Department of
Veterans Affairs

Office of Inspector General

MANAGEMENT LETTER:
TESTS OF SELECTED VETERANS BENEFITS PROGRAMS ACCOUNTING FUNCTIONS PERFORMED AT VA CENTRAL OFFICE

Report No.: 7AF-G10-080
Date: May 9, 1997

Office of Inspector General
Washington DC 20420

DEPARTMENT OF VETERANS AFFAIRS
Office of Inspector General
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May 9, 1997

Memorandum to the Director, Office of Resource Management (24)

Management Letter - Tests of Selected Veterans Benefits Programs Accounting Functions Performed at VA Central Office Report No. 7AF-G10-080

1. As part of the Office of Inspector General (OIG) audit of Department of Veterans Affairs (VA) Fiscal Year (FY) 1996 Consolidated Financial Statements (CFS),[1] we tested selected Veterans Benefits Program functions and accounting operations at VA Central Office (VACO).[2] The purpose of this portion of the audit was to determine if financial information processed at VACO was reliable, internal controls were adequate, and whether operations complied with applicable laws and regulations. Audit tests included following up on conditions reported in prior management letters. Our audit tests of operations at the Veterans Benefits Administration (VBA) Hines Finance Center, Debt Management Center, and regional offices were presented in a separate management letter.[3]

2. Overall we concluded that staff established required internal controls for monitoring financial information, and generally complied with VA policies and procedures based on audit tests made. Improvements had been made during the past year by the VACO staff to improve one of the five conditions discussed in our prior year report.[4] Notwithstanding this improvement, there are still three areas containing four conditions in which further improvements would be beneficial.

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[1] Report No. 7AF-G10-051 dated February 25, 1997, (*Audit of Department of Veterans Affairs Consolidated Financial Statements for Fiscal Years 1996 and 1995*), provides OIG's audit opinion on VA's FY 1996 Consolidated Financial Statements, and reports on VA's internal control structure and compliance with laws and regulations.

[2] VACO refers to the Office of Resource Management (24) and the Office of the Deputy Assistant Secretary for Financial Management (047).

[3] Report No. 7R4-G10-053 dated March 3, 1997, Management Letter - Fiscal Year 1996 Financial Statements Benefits Programs

[4] Report No. 6AF-Gl0-069 dated August 9, 1996, Management Letter - Tests of Selected Veterans Benefits Programs Accounting Functions Performed at VA Central Office.

- Improving data used to calculate the future liability for Compensation and Pension (C&P) benefits.

- Improving the financial statement preparation process.

- Strengthening policies and procedures for contract counseling accounting.

3. None of the above issues had a material effect on the CFS. Appropriate adjustments were made to financial statements. Therefore, we are not making formal recommendations. However, we are providing you our observations so that you can alert managers and staff of the continuing need to improve operations and better safeguard VA assets and resources. The suggested refinements should improve the accuracy of FY 1997 Consolidated Financial Statements.

4. You are not required to provide an official response to this management letter. However, we would appreciate receiving any written comments you desire to make. We will continue to monitor these issues during future financial statement audits.

5. If you would like to discuss this report or would like additional information or assistance, please call me at (202) 565-7013 or Mr. Ernest Kaulfuss at (202) 565-4618.

For the Assistant Inspector General for Auditing

(Original signed by:)
JOHN E. JONSON
Director, Financial Statement
Audit Operations Division

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OBJECTIVE AND SCOPE

OBJECTIVE

As part of the Office of Inspector General (OIG) audit of the Department of Veterans Affairs (VA) Fiscal Year (FY) 1996 Consolidated Financial Statements (CFS), we tested selected Veterans Benefits Program functions and accounting operations at VA Central Office (VACO). The purpose of this portion of the audit was to determine if financial information processed at VACO was reliable, internal controls were adequate, and whether operations complied with applicable laws and regulations.

SCOPE

We reviewed the adequacy of internal controls at VACO. We examined the policies and tested procedures relative to: the consolidation or "roll-up" process; the calculation of the future liability for Compensation and Pension (C&P); VACO and Veterans Benefits Administration (VBA) regional office coordination of trial balances, monthly reports, and financial representations; and VACO management's oversight of the financial statements. Concerning our review of VBA's calculation of the liability for future C&P benefits, our actuarial work was performed under contract with Price Waterhouse LLP. We defined the scope of the actuary's task, monitored the work, and we agree with the conclusions. A copy of that report is presented as Appendix III. In addition, we followed up to determine whether VBA staff took action to correct deficiencies identified in our FY 1995 management letter.

The audit was conducted in accordance with Government Auditing Standards, issued by the Comptroller General of the United States; and the Office of Management and Budget's (OMB) Audit Requirements for Federal Financial Statements; and consisted of such tests as considered necessary under the circumstances.

DETAILS OF AUDIT TESTS

Veterans Benefits Administration Improvements

While some improvements continued to be needed to monitor and control veterans benefits programs accounting functions, VACO staff took action to correct one of the five conditions reported in our prior year report (6AF-G10-069).

Documentation Updated in Liability for Future C&P Benefits Model

In our prior year report, we found that a flow record documenting the sources of data inputs to the model used by VBA to calculate the estimate of the liability for C&P benefits expected to be paid in the future had not been updated since FY 1994 and did not identify the responsible person or source for the data. Documentation of the responsibilities and data sources for the liability model is needed to clearly define the requirements for the calculation and provide procedures that can be easily understood and implemented.

VBA's Office of Resource Management provided an updated model documenting the sources of data inputs and a list identifying responsible persons and sources of the data for the model used in calculating the future liability of C&P benefits for the FY 1996 financial statements.

Improving Data Used to Calculate the Liability for Future C&P Benefits

As stated in our prior year report, and confirmed by the actuarial review of September 30, 1996, the estimate could be enhanced if actual experience data for death and non-death terminations, and more detailed demographic information (such as age and sex of the current beneficiaries) was used to estimate the liability of the benefit programs. VA continues to make progress in refining calculations of the Future Funding Requirements. This financial statement line item (about $240 billion) is important to VA and Congress in planning and making budgetary decisions. VBA's Office of Resource Management, using a contractor, developed a model, calculated the estimate and maintained the model (making sure assumptions being used remained accurate, changes to the benefit programs were incorporated, etc.). However the data they used did not include detailed information on the cause of termination of benefits or the sex and age of the current beneficiaries.

Our contract actuary reviewed the estimate of the Future Funding Requirements for reasonableness of methodology and assumptions. In addition, he independently calculated the estimate using a series of special extracts[5] containing 2 years of historical C&P experience. This showed that while the total C&P liability estimate was very similar ($239 billion versus $240 billion), and therefore acceptable, the individual components could be off by significant amounts. For example, the Price Waterhouse calculations increased the estimate for compensation benefits by $13.4 billion and decreased the estimate for the pension benefits by $13.5 billion compared to the VA model value. This could make a significant difference in the FY 1997 financial statement because the pension portion of the estimation will be reported as a footnote to the financial statement and will not be included as part of the future liability on the statement of financial position. These changes in reporting are required by the standards set out in the Statement of Federal Financial Accounting Concepts No. 5 -- Accounting for Liabilities of the Federal Government.

VBA needs to work with the Demographics Division staff, National Center for Veterans Analysis and Statistics, to obtain and retain available VA master file information that can be used to update the model. Coordination for this input can be done prior to year end closing in order to permit a timely run of the future liability calculation.

[5] This extract was developed from the VA master file by the OIG Technical Support Division (52TX) and included detailed beneficiary data such as age and sex, as well as entitlement codes and type of termination.

Improving the Financial Statement Preparation Process

VBA has continued to make improvements in its financial statement preparation process. However, during our testing of the consolidation process for the FY 1996 CFS we noted the following two issues that VBA should address when preparing the FY 1997 CFS to ensure correction of these previously reported weaknesses:

- Office of Resources Management staff accountants should be consistent with regards to classification of general ledger accounts within the financial statements. There are still the same inconsistencies in the classification of general ledger accounts within the financial statements that were discussed in the FY 1995 management letter. Account 1217 was included in “Credit Program Loan” for appropriation 36X4118, but in “Accounts Receivable” for appropriations 36X0102, 36X0137, 36X8133, 36X0200 and 36X0103. VBA staff should be consistent in the application of current OMB guidance for format and content of financial statements.

- Office of Resource Management staff accountants should perform reconciliations of “Fund Balances with Treasury” on a monthly basis and determine the reasons for discrepancies between fund balances with Treasury and the general ledger accounts (GLA). OMB Bulletin 94-01, Form and Content of Agency Financial Statements, requires VA to reconcile “Fund Balances with Treasury” to the GLA and explain the causes of the discrepancies in a note to the CFS. VBA management needs to assure that rather than prepare adjusting entries to agree with the Treasury balances, the causes for discrepancies should be determined and disclosed as required by OMB in notes to the financial statements. In addition to providing assurance that accounting balances are correct, reconciliations serve to identify controls which may not function properly.

<u>Strengthening Policies and Procedures for Contract Counseling Accounting</u>

Title 38, United States Code (U.S.C.) Chapters 30, 32, 35, and 36 and Title 10 U.S.C. Chapters 106 and 107, permit VA to contract for counseling services for veterans, service members, and eligible dependents. In addition, Vocational Rehabilitation and Counseling Service may contract out Chapter 31 counseling under Title 38 U.S.C. 3697.

Last year we reported that regional offices did not establish an obligation in the accounting system when contract services were authorized, nor was a target allowance or cost ceiling established for contract counseling service at each regional office. In addition, treatment of contract veteran counseling services varied at regional offices, with some maintaining strictly cash basis entries and no visibility to the contract services authorized and others using a manual system to track the obligations and expenditures outside of the financial system.

VBA management was contacted to determine what action had been taken to assure that treatment of contract counseling services is consistent and obligations are established with the appropriate target allowance or cost ceiling when those services are authorized. This change will result in contract counseling expenditures being handled on an accrual rather than cash basis, thereby bringing the accounting method used into conformance to VA accounting policy.

Management told us that once these obligations are processed through FMS, the entries will be made according to VA Policy. At the time of our review they were still working on the budget structure in FMS. When the budget structure is properly installed there will be a period of testing. They anticipate the system will be operational in FY 1998.

ACTUARY REPORT

DEPARTMENT OF VETERANS AFFAIRS
Compensation and Pension Benefits
Liability for Future Benefits for Current Beneficiaries as of September 30, 1996

OBJECTIVES, SCOPE AND BACKGROUND

At the request of the Department of Veterans' Affairs (VA) and in conjunction with the audit of the financial statements prepared as of September 30, 1996 of the VA, I conducted an actuarial review of the estimates made of the liability as of September 30, 1996 for the future benefits of the VA's Compensation and Pension benefit programs (C&P). The purpose of this review was to determine the reasonableness of the methodologies and underlying assumptions used and the resulting estimates of these liabilities as of September 30, 1996.

The estimates of the liability as of September 30, 1996 were developed by the VA, based in part on a spreadsheet model previously developed by Klemm & Associates (Klemm), who was engaged by the VA to develop an estimate of the corresponding liability for future C&P benefits as of September 30, 1993.

A summary of the liability estimates are (in $billions); in comparison, the estimate of the grand total as of September 1993 was about $ 282.3:

	Estimate of Liability as of September 30		
Category	**1994**	**1995**	**1996**
Compensation			
Veterans	$ 137.4	$ 173.3	$ 167.0
Survivors*	45.3	44.4	40.6
Total	$ 182.7	$ 217.7	$ 207.6
Pensions			
Veterans	$ 19.8	$ 24.3	$ 22.9
Survivors^	8.8	7.0	6.5
Total	$ 28.6	$ 31.3	$29.4
Burial	$ 2.6	$ 3.7	$ 3.0
Grand Total	$213.9	$ 252.7	$ 240.0

* As of September 30, 1996, for spouses - $30.8 billion; for children - $8.0 billion; for parents - $1.1 billion; for undifferentiated older conflicts (Civil War, Spanish-American, Mexican Border) - $0.7 billion.

^ As of September 30, 1996, for spouses - $5.1 billion; for children - $1.4 billion.

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The VA's C&P programs have been in existence for a very long time, with payments still being provided as compensation related to military service in the U.S. Civil War and subsequent military encounters. The obligations of the programs consist of benefits consisting of payments to veterans, their dependents, and their survivors, based on their degree of disability, income level, or their relationship to the veterans. In general, they consist of monthly payments that may vary from time to time, depending upon disability status, income level, economic conditions, and acts of Congress. The programs provide benefits to eligible veterans, dependents, and their survivors, including, where applicable, to spouses, parents and children.

The programs included in this review are the following:

- Compensation
- Pensions: Protected
- Pensions: Section 306 (PL86-211 and prior)
- Pensions: PL95-588 (“Improved”)
- Burial.

New benefits for the first two listed Pension programs are no longer available to veterans; in addition, cost of living adjustments (COLAs), based on changes in the Consumer Price Index for Urban Wage Earners and Clerical Workers (referred to here as the CPI) are not applied on a regular basis to these programs. For the other Pension and the Compensation program, COLAs have historically been provided. Although such adjustments currently require Congressional action, in those few cases in which they have not been provided, a retrospective catch-up adjustment was provided in a succeeding year. Thus, for the purpose of developing an estimate of the liability for these programs, it was assumed that COLAs would continue to apply for these two programs. Increased payments due to COLAs have recently been granted with payments beginning on December 1.

The VA engaged Klemm to assist them in deriving estimates of its future obligations as of September 30, 1993 for these programs. At the time, Klemm personnel indicated to me that they interviewed several individuals at the VA for the best currently available information regarding beneficiaries, together with corresponding monthly payment amounts to those beneficiaries as of that date. This year, for the first time, more detailed beneficiary information was made available; this information was developed from the VA master file by the VA’s Inspector General’s staff in Austin, Texas.

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The model, consisting of several spreadsheets, as well as certain reports, is segmented by veterans and by type of their survivors, and by period of conflict. An exception is the spreadsheet for Burial benefits, for which segmented data is not available, but whose the liability is not material relative to the total C&P liability. The conflict periods included are:

- Civil War
- Spanish American War
- Mexican Border Period
- World War I
- World War II
- Korean Conflict
- Vietnam Era
- Persian Gulf War
- Peacetime (for Compensation only).

No reflection has been made in the estimates of the expenses of the administration of these programs. I believe that this is consistent with current federal government accounting standards for such programs.

The methods used in the recognition of future obligations of the Compensation program are consistent with those prescribed by the newly adopted Statement of Recommended Accounting Standards: "Accounting for Liabilities of the Federal Government", Number 5 (Statement Number 5), which classifies such benefit payments as employee benefits, which recognizes the present value of future payments to beneficiaries currently receiving payment for as long as they will receive payment.

The classification would result in the Pension program being characterized as a general fund benefit program financed by general revenues. The obligation for the Pension program recognized on the VA's balance sheet as being limited to unpaid amounts due from the VA and to exclude any other future obligation. The VA has decided to report this obligation in a manner consistent with that of the Compensation program as of September 30, 1996.

These standard is effective for financial statement periods beginning after September 30, 1996. Therefore, the requirements of this standard are not required to be in effect as of September 30, 1996.

DEPARTMENT OF VETERANS AFFAIRS
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Liability for Future Benefits for Current Beneficiaries as of September 30, 1996

APPROACH

Approach Taken

My review consisted of the following:

- Discussions with various VA personnel, including:
  - Ms. Marcia Caplan
  - Mr. Richard Jenkins
  - Mr. Ernie Kaulfuss
  - Mr. Gilbert Melendez
  - Mr. Paul Mulligan
  - Mr. Richard Norwood.

- Review of various spreadsheets showing the calculations used in the estimation of the future C&P benefit payments as of September 30, 1996 and September 30, 1995, together with certain supporting reports and other documents provided to me by the VA.

- Review of the following reports prepared by the VA:
  CP-103
  CP-104
  CP-127
  RCS 20-0221
  RCS 20-0231
  RCS 20-0236
  RCS 21-14.

- Analysis of C&P experience data provided to me in spreadsheet form providing the number of beneficiaries:
  - as of September 30, 1994, September 30, 1995, and September 30, 1996
  - terminated during the 1994-95 and 1995-96 fiscal years (FYs).

- Tables and reports prepared as input to the Federal Budget containing information regarding experience under the C&P programs, including data on the reasons for termination of Disability and Death Awards (currently in Table 48).

- Review of various Federal Reserve Statistical Releases and Public Law No. 104-275, approved on October 9, 1996 and Public Law No. 104-204 that rescinded most of the impact of the Gardner vs. Derwinski court case.

The approach taken in this review included the following:

- I reviewed the calculations included in the various spreadsheets, showing the calculation of the estimates of liability, to determine whether the methodology and approach taken were reasonable.

- I reviewed the methodology used to discount future benefit payments.

- I reviewed the experience data provided to me by the VA and constructed various sets of historical experience termination rates by type of beneficiary to determine whether the assumptions used in the spreadsheets were reasonable. Although sufficient time within the scope of this project was not available to develop fully graduated termination rates, experience rates appropriately refined for the purpose of this review were constructed and applied to the population of beneficiaries for the major benefit categories as of September 30, 1996 in order to develop independent estimates of the outstanding liability of the C&P program as of September 30, 1996. A more complete discussion of the approach used to develop such termination rates follows in a later section of this report.

- I developed independent estimates of the impact of what was deemed to constitute a range of alternative scenarios with regard to certain of the major assumptions made.

I relied on the representations of the management of the VA and on testing performed by the VA's Inspector General staff (IG) for assurance that the data provided in beneficiary related data in various reports and data bases I relied upon in the course of my review were accurate (see attached letter from Mr. Kaulfuss dated December 18, 1996). However, I conducted such tests and made such inquiries regarding the data's overall reasonableness and consistency between periods as I deemed necessary. Several errors exist in the data base (for example, certain survivors were classified as older than 200 years old); however, the number of beneficiaries associated with such obvious data errors does not appear to be material relative to the total number of beneficiaries and thus should not result in a material mis-estimate of the liabilities included in this review.

Assets are not explicitly matched against the obligations of the C&P programs; nor are they available to the VA on other than a current basis. Rather, the source of the cash flow necessary to pay for these benefit payments is annual U.S. government appropriations for these programs. As a result, material investment proceeds from historical or future cash flows do not or are not anticipated to exist for these programs.

My review was conducted in a manner consistent with the Code of Professional Conduct of the American Academy of Actuaries and the Standards of Actuarial Practice as adopted by the Actuarial Standards Board.

METHODOLOGY AND UNDERLYING ASSUMPTIONS USED

Recognition of Contingency

A very significant assumption underlying the derivation of estimates of liabilities for VA's C&P program is the time at which the VA should recognize in its financial statements the contingency that results in the obligation for future liability (trigger point). Several possible trigger points exist, including:

1. Date at which the payment is made or is payable to the beneficiary (pay-as-you-go approach)
2. Date that the first payment to the beneficiary was made
3. Date the beneficiary award was initially adjudicated
4. Date a claim for benefits was filed
5. Date the veteran became disabled or died
6. Date of active duty discharge
7. Period over which the member of the military was exposed to the disability risk (if the disability had to be service related)
8. All potential payments made during a certain period of time (open-end approach)
9. In the case of survivors, one of the above dates with respect to the status of the veteran, rather than or in addition to the status of the survivor beneficiary payout.

Estimates of the VA's obligations under the C&P programs can be made for any of these approaches, as each can be measured, given appropriate experience data. Although a case could be made to support several of these, it has been determined that the most appropriate trigger point for the purpose of preparation of this report at this time is the date adjudication was completed, or rather, when this adjudication was recorded in the VA's computer system.

The Federal Accounting Standards Advisory Board (FASAB) recently adopted an accounting standard (its Statement Number 5) for the Compensation program "to recognize expense when (the) relevant event occurs and (the) program participant is determined eligible for compensation", as an employee benefit. This is most consistent with approach (3) above. Even though it is classified as an employee benefit, no discussion was provided in the Standard as to why the liability should not be recognized as employee services are provided (approach (6) or (7) above) as is the case for employee benefit plans.

The FASAB indicated in its Statement Number 5 that the Pension program should be accounted for in a manner consistent with approach (1) above, or as a general fund benefit program financed by general revenues, which would result in no material liability for this program on the VA's financial statement's balance sheet. No discussion was provided in the Statement Number 5 as to why the distinction between the Compensation or Pension programs was made, which is not apparent based on the description provided. However, the VA has elected to treat the future obligation in a manner consistent with its obligation under its Compensation program as of September 30, 1996. The remainder of this report evaluates the obligation of the VA in a manner consistent with the treatment on the VA's balance sheet as of September 30, 1996.

The lag between final adjudication and the recording of this event is apparently only a matter of days. If so, the lack of explicit recognition of this lag should not result in a material difference between the stated standard and the accounting method used, particularly because corresponding lags in reporting of beneficiary terminations are not reflected.

I was told by Mr. Mulligan that the time between adjudication decision and recording that fact on the VA masterfile was related to the time between masterfile update cycles, that are run about twice a week. The impact of this delay, particularly considering that recording terminations are also subject to a similar delay, should not be material in comparison with the overall liability of these programs.

Because benefits associated with the Burial program are fundamentally different from the income related benefits in the other C&P programs, the trigger point selected was different. The liability for this program has been estimated as equal to the present value of all estimated future payments for Burial benefits in perpetuity, rather than just those whose payments have been adjudicated or determined as of September 30, 1996. This is closer to approach (8), an open-end estimate.

Period Projected

For the significant military conflict periods/beneficiary types/benefits categories, the VA estimated the present value as of September 30, 1996 of total benefits for each of the thirty years after the valuation date for beneficiaries whose claims have been adjudicated through September 30, 1996 and who were still in an active beneficiary status as of September 30, 1996. For the present value of future benefits after this thirty year period, for most categories the actual rate of change in total benefits between the twenty ninth and thirtieth years was applied (this generally reflects annual expected COLAs and aggregate termination rate assumptions), net of the discount factor described below, in perpetuity thereafter. In general, based on current experience, this methodology for estimating benefit payments after thirty years is reasonable.

For certain categories in which independent tests were made, such as for female veterans, due to their relatively low termination rates and younger ages, this method resulted in relatively large present values for years later than thirty years from now; however, this overstatement is in absolute size does not appear to be material. For the Burial benefits, since no terminations are assumed to occur, the resulting ultimate liability estimate is relatively high compared to current levels of payment (the present value as of September 30, 1996 for burial benefits after 2026 is about $1.4 million out of a total present value of about $3.0 million for burial benefits for all years; in contrast with a total present value of future benefits for all of C&P after 30 years of about $29.9 million).

Model Used to Calculate the Liability

In the model used to calculate the C&P liability, three methods were used to develop estimates:

1. Veterans. Veteran beneficiaries as of September 30, 1996 were separately studied by Compensation and Pension programs, and by conflict period (see above). For Pension programs, the liability was estimated separately for three legislative sources of the benefits.

   This was done not only to derive separate liability estimates, but also because the model assumes one of the three sets of beneficiaries receives COLAs. They were then grouped by attained age during the 1996 calendar year, but not by sex. The total amount of monthly benefits assigned to each attained age was that payable as of the end of September 1996. The estimate of future benefits to be paid to beneficiaries in that conflict/age category during each of the next thirty years then equaled the annualized benefits, multiplied by the estimated probability of survival to the end of that year. The benefits were adjusted by the estimated amount of COLAs and the probability of survival was assumed to improve by 1% annually (actually, the mortality rate was reduced by 1% each year). The basis for estimated survival probabilities used are described below.
2. Survivors. The spreadsheet models for survivors were generally set up in a similar manner. Neither age nor sex of beneficiary was used directly. Instead, the age of the veterans for the corresponding conflict period was the basis used to allocate total survivor benefit payments. Separately for Compensation and Pension, the total benefits paid during the 1995-96 fiscal year to all survivor payees was allocated first to survivor type (spouse, child, and if applicable, parent) by the proportional number of beneficiaries currently collecting benefits for each type and then to age of veterans in the applicable category by the distribution by age of the monthly benefit amount as of the end of September 1996. This allocation to age is not related to the age of the payees, but rather to the current veteran beneficiaries in that category. The basis for estimated survival probabilities used are described below.
3. Burial. The 1995-96 payments for the burial program was increased by the appropriate COLA for each succeeding year into perpetuity. It was assumed that the aggregate number of burials and average cost of burials, adjusted by estimated changes in CPI, would continue into the indefinite future. The age of those buried was not reflected in these calculations.

Estimated rates of survival were then applied to the assumed population of each category of beneficiary as of the beginning of each of the thirty fiscal years subsequent to the valuation date. These rates of survival were derived from several mortality tables. Mortality was the only source of benefit termination explicitly reflected, as at the time the model was originally developed, mortality was the only decrement recognized. The mortality tables assumed, by beneficiary category, were the following:

- Veterans. The 1990 through 1992 mortality experience for Service-Disabled Veterans Insurance (S-DVI, a part of the VA life insurance program), as prepared and graduated by attained age by the Actuarial Staff of the Life Insurance Operations of the VA. This was available on an individual attained age basis between ages 41 and 75. These rates were assumed to apply to FY 1991. For ages 35 through 40, these rates were interpolated with the 1991 U.S. Life table for males of all races; for ages 75 through 80, the rates were interpolated with the Uninsured Pension - 94 (UP-94) mortality table (derived from experience of uninsured private pension plans for male lives). For younger ages, the 1991 U.S. Life table was used and for the older ages, the UP-94 mortality table was used. These tables were all either centered at 1991, or were adjusted to 1991 at an annual rate of mortality improvement of 1%. They were assumed to be all males.
- Survivors. A recent U.S. Life table was used, that from 1991. This table was available on an individual attained age basis through age 85, and was derived from U.S. Census data. For ages 85 through 90, these rates were interpolated with the UP-94 mortality table. After age 90, the UP-94 table was used exclusively. For each survivor category, the distribution of ages (weighted by monthly income amount) was assumed to be similar to that of the surviving veterans in that conflict category, adjusted by the following age differentials:
    - Spouse. The age difference between the spouse distribution of monthly incomes and the veteran for the same military conflict period was eight years, i.e., the current surviving spouses being on average eight years older than current veterans. They were assumed to be all females.
    - Parents. The current surviving parents were assumed to be 26 years older than the average current veterans. They were assumed to be 85% females and 15% males.
    - Children. The surviving children were assumed to be 24 years younger than the average current veterans, consisting of half females and half males.

The sex-distinct version of the UP-94 table and the 1991 U.S. Life table, as applicable, was used.

In all cases, mortality rate improvement was assumed to occur from the central year of experience underlying the table used to September 30, 1996 and to continue to improve in the future at an annual rate of 1.0%. Thus, assumed mortality expressed as of the central point of the experience period underlying the mortality table (unless it was already projected, in which case the projection year was used) was projected forward to the year after the valuation date. For example, for the September 30, 1996 liability estimate, the S-DVI mortality assumption for veterans was projected for six years (the end of the first quarter of the 1991 calendar year, through the end of the first quarter of 1997). In addition, the rate of mortality improvement was projected to continue after the valuation date through the estimated benefit payment date. This method of projection is reasonable and the level of mortality improvement is reasonably consistent with overall historical mortality trends.

The basis of the projections reflect, in all cases except for the Burial program, the current monthly rate of payment to the beneficiary unit (i.e., the veteran for veterans' benefits and the beneficiary type, e.g., children, parents or spouse, for survivors' benefits). This monthly amount was then multiplied by twelve and adjusted by the projected applicable COLA, if applicable, for subsequent years (future COLAs were applied to all programs except for the Protected and Section 306 Pension programs). The COLA projections were obtained from the U.S. Budget estimates prepared by the Congressional Budget Office. These estimates were made for the next several years. The COLA value after this period was assumed to remain constant at the estimated annual amount of 3.0%.

The COLAs as estimated in the Budget are estimated on a calendar year basis, while the COLAs in this case are applied on a fiscal year basis. However, since the assumed COLAs are similar in size, this difference should not result in a materially different estimate. The veteran beneficiary models assumed that the COLAs were effective for the entire fiscal year, even though they have been typically effective in December. The survivor models assume that COLAs are implemented in a consistent timing manner from year to year.

Public Law 104-204, effective October 1, 1996, eliminated most of the potential claims against the Compensation programs due to worsening physical conditions of veterans that result in a stay at a VA hospital that might have ensued as a result of the Gardner vs. Derwinski court case. As a result, no adjustment appears appropriate as a result of that court case.

In reviewing the model, the following are specific observations:

1. Beneficiaries who terminated during a particular fiscal year were not assumed to receive any benefit payments during the year of termination. This understates the estimate of liability by about $5.2 billion.
2. For veterans whose payments are adjusted by COLAs, no reflection of the fact that the annual COLA was made as of December 1 was made (since average end of fiscal year benefit size was used, all benefit payments for the fiscal year were assumed to be paid at end of fiscal year values). Thus, payments for October and November were assumed to be greater than what would be paid under the COLA assumption. As a result, this overstates the estimate of liability by 2/12 of a year (about .5% of the total liability for Compensation and Improved

Pension veterans), or about $.95 billion. Because benefit payments for survivors were based on average payments for a fiscal year and assuming consistent timing of COLAs, such an adjustment is not necessary for the survivor models.
3. The mortality rate input into the model for veterans age 58 was .00191, rather than .0191. This understates the estimate of the liability by about $0.25 billion.
4. Annual rate of mortality important for the children survivors for Compensation was 0.75%, rather than the 1.0% used for all other categories. This understates the estimate of the liability by about $35 million.
5. Mortality rates for all beneficiaries over age 110 were significantly overstated. This understates the estimate of the liability by about $15 million.
6. There appears to be some discrepancies between benefit levels for survivors and those reflected in the model. I recommend that such discrepancies (as well as the above) be reviewed and adjusted for where deemed appropriate prior to the running of the model for next year's estimates.

The aggregate impact of these modifications would be to increase the final liability estimate by about $4.65 billion.

Discounting

The methodology used to discount future benefit payments incorporates the following assumptions: (1) benefit payments are made in the middle of the fiscal year and (2) each year's benefit payments are discounted separately, using the approximate interest rate, determined on a yield to maturity basis, that could be earned on U.S. Treasury bonds available at the valuation date, for the duration corresponding to the time between the valuation date and the average time of payment for that fiscal year's benefit payments. The interest rates used in effect as of September 30, 1996 were taken from the Federal Reserve Statistical Release as of that date for U.S. government securities - Treasury constant maturities. For cash flows expected to occur more than thirty years after the valuation date, the yield rate for a thirty U.S. Treasury bond was used.

The following is a summary of values of interest rates during the recent past. The interest rates in the last two columns were calculated using month-end values. Interest rates during the 1996 fiscal year were about thirty five basis points less than the interest rates at the end of the 1996 fiscal year. Interest rates during the six month period centered on the end of the 1996 fiscal year were about fifteen basis points less than the interest rates at the end of the fiscal year

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Years to Maturity	U. S. Treasuries As of 9/29/95	12/29/95	3/30/96	6/30/96	9/30/96	12/29/96	1996 FY	6 Mo Ave
1	5.69%	5.18%	5.41%	5.70%	5.71%	5.51%	5.52%	5.63%
5	6.08	5.38	6.10	6.47	6.46	6.21	6.09	6.32
10	6.26	5.58	6.34	6.73	6.72	6.43	6.35	6.56
20	6.70	6.01	6.83	7.03	7.05	6.73	6.73	6.89
30	6.57	5.96	6.67	6.90	6.93	6.65	6.62	6.79

The following are estimates of the liability of the C&P programs as of September 30, 1996, using the interest rates as of September 30, 1996, the average interest rates during the fiscal year, and the average interest rates during the six months surrounding September 30, 1996:

Interest Rates As of:	Liability in $billions
September 30, 1996	$240.0
1996 Fiscal Year (9/1996 - .15%)	244.1
Six months around 9/30/1996 (9/1996 - .35%)	249.8
9/1996 - 1.0%	270.3
9/1996 - 2.0%	308.5
9/1996 + 1.0%	215.5
9/1996 + 2.0%	192.0

This year the use of the two alternative interest rate periods described above would have reduced interest rates by about 15 and 35 basis points, which does not produce a material change in the estimated liability, although the latter would have increased the estimated liability by about $10 billion. A variation of one or two hundred basis points does produce a relatively large impact in the estimated liability. This potential instability of estimated values is a by-product of the application of any market value based valuation methodology to these types of programs. Thus, using the current methodology, in a year of unstable interest rates, a significant variation of estimated liability may arise depending upon the interest rates in effect on a particular day, in this case on September 30.

This method of selecting discount rates was used because the VA does not possess specific assets to back up these obligations. Rather, the benefit payments will be made from future general revenues of the U.S. government. These interest rates may be viewed as representing the cost of capital to the government at the time of valuation that would be necessary to fund the obligations of the C&P programs if they were pre-funded, or viewed alternatively, the risk-free rate of interest that the VA would have to pay in order for these programs to be provided through another source. The interest rates used, as well as the resulting liability estimates, may vary, sometimes considerably, from one year's valuation to that of the next.

Because of the potentially wide fluctuation in the value of the liability based on a specific day's interest rates, alternative approaches to the current discounting approach were identified and evaluated.

- Often, such plans use interest rates associated with the expected yield rates of the underlying assets of the fund and projections of future investment yield rates. This approach is not relevant in this case, because there are no assets underlying these obligations, other than the full faith and credit of the U.S. government. Rather, funds are made available each year in which benefits are payable. This is similar to the approach used to discount future cash flows for the trust funds of Social Security that invests in U.S. Treasury securities.
- Credit reform interest rate. For GSEs, a single interest rate is used to discount future cash flows. For the third quarter of 1996 this interest rate was 6.33%. This is generally applied to liquidating accounts for obligations entered into subsequent to 1990, while a different discount rate, relating in part to underlying assets, is used for financing accounts if there is one, that represents obligations entered into prior to 1991.
- Market value rates. The Pension Benefit Guaranty Corporation (PBGC) attempts to reflect the value that the market would place on certain of these liabilities. One approach to their valuation is to estimate how much a commercial insurer would charge to take over, or buy, their obligations. In practice, commercial insurers may be asked to price the future cash flows as of the valuation date. The price would be a function of such factors as expected investment rates to be earned by an insurer, their expectation as to beneficiary survival rates and acceptable profit margins, and the relative degree of competition involved. The PBGC may ask a variety of insurers to develop hypothetical premiums for sample cases so it can determine what market values are. This approach to determine market or fair value is difficult to implement here due to the size of the C&P programs.
- Risk free rates of interest that the U.S. government would have to pay if it sold these liabilities in the market. This may correspond to the use of spot rates of interest on publicly auctioned securities.
- Cost of capital of the U.S. government if it wished to fund these obligations through issuance of U.S. Treasury securities. This might represent a blended rate based on some form of weighted average of the various durations of U.S. Treasury securities. The current methodology, using liability matched maturities, may be more appropriate than such a weighted approach.
- Real rate of interest. Social Security projections discounting future cash flows more than ten years after the valuation date at a long-term real rate of interest in excess of changes in the CPI (COLAd benefits). Some economists argue that, theoretically, the best estimate of real interest rate is the current long-term government bond yield rate less long-term expectations of changes in inflation, that is similar but not identical to the approach used.

Thus, several variations in discounting methodology exist. In addition, variations of these could be developed that would reflect a smoothing or stabilizing approach, not as dependent on the interest rates of a particular valuation date. I did not determine whether the use of such methodologies as of September 30, 1996 would result in a significant difference in estimated liabilities. As of this time, I cannot conclude that one of these alternative methods is superior to the one currently used. I recommend that this issue be further explored next year. Because the current approach is based on interest rates in effect on a particular day, values are subject to potentially significant variations in values, as can be seen from the sensitivity test results given above.

Independent Estimates of the Liability

The VA's IG ran a series of special extracts from the VA's masterfile to develop a series of spreadsheets containing historical C&P experience. Two years of historical experience were created, separately identified by conflict period, Compensation versus Pension, entitlement code and termination type, available by age and sex of the beneficiary:

- Beneficiaries as of September 30, 1994, September 30, 1995, and September 30, 1996 and
- Beneficiary terminations during fiscal years 1995 and 1996.

In the first data set run provided, only half of the terminations of each of the two fiscal years was provided. The termination spreadsheets were then recreated with complete termination history for the two years. I then recalculated termination rates. I then identified that the titles of two entitlement codes were switched that resulted in an improper allocation between the Pension and Compensation programs; once this error was identified, the data was re-combined and termination rates were again recalculated. Data from these extracts were then compared to regularly generated reports (e.g., CP-103, CP-127, RCS 20-0221, and RCS 21-14). Although there were discrepancies between these sources, they would not likely to result in material differences in the aggregate amount of estimated liability as of September 30, 1996. Although there were larger differences between these data sources and Table 48, their potential discrepancies also do not appear to be likely to result in material differences in estimates.

The steps I took in my evaluation included the following:

1. For each of the five data files, the number of beneficiaries were separated and sorted by sex (there were a number of beneficiaries with unidentified sex, but these were primarily concentrated in the survivor categories whose liability is relatively small in comparison with that of the veterans' categories), attained age during calendar year 1996, and survivor category (veteran, surviving spouse, surviving mother, surviving father, and surviving children).

2. The two termination files were also separated and sorted by death cause-of-termination or non-death cause-of-termination.
3. There were many records with more than one beneficiary category identified. These were separated and allocated to their proper category. In many of these, due to the data provided, adjustments to the tabulation by sex were made by judgment.
4. I then reviewed the reasonableness of the resulting data. Other than a relatively few outliers (e.g., survivors who were recorded as having been born a few hundred years ago or parents of veterans in their 20s), the most obvious coding issue was an unexpectedly large number of survivors born in 1901. I assume that this was coded in error, possibly due to lack of information at the time of a computer conversion. However, the experience for this age category was not inconsistent with ages around age 95. As a result, I did not make any adjustments for this probably error.
5. I was told that the age distribution provided for children was the age of the veteran associated with the child beneficiary. As a result, ages provided could not be relied upon. In addition, the number of children included in the detailed experience data provided, CP-103 and CP-127 reports are based on the number of child survivor payees, while the data from the CRS report series and that are used in the model to allocate the liability among survivor types were based on the number of children beneficiaries of all types, including dependents of living disabled veterans. As a result, the termination data of children do not appear reliable (e.g., annual non-death termination rates for compensation of about 50%). However, because the liability associated with children is relatively very small, I conclude that the model result is most likely not materially miss-estimated as a result. I recommend that more appropriate data be developed in the future for children.
6. Simply dividing the number of terminations by the number of beneficiaries at the beginning of the year would not appropriately reflect the portion of the year that terminations or new entrants during that year are exposed to the hazard of termination. As a result, I exposed each beneficiary who either entered or terminated during the year in the calculations for one-half of the year. The resultant ratio was the raw termination rate (either due to death, non-death or total terminations). At certain of the older ages (90 and above), this assumption may not be appropriate; however, the resulting liability estimate should not be materially misstated.
7. Total termination rates by beneficiary category by age and sex were then determined for the 1995 fiscal year and the 1996 fiscal year. The average rates for both fiscal years combined were then calculated. Because small amount of exposures for the very young and very old ages were available, judgmentally selected values were used for those ages instead of the calculated averages. Because a sufficient number of female veterans exist to form a credible volume of experience (in the thirties and forties, between ten and twenty percent of exposures were female), separate model runs were made for males and females for the Compensation program and weighted averages were used for the Pension program. For spouses, there was an insufficient number of males to develop independent rates; as a result, aggregate termination rates for males and females combined were derived. The determination of the termination rate assumptions applied are included in an Appendix to this report.

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8. The experience data provided only included information regarding number of beneficiaries, and not their average size of benefit payment. Thus, average benefit amounts had to be developed through some other source. The average benefit payment size for spouses, representing the average benefit payment due as of September 1996 was derived in the aggregate value for that survivor category reported in the CP-127 or CP-103 report as of the end of September 1996.
9. Because the spreadsheet model was used to develop independent liability estimates, the first two adjustments described on page 10 of this report were re-estimated reflecting VA experience. Because of non-death terminations, the present value of the extra cost in the year of termination was somewhat higher, an increase in the liability of about $7.4 billion (no estimate was made for parents and children - this should be relatively small).the overall adjustment in estimates was larger, consisting of an approximate $5.7 billion understatement for the recognition of benefit payments for the year of termination and a $1.2 billion overstatement for the recognition of the timing of COLAs for the year, or a net increase of $4.5 billion.
10. Because of the relatively small size of the liability associated with parent and child beneficiaries, independent calculations of this liability were not conducted, although the independent liability estimates are most likely somewhat overestimated as a result of the relatively large percentage of non-death terminations of children.

Compared to the VA's modeled estimates, the aggregate estimates of the Compensation program increased somewhat due to mortality experience lower than modeled estimates, with relatively few non-death terminations. The estimates for the Pension program decreased due the relatively large number of non-death terminations.

The following values were thus generated, compared with the modeled estimates of the liability for the C&P program as of September 30, 1996:

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		Independently Calculated Values with Adjustments		
Category	**Modeled Values**	**As Modeled**	**With Term Year**	**With COLA**
Compensation				
Veterans	$ 167.0	$ 171.7	$ 175.4	$ 174.5
Survivors	40.6	44.8	45.8	45.6
Total	$ 207.6	$ 216.5	$ 221.2	$220.1
Pensions				
Veterans	$ 22.9	$ 9.7	$ 10.4	$ 10.3
Survivors	6.5	5.2	5.5	5.5
Total	$ 29.4	$ 14.9	$ 15.9	$ 15.8
Burial	$ 3.0	$ 3.0	$ 3.0	$ 3.0
Grand Total	$240.0	$ 234.4	$ 240.1	$238.9

Sensitivity Tests

It is appropriate to understand the sensitivity of the model used to alternative potential scenarios or assumptions. As a result, several such variations are provided in this section. The impact of the use of alternative discount rates are given above in the section “Discounting”.

There has been a great deal of discussion during the last year concerning possible changes in the methods used to construct the CPI by the Bureau of Labor Statistics starting in 1998, the index that is used as the basis of the COLAs used in the model. The following assumes that the interest rate would not change as a result of a change in the definition of the CPI. The estimated liability for the C&P programs would be reduced by about $6 billion if the average CPI were reduced by 0.2% (the amount that the Bureau of Labor Statistics indicates is an appropriate adjustment (from $240.0 billion to $234.0 billion)). Assuming that the rate of change in the CPI would be decreased by 1.0% as recommended by a recent U.S. Government Task Force on this subject, the estimated liability would be reduced by about $27 billion (to $213.0 billion) or by about $31.7 billion (to $208.3 billion) if it were reduced by 1.2%.

A sensitivity test comparing the liability estimates associated with no annual reduction in the termination rate was performed, compared with the 1.0% annual rate assumed in the current model. The use of the higher trend rate reduced the modeled estimated liability by about $12.4 billion, to $227.6 billion. A sensitivity test was also run assuming a 2.0% annual rate of reduction in termination rates. This increased the estimated liability by about $13.6 billion, to about $253.6 billion. Based on historical population mortality, a 1.0% annual trend would be reasonable to reflect probable future mortality improvements. However, it is not clear based on the limited C&P experience what a reasonable trend rate would be for non-death terminations. Such a rate should be developed as a result of indications of future mortality under the C&P program. An appropriate trend for the non-mortality component of C&P terminations should be developed for use in the future.

Burial Benefits

For the burial program, because neither period nor age related data was available, future Burial benefits were estimated in the aggregate in the manner described above. The VA determined the most recent year's aggregate Burial benefits (less payments for headstones and markers). This amount was increased by the currently projected COLAs to the year of payment. These were then discounted to September 30, 1996. This is an approximation to the benefits to be paid for existing C&P beneficiaries and is inconsistent with the contingency recognition rules used for the other C&P programs.

If the liability is intended to reflect the present value of Burial benefits for all current veterans, the estimate may be somewhat conservative. On the other hand, if the liability is intended to only reflect benefits payable for those veterans who have already died, the estimate would be significantly too large. Due to the relatively small size of the Burial benefits in comparison with the other C&P benefits, the use of alternative methodologies that could be used should not materially affect the aggregate estimate of the entire C&P program. I recommend that the basis for the determination of the estimate of this program's liability be reviewed for use in future valuations.

OVERALL FINDINGS AND RECOMMENDATIONS

Although not based upon historical experience of the programs, the methodology used by the VA in deriving estimates of liability for the VA's C&P programs as of September 30, 1996 has resulted in estimates that are not unreasonable in the aggregate and are generally consistent with the intended definition of the trigger point for which liability is recognized. Note the issues raised in the body of this report. In aggregate, based on available reported historical experience, the resulting estimate of liability as of September 30, 1996 appears to lie within a reasonable range of probable values ($240 billion compared to $238.9 billion as independently calculated). Note that, based on FY 1995 and FY 1996 experience and all causes of termination, certain portions of the estimates differ by a more material amount from those independently calculated relying on VA experience. This will become more relevant in the future if the estimates of the liability for the Compensation program is viewed independently of that of the Pension program.

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Although estimates of future Burial benefits have been developed in a manner quite different from that of the other C&P programs, the amount of liability of this program appears to have been conservatively estimated and is not material relative to the aggregate size of the remainder of the C&P program.

I recommend that experience (including both death and non-death terminations) under these programs continue to be reviewed and, if deemed appropriate, be reflected in future models of estimates of the liability of the C&P programs. I also recommend that the discounting methodology used continue to be evaluated to confirm its continued appropriateness. In addition, a number of relatively small issues as raised above should be addressed.

These conclusions are based on the premise that the definition of the trigger point relied upon is appropriate for use in estimating liability values the balance sheet of the VA as of September 30, 1996. An open end valuation, such as used by the Social Security Administration to report on its trust fund operations, may be more appropriate for use in management information regarding the future cost of C&P benefits promised by the U.S. government. I recommend that this latter approach be reviewed by the VA for possible future development.

Sam Gutterman, FSA
Chicago, Illinois
March 30, 1997

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