to purchase an item under a lease-purchase contract. The resultant remaining balance of the product purchase price is recorded as a liability. The liability account is then reduced on the basis of periodic payments by the purchasing DoD activity.⁵ The

⁵Department of the Navy, Naval Comptroller Manual volume 1, NAVSO P-1000, July 83, pp a1-a7

lease and later purchase of photocopy machines is an example of items obtained by DoD using this liability category. This category is directly analogous to private sector accounting for liabilities under capital leases.

6. LIABILITIES FOR UNUSED ANNUAL LEAVE

The final major category of liabilities incurred by DoD is the Liability for Unused Annual Leave. As DoD employees accrue the right to take leave with pay in the future, the Federal Government incurs a current cost and a liability measured by the salaried cost of time to be taken on leave. As provided for by Section 16.8, Title 2, of the General Accounting Policy and Procedures Manual for Guidance of Federal Agencies, this liability for civilian leave earned but not yet taken is adjusted to agree with civilian leave records as of December 31 and June 30, and shown in the financial account and reports of each military service.⁶

⁶Department of the Navy, Naval Comptroller Manual Volume 1, NAVSO P-1000, July 83, pp a1-a7

APPENDIX G

A. PROPRIETARY VERSUS FUND ACCOUNTING

1. DEFINITION

The primary objective of this report is to provide a basic understanding of how various, fairly broad financial accounting concepts are applied to the accounting records and financial statements of Department of Defense activities. The specific financial accounting concepts that are most relevant are:

1. Accrual verses Cash Basis Accounting
2. Revenue Recognition
3. Expense Recognition

Prior to analyzing these concepts and applying them to DoD, a basic understanding of Government accounting is necessary. There are three accounting bases utilized by Government activities (accrual, modified accrual, and cash) and DoD utilized two of these, accrual and modified accrual. DoD accounts for approximately 95% of all of its financial transactions via the modified accrual basis and accounts for a mere 5% of its financial transactions via the accrual accounting basis. The modified accrual approach is commonly

referred to as **fund** accounting and the accrual approach referred to as **proprietary** accounting.

Fund accounting (which is a semester course at many universities) is used by most not-for-profit organizations. This approach is particularly useful when resources have been restricted in some way, namely through appropriations. To understand how the concepts presented in this report are applied to DoD, an embryonic understanding of fund accounting is helpful.

It is important to note that proprietary accounting in DoD is similar in many aspects to proprietary accounting in private industry. This knowledge is especially useful in following the remainder of this paper since many of the concepts that are discussed later apply specifically to DoD proprietary accounts, "Navy Stock Fund" and "Navy Industrial Fund". Because introductory accounting courses typically focus on proprietary accounting, this paper will focus our attention on some of the major differences between proprietary and fund accounting.

2. PROPRIETARY AND FUND ACCOUNTING: OBJECTIVES

The first major difference relates to the objective or overall goal of financial statements (the thrust of this course). The objective of financial statements in proprietary (accrual) accounting is to provide realistic, accurate, timely information that is fairly stated. Specifically, the

financial statements of profit-seeking enterprises must provide **quality** information for present and potential investors and creditors regarding the amount, timing and uncertainty of an enterprise' future cash flow. The focus is on information useful for decision making.

The objective of financial reporting for Government entities is radically different in that it emphasizes accountability as opposed to profit measurement. Specifically, fund accounting is a system of record keeping and financial statement preparation that segregates the different resources of an entity into separate self-balancing sets of accounts, known as funds. The purpose is to ensure that funds set aside for particular purposes are used only for those purposes, hence the segregation. Resource flows into and out of the fund are tracked.

3. PROPRIETARY AND FUND ACCOUNTING: RECOGNITION OF REVENUES

The second difference relates to revenue and cost recognition. In proprietary (accrual basis) accounting, revenue is recognized when earned and measurable. The effects of events, transactions, and circumstances are recognized in the period in which they take place (the critical point), not when cash is paid.

In fund (modified accrual) accounting revenues are recognized when **available** and measurable (as opposed to **earned**

and measurable) since Government entities do not have an earning process and thus no critical point. For government entities revenues are generally made available within appropriations through the use of allotments.

4. PROPRIETARY & FUND ACCOUNTING: COSTS AND EXPENDITURES

Proprietary accounting results in the recognition of all costs incurred as reduction of income by either:

1. Matching costs to related revenues (e.g. cost of goods sold, sales commission associated with the revenue generated from the sale).
2. Relating costs to a specific period as opposed to a particular revenue (e.g., period costs such as administrative expenses).
3. Capitalizing costs that are expected to yield benefits over several periods (e.g., capitalization and allocation of the cost of a fixed asset).

In Fund Accounting, costs incurred by Government activities are not designed to generate revenue (as opposed to business enterprise's in which every expenditure is designed to generate revenue). As a result, most costs incurred by government cannot be matched to any revenue or benefit of the entity itself and are generally recognized as expenditures when goods or services are purchased. There is no recording of depreciation as is done by profit-seeking entities attempting to match costs to benefits.

5. OTHER DIFFERENCES

Fund accounting is different from proprietary accounting in many other ways. Some of these are:

- 1) retained earning are nonexistent
(instead, assets = liabilities + fund balance)
- 2) expenses are referred to as expenditures
- 3) accounts payable are referred to as vouchers payable
- 4) assets are not recorded in sub-ledgers
(no depreciation)

BUDGET CYCLE: DoD records budgeted and actuals

DoD		INDUSTRY
Journal Entry 1		
REPAIR PARTS	XXX	
CONSUMABLES	XXX	NO JOURNAL ENTRY
MILITARY PAY	XXX	
CIVILIAN PAY	XXX	
O&M, N	XXX	
OPN	XXX	
MPN	XXX	

(TO RECORD THE APPROVED BUDGET)

EXPENDITURE CYCLE: DoD records approved purchase orders

DoD		INDUSTRY
Journal Entry 1		
ENCUMBRANCE	100	NO JOURNAL ENTRY
RES ENCUMB FUND BAL	100	
(TO RECORD APPROVED P.O.)		
Journal Entry 2		
RES ENCUMB FUND BAL	100	EXPENSE 120
EXPENDITURE	120	ACCT PAY 120
ENCUMBRANCE	100	
VOUCHERS PAYABLE	120	

(TO RECORD RECEIPT OF MATL)

Journal Entry 3

VOUCHERS PAYABLE	120	ACCT PAY	120
CASH	120	CASH	120

(TO RECORD PAYMENT)

REVENUE CYCLE: DOD records when **available** and measurable

DoD		INDUSTRY	
Journal Entry 1			
REIMBURSEMENT REC	100	ACCT REC	100
REVENUE (WHEN AVAIL)	100	REVENUE	100
(TO RECORD REVENUE)			

Journal Entry 2			
CASH	100	CASH	100
REIMBURSEMENT REC	100	REVENUE	100
(TO RECORD CONVERSION)			

FIXED ASSET PROCUREMENT: DOD records as expenditure

DoD		INDUSTRY	
Journal Entry 1			
EXPENDITURE - BLDG	900	BUILDING	900
CASH	900	CASH	900
		DEPREC EXP	100
		ACCUM DEPR	100

APPENDIX H

A. RATIO ANALYSIS FOR A SHIPS STORE

1. DEFINITION

The two most important ratios in calculating the health of a ship's store operation are inventory turnover and gross margin.¹ A detailed discussion of inventory turnover, gross margin, and analysis of actual data is given below.

a. *Inventory Turnover*

The long standing goal for ship's store operations is four turnovers of inventory per year. Simplified, the equation used for computing inventory turnover is $\text{COGS} \div \text{BI}$ for the accounting period. (Stock turn for three triannual accounting periods is then added to see if the goal for the year is obtained.) Industry does a similar calculation but usually uses average inventory as the denominator.

Failure to meet the stock turn goal is taken as an indication of poor management practice. Contributing factors to poor stock turn include excessive amounts of items, outdated stock which needs to be expended through survey, and

¹Operations Manager for ship's store operations stated the most important ratios indicating a ship's stores health are gross margin and stock turn. Mr. W.L. Moore, Code SS01, Operations Manager for Ships Store Operation, Staton Island, New York, PH (718)390-3840, 31 August 1992

a management policy which does not provide for routine restocking through reorder.

b. Gross Margin

Exhibit (1) shows an annual operational analysis of a ship's store with gross margin percentages for three triannual periods. Gross margin percentage is another ratio commonly used to assess ship's store operations. The calculation is $\text{Sales} - \text{COGS (GM)} / \text{sales}$ expressed as a percentage. Because markups on ships store merchandise are made at a standard 15%, the gross margin should remain constant, after accounting for significant markdowns in price or surveys of damaged goods. Major fluctuations in gross margin are indicative of deeper problems. The most common problems are inaccurate inventories and poor receipt processing. The effects of these problems are discussed in greater detail below.

2. ERRORS IN CALCULATIONS

An error in computing ending inventory for the quarter will significantly effect gross margin in the current and future quarter by changing the cost of goods sold. Looking back at the equation for gross margin, and reviewing the COGS equation, we see that an overstated ending inventory will have the following effect:

Current QTR

$$BI + \text{Purch} - EI\uparrow = \text{COGS}\downarrow$$

$$\text{Sales} - \text{COGS}\downarrow / \text{Sales} = \text{GM}\uparrow$$

Following QTR

$$BI\uparrow + \text{Purch} - EI = \text{COGS}\uparrow$$

$$\text{Sales} - \text{COGS}\uparrow / \text{Sales} = \text{GM}\downarrow$$

(Note: Arrows reflect the effects an overstated ending inventory will create.)

Errors in receipt processing effect the purchase element in the cost of goods sold equation but the error is not carried forward to the next period if the merchandise is sold in the current period. Using the same illustration as above, the effect of failing to record a receipt in the current period can be seen as follows:

Current QTR

$$BI + \text{Purch}\downarrow - EI = \text{COGS}\downarrow$$

$$\text{Sales} - \text{COGS}\downarrow / \text{Sales} = \text{GM}\downarrow$$

(Note: This equation assumes that the material received was sold during the accounting period. If it were still in ending inventory, the reduction in Purch would be offset by the increase in EI with no net effect.)

Exhibit (2) makes a quick comparison between industry stock turn and gross margin with that of ship's store operations.² Items readily apparent are industry markup is at

²Figures were extracted from Moody's Industrial Manual and ship's store operation analysis summaries

least 6% higher and stock turn in ship's stores is approximately the same as large retail operations.

Note how the Gross Margin percent and Stock Turn ratio capture two of the most important aspects of a store's operations. The Gross Margin percent indicates the gross profit built into sale of individual items. The Stock Turn ratio indicates the volume or rate at which items are being sold. Organizational profitability depends on both the rate at which items are moved and the amount of profit on each.

The results for Stop-N-Go indicate success on both dimensions. Stop-N-Go's turnover is the highest and it's Gross Margin rate is the highest. Quite interesting: One would normally expect an inverse relationship. Higher margins would be associated with higher prices and hence lower volume and turnover. (Or lower margin with lower prices and higher volume and turnover.)

ACTUAL FOR TRIANNUAL PERIODS ENDING

DESCRIPTION	NAVCOMPT 153 CAPTION	SEP 30, 1991	%RETAIL SALES	JAN 31, 1992	%RETAIL SALES	MAY 31, 1992	%RETAIL SALES
1. Retail Sales	C02	644543		848904		1418963	
2. Cost of Retail Sales	C10	541433		686972		1084824	
3. Gross Profit	C02-C10	103110	15.99%	161932	19.07%	334139	23.54%
4. Dishonored Checks	C11						
5. Operating Exp.	C12	54232		33552		31602	
6. Laundry Claims/							
Service Charges	C13	178		2761		1843	
7. General Fund Asses	C14	35449		46689		78043	
8. Operating Profit	C25	13251	2.05%	78930	9.29%	222651	15.69%
9. Bulk Sales	B12						
10. Transfer to other							
supply offices	B19	655		5914		9029	
11. Drink Vending							
Machine Sales	C03			122646		368668	
12. Cost of Sales							
Vending Machines	C15			76974		217956	
13. Cost of Operating							
Vending Machines	C16			366		1009	
14. Vending Machine							
Profit	C26			45306	36.94%	149703	40.60%
15. Amusement Machine							
Sales	C04	23513		51989		87749	
16. Amusement Machine							
Profit	C27	14900	63.40%	32961	63.39%	55633	63.40%
17. Rebate from Exchange							
Catalog Sales	C04A						
18. Total Profit		29157		157197		427987	
19. Maximum Authorized							
Inventory		233118	STCKTRN .94	285120	STCKTRN 1.59	285120	STCKTRN 1.74
20. Opening Inventory	B08	634136		502931		7770474	
21. Closing Inventory	B28	502931		773411		410642	
22. # of Persons Supported		4317		5280		5280	
23. # of Days At Sea		51		78		101	

Exhibit 1

STOCK TURNOVER

GROSS MARGIN

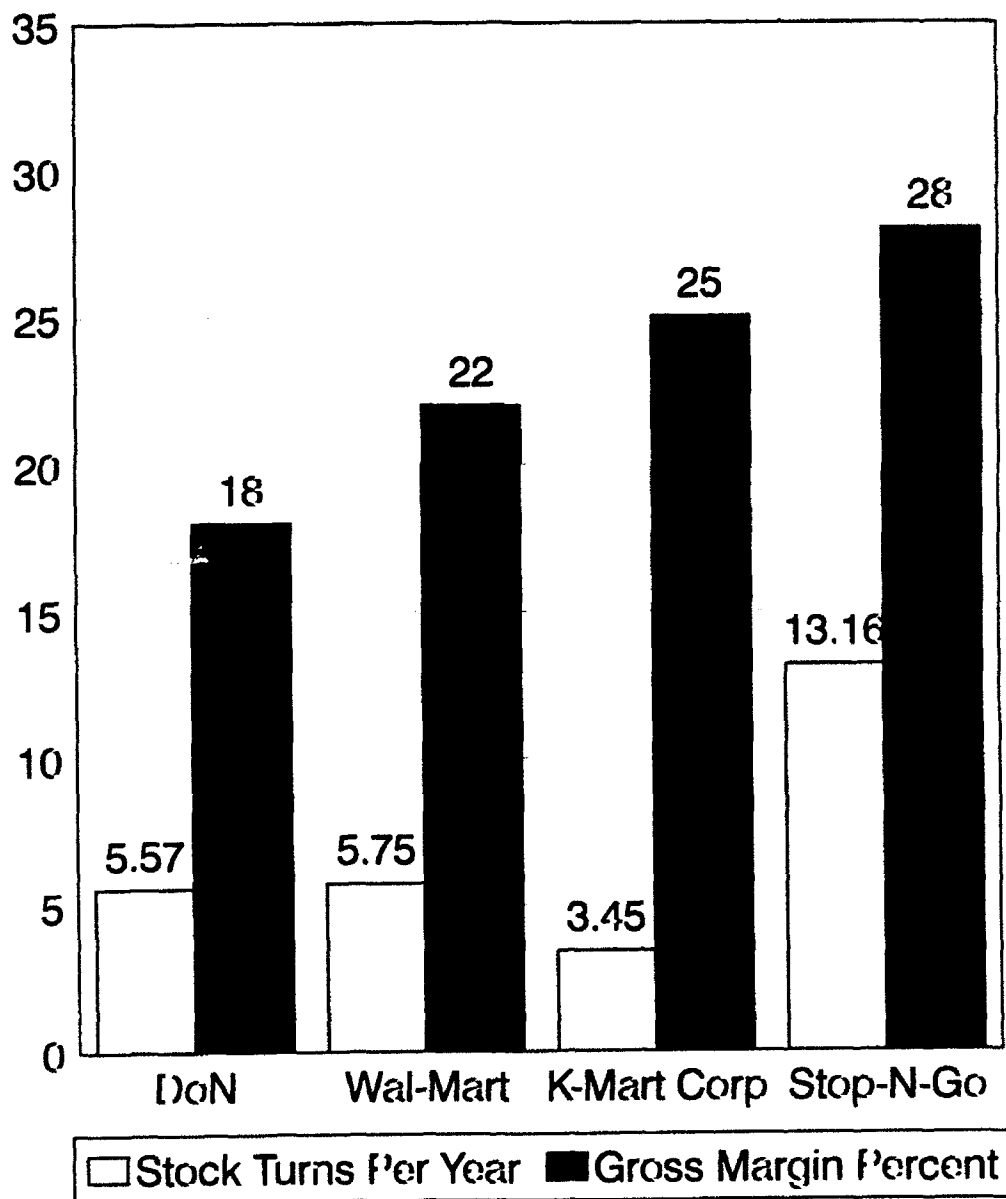


Exhibit 2

APPENDIX I

A. MINI CASES

The following two mini-cases consist of a brief scenario and a series of questions which outline the use of the stock turn and gross margin ratios. Each case has enough information that application of basic accounting principles is all that is necessary for completion.

1. STOCK TURNOVER RATIO -- PROBLEM

Two of three annual quarters for the USS EMBLEMATIC have just passed and the Sales Officer sees he is only halfway to his stock turn goal of four turns per year. Only a week away from deployment he was not overly concerned, but calls in his leading SHC to see what can be done to ensure the goal is met. Review the additional information given below and answer the following questions.

ADDITIONAL INFO

Stock turn = $\frac{\text{Cost of Goods Sold (COGS)}}{\text{Beginning Inventory (BI) for the quarter}}$

THIRD QUARTER INFO

BI - 17,000 Purchases - 21,000
EI - 4,000

QUESTIONS

1. Assuming cost of goods sold is a constant 85% of sales what amount of sales would be needed to make the goal?

2. In the equation for stock turn shown below what element does management have the most control over to ensure stock turn is met?

3. With the actual figures for the final quarter, compute USS EMBLEMATIC's stock turn for the third quarter. Did they make their goal for the year?

2. STOCK TURNOVER RATIO -- SOLUTION

1. Two stock turns are needed to reach the goal.
BI is 17,000 so cost of goods sold must be twice as much. Therefore, sales X .85 must equal 34,000. $34,000 \div .85 = 40,000$ (Ans: 40,000)
2. BI
3. (a) $BI(17,000) + Purch(21,000) - EI(4,000) = COGS(34,000)$
Stock Turn = $34,000 \div 17,000 = 2$.

(b) Adding this stock turn with the 2 turns made in the previous quarters USS EMBLEMATIC reached there goal of 4 turns per year.

3. GROSS MARGIN RATIO -- PROBLEM

SH1 Barletta just completed his third review of the Ship's Store Balance Sheet and Profit & Loss Statement (NC-153) for the quarter ending 31 January 1992. The gross margin has changed from the standard markup of 15% to 10%. He is convinced he made a mistake by letting SH3 Gonzalez take over as records keeper and begins reviewing all supporting journals to determine why the gross margin has changed. During his review he finds three accounting errors and makes all necessary corrections.

ACCOUNTING ERRORS FOUND BY SH1 BARLETTA

1. Review of the journal of receipts showed a shipment of watches valued at \$140.00 cost and \$165.00 retail, received during the quarter, had not been posted as a receipt and were already sold.

2. In ending inventory a complete shipment of cameras, valued at \$400.00 cost, was found that had not been posted as a receipt for the quarter.

3. A close look at the ending inventory showed the cost price for 200 USS NEVERSAIL backpacks were listed at \$2.00 vice the correct cost price of \$12.00.

ADDITIONAL INFORMATION FOR THE QUARTER

Beginning Inventory	-	12,250
Ending inventory	-	7,800
Sales	-	31,000
Purchases	-	23,450

QUESTIONS

1. What is the revised calculation for gross margin after correcting the errors found?

2. If uncorrected would any of these errors effect the gross margin calculation next quarter? If so by how much?

3. Assume that the accounting quarter is not over, what would be the easiest way to reduce an excessive gross margin while increasing sales?

4. GROSS MARGIN RATIO -- SOLUTION

1. $BI(12,250) + Purch(23,450+140*) - EI(7,800+2,000**) =$
COGS (26,040).
 $GM = Sales(31,000) - COGS (26,040) \div Sales \times 100$
ANS 16.0%

* \$140 cost price added as a result of receipt posting error in accounting error (1).

** \$2,000 inventory error discovered in accounting error number (3) added to ending inventory.

Note: Because accounting error (2) decreased purchases and increased ending inventory for the period there was no net effect.

2. If uncorrected only accounting error (3) would carry over into the next accounting period. The effect would be a 2,000 overstatement of cost of goods sold and a corresponding reduction in the gross margin percentage for the quarter.

3. Markdown merchandise.

APPENDIX J

A. FINANCIAL REPORTING

1. DEFINITION

Looking at various DoD and DoN accounting processes, the accounting for ship's store retail operations most closely parallels industry practice. This paper will focus on the DoN accounting procedures for shipboard operations and make comparisons with generally accepted accounting and reporting practice taught in the classroom. To make this comparison, a background of shipboard retail operations will be given, a thorough overview of financial reporting for shipboard retail operations discussed, a ratio analysis of statements reviewed, and two mini-cases presented which highlight the use of ratio analysis.

2. BACKGROUND

Founded in 1909, ship's store operations have over 350 locations, serve in excess of 290 thousand customers, generated sales in excess of 155 million in FY-91, and produced 22.2 million in profit the same year for use in recreation funds. The Defense Business Operations Fund provides the funds used to purchase the merchandise, actual cash sales are collected by local disbursing officers, and at

the end of the year the government is reimbursed for funds used. Remaining funds are transferred to a designated U.S. Treasury trust fund titled Ship's Store Profits, Navy. Profits from this trust are then transferred to individual ship's store recreation funds.¹

3. FINANCIAL REPORTING

The quarterly (four month quarter) ship's store Balance Sheet and Profit and Loss Statement (NC 153) is best described as an income statement. Breaking the report down we find the top portion labeled "balance sheet" is an elaborate cost of goods sold equation, and the bottom half labeled "profit and loss statement" an income statement. To provide a closer understanding, a review of the Balance Sheet and Profit and Loss Statement (Exhibit 1) is discussed, and comparisons made to industry income statements.

a. Balance Sheet

In its most basic form the Balance Sheet half of the NC 153 is simply purchases (Purch) plus beginning inventory (BI) on the left side and cost of goods sold (COGS) plus ending inventory (EI) on the right side. Simplified further, $\text{Purch} + \text{BI} = \text{COGS} + \text{EI}$, a mathematical manipulation of the more traditional accounting equation $\text{BI} + \text{Purch} - \text{EI} =$

¹Excerpts from a Congressional Research Service review of ship's store operations conducted in May 1991 and actual figures from FY-91 operations

COGS. As in industry the COGS is a plug figure which is used to determine gross margin.

b. Profit and Loss Statement

Looking at the profit and loss statement, we see that the left side keeps a running total of the account by adding a balance brought forward from last quarter to current quarter sales. The combined total is labeled total receipts and is used to determine funds available for transfer to welfare and recreation.

The right hand side takes the cost of sales, calculated above, adds administrative expenses and other fund transfers to come up with a total expenditures entry. Total receipts less total expenditure gives funds available for transfer.

c. Financial Statement Comparisons

Comparing exhibit 1 with a standard Income Statement (Exhibit 2) we find many similarities. Sales revenue and the calculation of cost of goods sold is identical. Aside from structure, the forms major differences can be seen in only three specific cost elements. These elements include selling and administrative expense, interest expense, and tax expense. All three expense elements are reflected in industry statements, but only non-labor related administrative expense is reflected on the ship's store NC 153.

Labor costs related to selling and administration expenses are paid by appropriated funds which cover the salaries of ship's store employees. Interest expense associated with purchases are eliminated as operating funds are drawn interest free from the Defense Business Operations Fund (DBOF). Finally, tax expense is irrelevant as all profit generated is tax exempt.

-FRONT

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CONTROL DATA CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF EARNINGS

Years ended June 30, 1965 and 1964	1965	1964
Net sales.....	\$127,820,209	\$105,452,868
Rentals and service.....	32,652,953	25,618,729
	<u>160,473,162</u>	<u>131,071,597</u>
Cost of sales.....	73,493,195	60,600,862
Cost of rentals and service.....	21,416,092	18,255,758
	<u>94,909,287</u>	<u>78,856,620</u>
Gross Profit.....	65,563,875	52,214,977
Selling, administrative and general expenses.....	32,070,568	23,148,789
Research and development expenses.....	13,915,618	12,323,106
	<u>45,986,186</u>	<u>35,471,895</u>
Operating Profit.....	19,577,689	16,743,082
Other income.....	319,812	187,072
	<u>19,897,501</u>	<u>16,930,154</u>
Interest and other deductions.....	3,334,540	1,714,801
Earnings before income taxes.....	16,562,961	15,215,353
Federal, state and foreign income taxes, estimated.....	8,650,000	9,197,232
Net earnings (note 2).....	<u>\$ 7,912,961</u>	<u>\$ 6,018,121</u>
Net earnings per share of common stock, after preferred stock dividends and proforma interest adjustment of \$40,289 in 1964 (note 2).....	<u>\$ 1.06</u>	<u>\$ 0.84</u>

Note: Depreciation and amortization of fixed assets and deferred charges included above in costs and expenses (note 2):

	1965	1964
Depreciation of property, plant and equipment.....	\$14,387,829	\$13,613,623
Amortization of patents and in '65 deferred costs to leases.....	<u>3,264,233</u>	<u>177,055</u>
	<u>\$17,652,062</u>	<u>\$13,790,678</u>

APPENDIX K

A. EXHIBITS

On the following pages are the exhibits utilized in Appendices G, H, and J.

GROSS MARGIN

PERCENTAGES

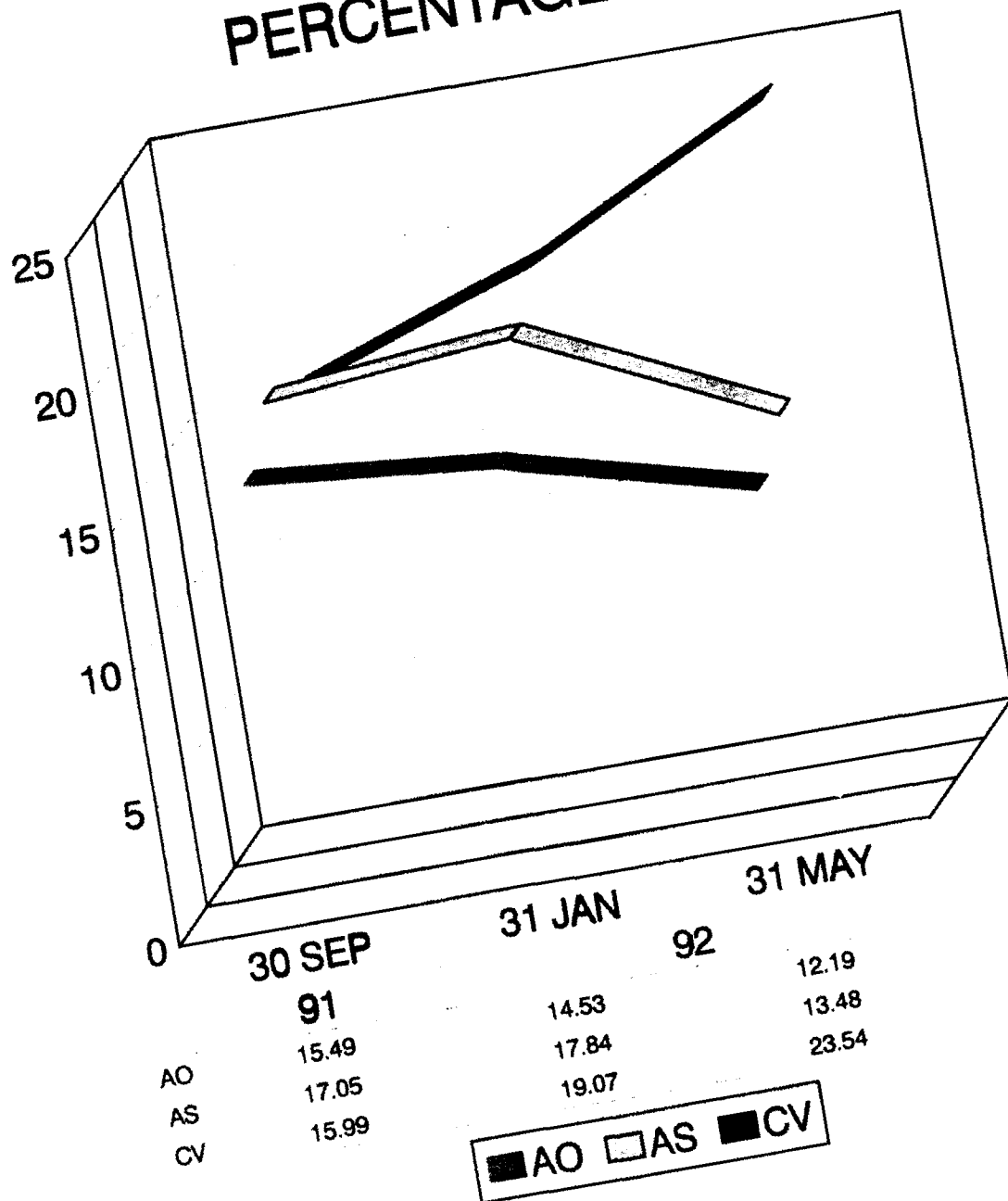


Exhibit 4

STOCK TURN

(Quarterly Goal 1.33)

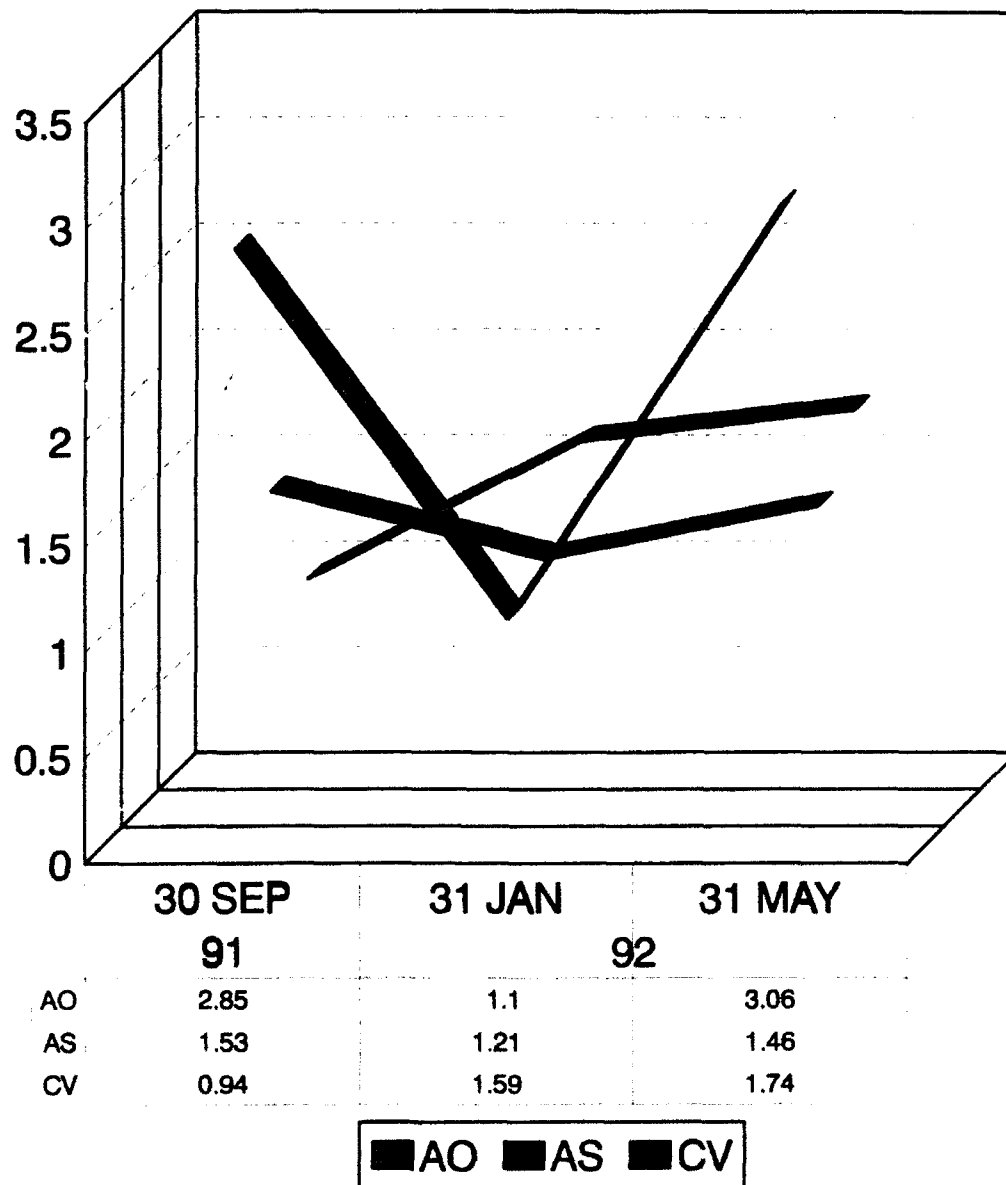


Exhibit 3

GOVERNMENT TERMS FOR PROPRIETARY ACCOUNTING

1. EXPENDITURES = EXPENSES
2. ENCUMBRANCE = PURCHASE ORDERS (PO)
3. VOUCHER PAY = ACCOUNT PAY PROPRIETARY
4. FUND BALANCE = RETAINED EARNINGS
5. RESERVE FOR ENCUMBRANCES FUND BALANCE = APPROPRIATION OF
RETAINED EARNINGS
6. **ESTIMATED** REVENUES ARE ACTUALLY BUDGETED REVENUES
7. APPROPRIATIONS ARE ACTUALLY BUDGETED EXPENDITURES

DIFFERENCES BETWEEN FUND AND PROPRIETARY ACCOUNTING

SUBJECT	FUND (GOVT)	PROPRIETARY
1. FORMULA	A = L + SE	A = L + FUND BALANCE
2. REVENUE RECOGN	MEASURABLE & AVAILABLE	MEASURABLE & EARNED
3. SUB-LEDGERS	GROUPS a. F/A ACCT GROUP b. L/T DEBT GROUP	SUB-LEDGERS a. F/A REGISTER
4. EXPENSES	EXPENDITURE	EXPENSES
5. ACCT PAY	VOUCHER PAYABLE	ACCT PAY
6. FINANCING	GENERAL OBLIGATION BONDS	DEBENTURE BONDS
7. PO	BOOK PO's	DO NOT BOOK PO's
8. BUDGET	BOOK BUDGET & ACTUALS	ONLY BOOK ACTUALS
9. EQUITY RESERVE	RESERVE FOR BALANCE OF ENCUMBANCE FUND	APPROPRIATION OF RETAINED EARNINGS
10. BOOK REVENUE	(JOURNAL ENTRY 1) TAX REC XXX UNCOLL TAX XXX REVENUE XXX	(JOURNAL ENTRY 1) A/R XXX REVENUE XXX (JOURNAL ENTRY 1B) BAD DEBT EXP XXX ALLOW D/A XXX

Exhibit 7

INITIAL DISTRIBUTION LIST

- | | | |
|----|--|---|
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PSC 819, Box 18
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