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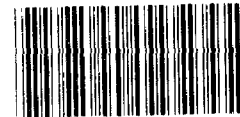
GAO

Report to the Chairman, Committee on
Appropriations, U.S. Senate

April 1988

DOD INFLATION

Budgeting and Monitoring Inflation Funding in the Department of Defense



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United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

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April 26, 1988

The Honorable John C. Stennis
Chairman, Committee on Appropriations
United States Senate

Dear Mr. Chairman:

In response to the Senate Committee on Appropriations' Report on the Department of Defense Appropriations Bill for Fiscal Year 1987, we evaluated the feasibility of budgeting and tracking inflation funding separately in the Department of Defense (DOD). This topic has been the focus of hearings held by your Committee and the Joint Economic Committee.

In the National Defense Authorization Act for Fiscal Year 1987 (10 U.S.C. 2216), the Congress established a requirement for DOD to provide the authorizing committees an overall status report on DOD inflation annually, starting in February 1988. The first report was issued January 28, 1988. Although this report appears to provide the needed information for congressional oversight, we believe the starting point should be amounts appropriated for inflation. Also, we believe an update of DOD's report should be submitted to the Committees on Appropriations prior to their budget markup. Such an update is within DOD's existing information system capabilities and should not create an excessive administrative burden.

As arranged with your Office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will send copies to the Chairmen, House Committee on Appropriations and House and Senate Committees on Armed Services; the Secretary of Defense; and the Director, Office of Management and Budget. We will also provide copies of this report to others upon request and to the Chairman, Subcommittee for National Security Economics, Joint Economic Committee.

Sincerely yours,

Frank C. Conahan
Assistant Comptroller General

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Executive Summary

Purpose

This report was prepared in response to the Senate Committee on Appropriations' Report on the Department of Defense Appropriations Bill for Fiscal Year 1987. The Committee requested GAO to study whether it is possible for the Department of Defense (DOD) to set out separate inflation estimates in each appropriation account and to track inflation spending.

The Committee also asked GAO to study

- whether it is feasible to restrict the use of inflation funds to pay only for inflation costs,
- whether it is feasible that there be an automatic lapsing of funds appropriated for inflation at the end of the fiscal year if they are not spent for inflation,
- what overall savings might accrue from adopting such changes, and
- whether it is feasible to provide inflation estimates for individual systems in the Selected Acquisition Reports (SARS).

Background

DOD includes amounts in its proposed budgets to cover anticipated increases in prices for most appropriation accounts. These amounts, however, are not separately shown in the proposed budgets nor are they separately appropriated. The amounts (except for pay and fuel accounts) are based on projections of the Gross National Product (GNP) implicit price deflator provided by the Office of Management and Budget. For estimates of price changes in fuel purchases, DOD uses estimates of the oil refiners' acquisition cost.

GAO estimates that since 1982 DOD received about \$55 billion more for anticipated inflation than was warranted by the inflation that subsequently occurred. This happened as the country transitioned from very high inflation (1978 through 1981) to declining inflation (1982 to 1986). According to DOD, most of the inflation dividends were cut by congressional action, spent on additional defense programs, or lapsed and returned to the Treasury.

Results in Brief

It is feasible for DOD to report to the Congress the amounts budgeted for inflation for each appropriation account by using information it already prepares.

It also is feasible for DOD to report periodically by appropriation account on the revised amounts needed for inflation derived from using more

current inflation indexes. In addition, it is feasible to provide inflation estimates in SARS; these reports currently contain inflation amounts, although improvements to these figures are needed.

GAO concluded that for oversight purposes the Congress needs to be able to determine what inflation funds it would have provided DOD if it had been able to see into the future more clearly. A number of ways exist to restrict the use of DOD's inflation funds to inflation. Each would require adding controls and would increase DOD's administrative burden. However, periodic reporting of inflation dividends and shortages to the Congress before either disposing of dividends or funding shortages could quell concerns over the disposition of excess inflation funds and provide the needed oversight information.

Principal Findings

Budgeting Separately for Inflation

For each budget request, DOD calculates an estimated inflation amount for most of its appropriations. In the past, these estimates were not separately identified in the President's annual budget to the Congress. However, DOD did provide this information for the fiscal year 1987 budget at the request of the Senate Committee on Appropriations. DOD can provide this information routinely. This information was provided as supplementary source data to the defense oversight committees for the fiscal year 1988 budget request. The data show, for each appropriation account, the amount provided the previous year and the amount for the current year requested for inflation. At a later time the same information updated could be used by the Congress to determine the changes resulting from more current information on inflation. Mandating that DOD's inflation information be provided in the President's budget would require amending 31 United States Code 1105 (a).

Monitoring Inflation

DOD can and does monitor the adequacy of its inflation funds through inflation indexes that are developed after its budget request is prepared. DOD periodically updates its calculations of the inflation amounts needed in each appropriation account. However, except for pay and fuel purchases, it uses defense purchases indexes rather than the GNP implicit price deflator. GAO believes that since the GNP implicit price deflator is used in preparing the original budget request, it should also be used to monitor and update inflation amounts received by DOD.

The National Defense Authorization Act of 1987 requires DOD to submit an annual report to the Committees on Armed Services, starting in February 1988, to facilitate congressional monitoring of DOD's inflation experience. The act requires DOD to disclose the disposition of any excess inflation funds.

The first report was issued on January 28, 1988. GAO's review of this report disclosed that it did not provide updated inflation information based on appropriated inflation amounts. For this report, DOD received informal guidance from congressional representatives to start with January 1987 inflation amounts since the Congress had made inflation adjustments to the fiscal year 1987 budget request that could not be completely identified. Also, this report only covered fiscal year 1987, as allowed for the first report. In the future, three years should be covered.

GAO concluded that this information along with current information on unobligated balances which the Congress regularly receives would provide the basic data the Congress needs to decide whether or not to adjust DOD funding in response to recent changes in inflation.

Restricting the Use of Inflation Funds

Some have advocated legislation that would restrict the use of funds appropriated for inflation. Under one option, a separate fund for DOD's inflation funds would be established. Under this option, funds would be placed in a special inflation fund and would not be available for other purposes. DOD officials believe that administering a separate inflation fund could be complicated. It would require establishing a mechanism to distribute inflation funds to the programs and to ensure that excess inflation funds were recouped.

Two other options would hold DOD accountable for excess inflation funds on an aggregate level. These options overcome the problems of setting up a system to distribute funds from a separate inflation fund. In one option, any excess inflation funds would lapse and be returned to the Treasury. In the other, congressional approval would be required for their reallocation. An additional option, which has been used to some extent recently, is for the Congress to adjust the next year's appropriations for any variances in inflation funding needs in the previous years.

Potential Savings

A system that monitors inflation and includes regular reports to the Congress will not in itself produce savings. However, such a system

would provide the Congress with information needed to help the Congress decide whether or not to adjust DOD's funding levels if more recent indexes show significant over or under budgeting for inflation.

Selected Acquisition Reports

GAO concluded it is feasible for inflation estimates to be reported for individual weapon systems in SARS. Indeed, SARS now include estimated inflation amounts over the life of an acquisition program, but these estimates are not being computed consistently.

Recommendation

GAO recommends that the Secretary of Defense ensure that inflation amounts included in SARS are computed and adjusted consistently by using the GNP deflator.

Matter for Congressional Consideration

The Congress may want to consider amending 31 United States Code 1105 (a) to require that the President's annual budget request show separately the amounts DOD estimates it will use for inflation for each appropriation account.

Agency Comments

DOD generally agreed with GAO's report but believes there is no need to amend the law. GAO agrees that if DOD provides inflation data that are acceptable to the Congress, the law does not have to be amended. However, amending the law would place such inflation data in a widely available document versus a document available to certain select committees and its submission would be certain.

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Abbreviations

CBO	Congressional Budget Office
DOD	Department of Defense
GAO	General Accounting Office
GNP	Gross National Product
O&M	operation and maintenance
OMB	Office of Management and Budget
SAR	Selected Acquisition Report

Introduction

The Department of Defense (DOD) budget requests include amounts for inflation that are based on projections of future inflation rates and the rate at which annual appropriations are estimated to be spent. These amounts are not shown separately in the budget request but are included as part of the total estimated cost of programs and activities.

As time passes, both newer estimates and actual inflation and spending (outlay) rates become known. This information can be used to evaluate the appropriateness of the amounts that were provided to DOD for inflation and to make any desired adjustments to DOD budgets. DOD has not been required to report in a consistent fashion on its inflationary gains or losses. It benefited from large inflation dividends between fiscal years 1982 and 1986 when actual inflation was considerably less than anticipated.

It is important to know what DOD includes for inflation in its budget request and what the Congress includes for inflation in its appropriation action. If inflation is less than the amount DOD and/or the Congress assumed, then DOD realizes greater real growth than the Congress intended. This is because DOD needs fewer funds than appropriated to cover actual inflation costs. The "surplus" inflation funds can be used to fund additional real program growth or can be rescinded by the Congress. If these funds are not used, they will lapse and be returned to the Treasury. Conversely, if inflation is more than anticipated, DOD will realize a lower real growth than the Congress intended. Thus, it is important to assess how DOD has fared compared to the inflation and real growth assumptions embodied in both the DOD budget requests and congressional appropriations.

The greatest change takes place in the weapon systems appropriations, which are fully funded and which are obligated and outlayed over 3 to 7 years. For its largest weapon systems, DOD presents total estimated costs in its Selected Acquisition Reports (SARS). The SARS provide information on major weapon systems and compare the progress of selected acquisitions with initial technical, schedule, and cost performance estimates. Each SAR includes an amount for estimated inflation over the life of an acquisition program.

In the late 1970s, a time of rapidly growing inflation, DOD lost buying power. During that time, DOD was actively seeking funds to replace those lost to underestimated inflation. Between fiscal years 1985 and 1987, there was considerable dispute over the exact size of DOD's budgetary gains, but everyone who participated in the dispute agreed that DOD had

benefited from inflation dividends as inflation fell faster than was predicted. Within the past year, DOD has seen only slight inflation dividends as the changes in inflation rates have narrowed and the Congress has reduced DOD's funding levels in response to reports on inflation dividends. When DOD's buying power was being eroded by underfunded inflation, the Congress was faced with competing priorities and frequently ignored DOD's requests for funds to stem the effect of the rapidly growing inflation. When DOD's buying power was growing from inflation dividends due to overestimates of inflation, DOD was not anxious to voluntarily reduce its budgets to reflect these inflation dividends. In today's environment when it is unclear how DOD will be affected by future inflation, changes in the inflation monitoring and reporting system are more likely to be accepted and implemented by both the legislative and executive branches.

In this report, we assess alternatives for measuring DOD's budgetary gains and losses when inflation is less or more than the amount estimated and appropriated. We apply three criteria. We believe that any methodology that is adopted should

- be consistent, providing comparable data over time;
- be relatively simple, easy to implement, and pose little additional administrative burden on DOD; and
- provide the Congress with reliable data that are useful for congressional budgetary decisions and oversight on estimated versus actual inflation costs in DOD programs.

How DOD Formulates Its Requirements for Inflation Funds

DOD's method of estimating inflation costs contains the following three elements:

- Estimates of future inflation rates provided by the Office of Management and Budget (OMB) in the form of the Gross National Product (GNP) implicit price deflator for all amounts except pay and fuel. For pay, the inflation estimate is based on proposed changes in the rates of civilian and military pay. For fuel, it is based on a projection provided by OMB of the refiners' acquisition cost.
- Estimates of the spendout (outlay) rates for each DOD appropriation account, that is, the rate at which budget authority is turned into checks written to liquidate obligations.
- Compound (also called composite) inflation indexes, based on the above rates, for each fiscal year over which appropriations are expected to spend out, or outlay.

The GNP price deflator is a broad measure of prices of goods and services produced in the United States. Pricing adjustments for petroleum products are based on a special forecast of fuel prices—refiners' acquisition cost—that also is provided by OMB.

Thus, DOD's inflationary gains or losses can be affected by errors in estimating actual inflation and errors in estimating the rate at which budget authority is turned into outlays. The effects of outlay rates are discussed in appendix II.

DOD's Inflation Funding

As part of the budget preparation process, the DOD Comptroller calculates inflation estimates by appropriation account. DOD's fiscal year 1988 budget request included 82 appropriation accounts, of which 69 included amounts for inflation. For fiscal year 1988, a number of accounts such as the Court of Military Appeals, special foreign currency fund, and homeowner's assistance did not include inflation amounts.

DOD's budget proposal for fiscal year 1988 included \$12.7 billion for anticipated inflation, using an overall inflation rate of 3.5 percent for fiscal year 1988. The inflation rate used for the various appropriation accounts may vary from this percentage because of longer outlay periods and/or the presence of fuel and pay funds, which use different inflation estimates. For example, operation and maintenance (O&M) accounts generally have a 1-year obligation period with outlays over a 3-year period, while procurement accounts have a 3-year obligation period with outlays over a 5-year period. (For Navy ships, the obligation period is 5 years and the usual outlay period is 7 years.) Funds in the O&M account expire if unobligated after the first year, whereas funds in the procurement accounts do not expire until the third year and the fifth year for ships.

Unidentified Uses of Excess Inflation Funds

Since fiscal year 1982, inflation rates have been lower than anticipated at the time of the budget estimates. As a result, more money (obligation authority) was made available than needed to cover inflation and produced the so-called inflation dividend. Estimates of the inflation dividend by various groups, including the Congressional Budget Office (CBO), DOD, the Congressional Military Reform Caucus and us, ranged from \$23 billion to \$55 billion for fiscal years 1982 through 1987, depending on the time period covered and the estimating methodology used as shown in table 1.1.

Table 1.1: Studies of the Inflation Dividend

Study	Date issued	Size of inflation dividend	Fiscal years covered	Cumulation used ^a	Index for actual major weapons inflation
Aspin	May 85	\$18-50 billion	1982-85	Yes	GNP deflator
Military Reform Caucus	June 85	\$53.7 billion	1982-85	Yes	Producer price manufactured goods
GAO ^b	Mar. 86	\$44.3 billion	1982-86	No	GNP deflator
CBO	Jan. 86	\$23.2 billion	1983-85	No	BEA major commodities index
DOD	July 86	\$35.9 billion	1982-86	Yes	BEA major commodities index ^c

^aCumulation means compounding the effect of inflation dividends.

^bIn April 1987, we cited a \$55.8 billion figure for 1982-87.

^cDOD used the index values before their recent revision by the Commerce Department's Bureau of Economic Analysis (BEA). Use of recent BEA revisions of these indexes would increase the DOD estimate of the inflation dividend.

Source: Aspin, Les, Coverage, Cumulation, and Compensation or Wherefore Art Thou Inflation Dividend?, House Committee on Armed Services, September 3, 1986, p. 2.

Some of this inflation dividend was reduced by congressional actions designated as inflation reductions. The remaining funds, according to testimony by the DOD Comptroller, were reprogrammed or lapsed and returned to the Department of the Treasury. Most DOD appropriations must be obligated within 3 years. Therefore, most inflation dividends for fiscal years 1982 through 1985 are no longer available for obligation by DOD. Because inflation funds have not been fully monitored, exactly what happened to the total excess inflation funding cannot be determined. The National Defense Authorization Act for Fiscal Year 1987 (10 U.S.C. 2216) instituted new inflation reporting requirements to improve oversight of inflation funding.

Objectives, Scope, and Methodology

Our review was conducted in response to the Senate Committee on Appropriations' Report on the Department of Defense Appropriations Bill for Fiscal Year 1987. The report requested us to evaluate

- whether it is feasible for DOD to budget separately for inflation, to set out separate inflation estimates in each appropriation account, to provide inflation estimates for individual systems in the SARS, to track inflation spending, and to identify advantages this might offer in monitoring budgetary execution;
- whether it is feasible to restrict the use of inflation funds to inflation and what the possible benefits and hazards of such an action might be;

- whether it is feasible to require that funds appropriated for inflation, but not spent, lapse at the end of the fiscal year, and how this would affect the full-funding principle for defense procurement; and
- what overall savings might accrue from adopting such changes.

Of particular interest to the Committee were steps that could be taken to make inflation funds more visible to show more clearly the funding provided to DOD for inflation and the disposition of these funds.

To determine how DOD currently budgets, monitors, and reports on inflation and to assess various alternatives for doing so, we interviewed the DOD Comptroller and members of his staff. We also interviewed officials in the Comptroller offices for the Army, Navy, and Air Force. These officials provided information and documentation on the feasibility of budgeting separately for inflation and monitoring inflation spending at various levels of accountability and detail. Using DOD's budget and accounting documents and OMB's inflation data, we analyzed DOD's method of budgeting and adjusting inflation levels within appropriation accounts.

To obtain additional information on potential systems for accounting for inflation, we conducted interviews and reviewed accounting documents at the (1) Air Force Accounting and Finance Center in Denver, Colorado, (2) Army Finance and Accounting Center in Indianapolis, Indiana, and (3) Office of the Navy Comptroller, the Pentagon.

To evaluate the feasibility of providing inflation estimates for individual systems in the SARs, we interviewed officials and reviewed SAR inflation adjustment worksheets at the Naval Air Systems Command, Arlington, Virginia; Army Tank Automotive Command, Warren, Michigan; and the Air Force Tactical Systems Command, Dayton, Ohio. We reviewed not only our previous reports and testimony but also those prepared by the Bureau of Economic Analysis, CBO, and DOD.

We conducted our work in accordance with generally accepted government auditing standards.

Separately Identifying Inflation Amounts in DOD's Budget Requests Is Feasible and Desirable

It is feasible for DOD to report to the Congress the amounts budgeted for inflation for each appropriation account by using information it prepares for internal use. Currently, DOD is not required by law to identify separately the amount requested for inflation in the President's budget to the Congress.

DOD Prepares Information on Inflation Funds Budgeted for Each Appropriation Account

As part of the budget preparation process, the DOD Comptroller calculates estimates of the funds needed for inflation in each appropriation account. At the request of the Senate Committee on Appropriations, an exhibit showing the inflation funds contained in each appropriation account was included in DOD's fiscal year 1987 budget submission to the Congress. The exhibit indicated, by appropriation account, the dollar amounts that were added for inflation to the fiscal year 1986 budget request in addition to those increases applied for program (real) growth. DOD officials said this information can be reported to the Congress on a recurring basis and was provided as supplementary source data to the defense oversight committees for the fiscal year 1988 budget. Table 2.1 shows a page from this submission.

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Separately Identifying Inflation Amounts in
DOD's Budget Requests Is Feasible
and Desirable

Table 2.1: Example of DOD Format for DOD Supplementary Source Data on Inflation Estimates for Fiscal Year 1988

Dollars in millions

Account	FY87 Budget Authority	Inflation	Growth	FY88 Budget Authority
Aircraft Procurement, Army	2,755	89	-370	2,474
Missile Procurement, Army	2,194	71	193	2,458
Weapons and Tracked Combat Vehicles, Army	3,730	121	-698	3,153
Procurement of Ammunition, Army	2,127	69	-2	2,194
Other Procurement, Army	5,064	164	643	5,871
Aircraft Procurement, Navy	9,977	323	-375	9,925
Weapons Procurement, Navy	5,266	171	1,065	6,502
Shipbuilding and Conversion, Navy	10,211	331	523	11,065
Other Procurement, Navy	5,958	193	-1,167	4,984
Procurement, Marine Corps	1,465	47	-110	1,402
Aircraft Procurement, Air Force	17,515	568	-3,892	14,191
Missile Procurement, Air Force	7,449	241	2,083	9,773
Other Procurement, Air Force	9,499	308	-1,237	8,570
Procurement, Defense Agencies	1,498	49	-255	1,292
National Guard and Reserve Equipment	557	18	-575	0
Defense Production Act Purchases	13	0	18	31
NATO Cooperative Defense Programs	0	0	0	0
Coastal Defense Augmentation	200	6	-206	0
Chemical Agents and Munitions Destruction, Defense	369	12	-294	87
Total Procurement	85,847	2,781	-4,656	83,972

In a January 1986 report,¹ CBO suggested a way to display inflation and real growth by appropriation account in the DOD budget request. This format, which is shown in table 2.2, shows the base figure used to calculate inflation amounts, amounts requested for inflation, amounts requested for real growth, and the total budget request.

¹Congressional Budget Office, Budgeting for Defense Inflation, January 1986.

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Table 2.2: CBO Sample Format for DOD Inflation Funding Requests

(In millions of 1985 and 1986 dollars)

Account	1985 Appropriations (In 1985 dollars)	President's Budget Request for Fiscal Year 1986			Total Funding Requested (In 1986 dollars)	Increase (Decrease) from 1985 Appropriations
		Real increase (Decrease) (In 1985 dollars)	Inflation Funding			
Aircraft Procurement, Army	3,901	(204)	196	3,893	(8)	
Missile Procurement, Army	3,158	59	170	3,387	229	
Weapons and Tracked Combat Vehicles, Army	4,548	903	288	5,739	1,191	
Procurement of Ammunition, Army	2,646	(115)	104	2,635	(11)	
Other Procurement, Army	5,122	372	219	5,713	591	
Aircraft Procurement, Navy	10,898	553	612	12,063	1,165	
Weapons Procurement, Navy	4,354	990	284	5,628	1,274	
Shipbuilding and Conversion, Navy	11,592	(707)	527	11,412	(180)	
Other Procurement, Navy	5,342	1,004	255	6,601	1,259	
Procurement, Marine Corps	1,837	(194)	84	1,727	(110)	
Aircraft Procurement, Air Force	26,078	(1,233)	1,321	26,166	88	
Missile Procurement, Air Force	6,888	3,419	556	10,863	3,975	
Other Procurement, Air Force	8,848	308	382	9,538	690	
Procurement, Defense Agencies	1,166	171	55	1,392	226	
Total	96,378	5,325^a	5,054^a	106,757	10,379	

^aFigures as shown in the CBO report, although these columns do not add.

Because the Congress provides funds to DOD on the basis of appropriation accounts, such as the ones in table 2.2, we believe this format is a practical and effective way for DOD to present its inflation funding needs and proposals for real growth. To the extent that DOD has not adjusted its base year figures (fiscal year 1985 in CBO's sample format) to reflect the differences between estimated and actual inflation, the base figure is in error. To correct this error would require a decision on how far back to go to make the necessary corrections. We believe this is unnecessary for purposes of beginning a new system to budget for and monitor inflation. As a related matter, however, the Congress may be interested in the amount of real program growth represented by a current appropriation request compared with a prior year's appropriations. In that case, the Congress may want to require adjustment of the prior year's appropriations base for the revisions to the actual and forecasted inflation

rates that are embodied in the prior year's appropriations. (See app. I for a discussion of the effect of the base on inflation budgeting.)

The Congress usually does not appropriate the amount requested. Also, sometimes, after the budget submission and before appropriation action, more current inflation forecasts are available and are used to adjust the amount appropriated for inflation. Thus, when more current or different inflation forecasts are used for appropriation action, the Congress needs to identify the amount of funds appropriated for inflation so that inflation funding can be monitored and the proper adjustments made in the next year.

Conclusions

Congressional oversight of DOD's inflation funding can be enhanced by DOD's submitting estimated inflation amounts by appropriation account level in the President's budget. Also, if more current inflation forecasts are available before funding decisions are made, the Congress could adjust the amounts in response to the updated information. This information can be provided as supplemental material to the budget request or it can be required as part of the President's budget if 31 United States Code 1105 (a) is amended.

Matter for Congressional Consideration

The Congress may want to consider amending 31 United States Code 1105 (a) to require that the President's annual budget request show inflation amounts separately for each appropriation account for the defense function.

Agency Comments

DOD agreed that it is feasible to provide the Congress with inflation information for each appropriation account. DOD noted that for several years it included information on the amount added to each appropriation account for inflation and program as part of supplemental information in support of the budget request. DOD stated it can continue to provide this information and does not believe it is necessary to amend 31 United States Code 1105 (a). We agree that so long as DOD provides inflation data that are acceptable to the Congress, the law does not have to be amended. The advantages of amending 31 United States Code 1105 (a) to require inflation data as part of the budget submission are (1) this is a widely available document versus a document available only to certain select committees and (2) its submission would be certain.

Monitoring Inflation Funds Is Feasible and Desirable

For oversight purposes the Congress needs to know how much DOD is gaining and losing from misestimates of inflation. This information can be used as input to funding decisions that are being considered.

There was an extensive debate from 1985 through 1987 about the amount and disposition of excess inflation funds in DOD's appropriations. Estimates ranged from \$23 billion to \$55 billion. Since inflation funds are not monitored separately from program funds, there was no resolution on their disposition. Although we could not say precisely how these funds were disposed of, we reported that some were used to purchase more program, some were reprogrammed and used for other approved programs, some were reclaimed by the Congress, and some lapsed and were returned to the Treasury.

Information can be developed that will help answer future questions on the size of DOD's gains or losses due to misestimates of inflation. Using the GNP implicit price deflator as an estimate of actual DOD inflation, DOD can monitor inflation amounts that were appropriated for inflation and adjust them to reflect actual or more current inflation rates. Before estimating the amount of inflation funds needed in the next year's budget request, DOD should adjust earlier estimates of inflation based on enacted appropriations.

Also, in its reports on inflation, DOD should monitor the accuracy of inflation estimates using the same indexes it uses in budgeting for inflation. These indexes are the GNP implicit price deflator for nonpay and nonfuel accounts and the refiners' acquisition cost for fuel accounts. Projections of both are provided by OMB. The Congress has identified the appropriation account level as the appropriate level of reporting for the Committees on Armed Services' inflation status report. Thus, there seems to be some agreement that this is the best level for monitoring inflation amounts.

Report on Inflation Budgeting

The National Defense Authorization Act for Fiscal Year 1987 (10 U.S.C. 2215 and 2216) requires the Secretary of Defense to provide the Committees on Armed Services detailed information on unobligated balances in February, April, and August (section 2215) and a report on DOD's overall status of inflation funding each February, starting in 1988 (section 2216).

The first section 2216 report was due February 1988 and was issued on January 28, 1988. Specifically, the Secretary of Defense is required to

include for each appropriation account a comparison of the amounts appropriated to DOD to offset anticipated inflation and estimated amounts (taking into account actual and more current estimates of inflation as of the date the report is submitted) necessary to offset anticipated inflation.

The Secretary also is required to include in this report, for the funds appropriated for the fiscal year during which the report is submitted and for each of the two prior fiscal years for each appropriation account, the following:

- A discussion of the reasons for any variance between the amounts appropriated to offset anticipated inflation and the amounts estimated, as of the date of the report, as necessary to carry out the programs for which the appropriations were made.
- An identification of the sources of funds used or proposed to be used to offset any deficiency in the amount appropriated for anticipated inflation.
- A description of the actual or planned disposition of any excess in the amount appropriated for anticipated inflation compared to actual inflation and more recent estimates.

DOD submitted the first section 2216 overall status report on inflation to the House and Senate Armed Services Committees on January 28, 1988. The report only gave detailed inflation information on fiscal year 1987. DOD noted that given the late enactment of the fiscal year 1988 appropriations and significant reductions agreed to in the budget summit, there are currently no excess fiscal year 1988 funds to be reported. The law requires the section 2216 report to cover 2 prior years in addition to the current year. Normally, fiscal year 1986 would have been included, but the law states that the first report should contain information for fiscal year 1987 only. In the future, 3 fiscal years should be covered. Table 3.1 shows a page from the section 2216 report for fiscal year 1987, the only year for which this information was provided.

**Chapter 3
Monitoring Inflation Funds Is Feasible
and Desirable**

Table 3.1: Example of Page in January 28, 1988, DOD Inflation Report

(Budget authority in millions)

**February 1, 1988 Department of Defense Reporting Requirement USC, Title 10,
Chapter 131, Section 2216**

Account	FY87 Budget Authority	Inflation— January 87	Inflation— January 88	Inflation Variance
Aircraft Procurement, Army	2,781	93	98	5
Missile Procurement, Army	2,184	73	77	4
Weapons and Tracked Combat Vehicles, Army	3,805	127	134	7
Procurement of Ammunition, Army	2,087	70	73	3
Other Procurement, Army	5,027	168	177	9
Aircraft Procurement, Navy	9,947	332	350	18
Weapons Procurement, Navy	5,236	175	184	9
Shipbuilding and Conversion, Navy	10,211	341	360	19
Other Procurement, Navy	6,036	202	213	11
Procurement, Marine Corps	1,462	49	51	2
Aircraft Procurement, Air Force	17,256	576	608	32
Missile Procurement, Air Force	7,432	248	262	14
Other Procurement, Air Force	9,289	310	327	17
Procurement, Defense Agencies	1,597	53	56	3
National Guard & Reserve Equipment	557	19	20	1
Defense Production Act Purchases	13	0	0	0
Coastal Defense Augmentation	200	7	7	0
Chemical Agents and Munitions Destruction, Defense	119	4	4	0
Total Procurement	85,239	2,847	3,001	154
Inflation Rates		3.339%	3.521%	

Our review of the January 28, 1988, section 2216 report showed that it started with January 1987 inflation amounts rather than the amount appropriated for inflation. In a period where the rate of inflation remains fairly constant this approach will miss very little inflation dividend or shortage. A top DOD official informed us that DOD received informal guidance from congressional representatives to start with January

1987 inflation amounts since the Congress had made inflation adjustments to the fiscal year budget 1987 request that could not be completely identified. Therefore, the January 1987 rates were used in the absence of knowing the amount appropriated for inflation.

Ideally, as a matter of policy and practice, however, the amount appropriated for inflation should be reported. Assume, for example, that an inflation rate of 3.5 percent was used when appropriating funds but the inflation rate declined to 3.3 percent in January 1987. Depending on which direction inflation is moving, comparing the January 1987 inflation estimate to the January 1988 inflation estimate would either overstate or understate the difference between what is currently needed for inflation and the amounts budgeted for inflation in the enacted appropriations. Eliminating this potential for error requires starting with the amount appropriated for inflation in a chart such as the one in table 3.2.

Table 3.2: Sample Summary Report on the Status of Inflation Funding Since Prior Year Budget Enactment

(Dollars in millions)

Appropriation account	Inflation funding appropriated in FY 19XX	Changes to inflation funding needs in FY 19XX based on updated inflation rates	Congressional changes to inflation amounts for FY 19XX since appropriation	Remaining excess/shortage inflation funds for FY 19XX
Aircraft Procurement, Army				
Missile Procurement, Army				
Weapons and Tracked Combat Vehicles, Army				
Procurement of Ammunition, Army				
Other Procurement, Army				
Aircraft Procurement, Navy				

The section 2215 report, which DOD submitted with the section 2216 report, gives the amount of the unobligated balances remaining from past appropriations. Submitting these reports together should be helpful to the Congress, particularly if it is considering rescinding or transferring inflation dividends. The section 2215 report provides information on the funds available for such actions.

GNP Deflator Is the Best Available Index to Use to Measure Inflation for Nonpay, Nonfuel Accounts

In our September 1985 report,¹ we concluded that the GNP implicit price deflator is the most appropriate measure to use to calculate the difference between budgeted and actual (or more recent projections of) inflation for nonpay, nonfuel accounts. So that the Congress can determine what it would have appropriated if the information had been available, past assumptions used for appropriation purposes should be updated with new inflation forecasts. The GNP deflator is the measure the administration uses to estimate inflation throughout the economy and to provide guidance for all federal budgeting. It is the most well-known, broad-based measure of prices. Our 1985 analysis revealed no better general measure of inflation for the purpose of defense budgeting.

When the prior year's defense budget is repriced, the updated historical values of the GNP deflator should be applied to the total originally planned outlays for prior years, as adjusted for any changes made by appropriation action. This approach would provide a uniform methodology for adjusting inflation estimates that is consistent with initial budget assumptions and is relatively easy to understand.

DOD budgets for anticipated inflation based on total planned defense outlays and on a projection of the GNP deflator provided by OMB. However, when calculating its prior year adjustments, which are based on actual inflation or more current estimates of inflation, DOD uses a defense purchases index,² not the updated GNP deflator.

The defense purchases indexes are based on prices of items delivered in a given year. However, DOD does not always outlay all its funds for an item in a year. For such items as aircraft or ships, progress payments are made while the items are being produced. Therefore, there is a lag in the effect of inflation as measured by the defense purchases index.

Prior to fiscal year 1987, DOD used a major commodity inflation rate of 1.3 times the GNP deflator. DOD officials contended that major weapons systems prices had grown faster than the rate of inflation as measured by the GNP deflator and that therefore budgeting for defense inflation by using the GNP deflator underestimated real defense funding requirements. Our 1985 report details our reasons for not accepting these assertions. In brief, we noted that the GNP deflator—measuring the average

¹Potential for Excess Funds in DOD (GAO/NSIAD-85-145, Sept. 3, 1985).

²The Bureau of Economic Analysis creates defense price indexes for a variety of types of purchases such as aircraft, missiles, ships, electronic equipment, and ammunition. DOD uses these indexes in its monitoring of inflation experience.

of prices across the nation—is a composite of separate measures of prices in many sectors of the economy, including defense. While the prices in specific sectors, such as defense, may grow faster or slower than the GNP deflator in any given year, these deviations tend to cancel out over longer time periods. Our analysis in the 1985 report found that a measure of defense prices did grow at roughly the same rate as the GNP deflator over a longer period, and we concluded that the GNP deflator is a reasonable measure to use in budgeting and monitoring inflation in defense.

Some interest has been expressed in the development of a defense outlays deflator. We discussed this issue with officials of the Bureau of Economic Analysis who stated that an outlays deflator could be developed if the need were sufficient. We have not evaluated this alternative measure of defense prices. However, our 1985 report concluded that the weight of argument favored the use of the GNP deflator in defense budgeting over any measure of prices in the defense sector alone. If, however, a defense outlays deflator were developed and deemed appropriate for use in monitoring inflation for defense purchases, then consistency would require that it be used for budgeting for inflation as well.

The Appropriation Level Is Appropriate for Monitoring Inflation Amounts

Monitoring inflation below the appropriation account level would be difficult and inconsistent with the way inflation estimates are made in the budget process. The GNP deflator, an aggregate inflation indicator, is used in developing and estimating amounts needed to fund future inflation. The GNP deflator tends to be less accurate when applied on a less aggregate basis.

Below the appropriation account the level of detail grows rapidly and, in our opinion, it is not clear that inflation data at that level would be helpful or useful. Monitoring inflation amounts at the first level below the appropriation account level would require, to the extent they are available, choosing and following separate indexes for each budget activity. For example, the Navy's aircraft procurement appropriation account has seven budget activities (combat aircraft, airlift aircraft, trainer aircraft, other aircraft, modification of aircraft, aircraft spares and repair parts, and aircraft support equipment and facilities). The budget activity for combat aircraft includes 12 types of aircraft and the budget activity for modifications includes 35 categories of modifications.

Office of the Secretary of Defense, Army, Navy, and Air Force officials whom we interviewed argued against displaying budgeted inflation amounts below the appropriation account level because of the administrative difficulties involved. In addition to these difficulties, such a detailed presentation might convey a false sense of precision.

Conclusions

Identification of inflation funds below the appropriation account level does not seem desirable or necessary. Inflation funds can be monitored and updated by appropriation account and for DOD as a whole by applying updated estimates of the same inflation indexes used to develop the budget. This entails using the updated refiners' acquisition cost for petroleum products and the GNP implicit price deflator for nonfuel purchases as the inflation measures and applying them to enacted appropriation amounts. This update should be conducted for the current year and 2 prior years, as required by law, and be compared to appropriated inflation amounts. This information, together with current information on unobligated balances, will provide the Congress the basic information it needs to assess how DOD has fared compared to inflation experience.

Agency Comments

DOD agreed with this chapter, stating that a system to monitor and periodically report on inflation is the best approach and was addressed by the National Defense Authorization Act for Fiscal Year 1987.

Other Issues Pertaining to Inflation

The Senate Committee on Appropriations asked us to assess whether it is feasible to (1) restrict the use of inflation funds to inflation and (2) require that funds appropriated for inflation lapse at the end of the fiscal year if not spent for inflation.

During this study we explored alternative approaches to restricting the use of inflation funds with numerous DOD and legislative officials. There is considerable concern about the additional administrative details and the lack of flexibility that would result from any of the approaches we explored. Most of the officials believe that a more responsive reporting system on DOD's inflation funds is needed. Many also believe that the Congress should participate in deciding on the disposition of inflation dividends or the funding of inflation shortages. At a minimum, most think that the simpler approach of better reporting and shared DOD and congressional decisionmaking on the handling of shortages or overages should be tried before a more extreme approach is adopted.

Inflation funds could be restricted to inflation with a provision that they could not be used for other purposes. If this provision were put into law, any inflation funds not used for that purpose would lapse automatically and be returned to the Treasury.

Additional options for dealing with excess inflation funds include (1) requiring congressional approval for the reallocation of excess inflation funds and (2) adjusting the next year's appropriation for any variances in inflation funding needs.

Restricting Inflation Funds to Inflation Through Use of a Separate Fund

One approach that has received considerable attention would restrict the use of DOD's inflation funds to inflation by establishing a special inflation fund and appropriating funds for inflation. The theory behind a fund of this type is that periods of overestimation would likely be matched by periods of underestimation. The fund would at some times carry more surpluses than at other times, but over time would balance out.

A way to distribute inflation funds to satisfy claims made against the fund would need to be established. This would require a more detailed reporting system within DOD and among DOD's contractors to support such claims.

Restricting Inflation Funds to Inflation With Lapsing of Any Excess Inflation Funds

Another approach would be to restrict inflation funds to a level measured by an inflation index to prevent excess inflation funds from being used for other purposes. The Congress could earmark a designated amount of funds only for inflation without a separate inflation fund being established. Excess inflation funds either would lapse and be returned to the Treasury or could be rescinded, depending upon the specifics of the legislation.

Each year DOD would be accountable on an aggregate basis for funds appropriated in excess of actual inflation as measured by the GNP deflator. We believe that DOD needs to be given the flexibility to react to changes in inflation on individual programs and to be held accountable at no lower than the appropriation account level.

Overages or shortages in inflation funds would be estimated using the latest estimates of past inflation and more current forecasts of future inflation (as measured by the GNP deflator). The actual value of the deflator for a given year would not be known until after the year is over. Consequently, restricting inflation funds in this manner would require enough flexibility in managing inflation funds to allow for the time lag until information on actual inflation became available.

A way to manage the use of the funds would be needed. Some officials think the distribution could be handled by an official in each service's budget office. This official would ensure that the unobligated balances for each appropriation were sufficiently large to provide the funds indicated by the most recent inflation forecasts.

However, this would be particularly difficult for 1-year appropriations, such as O&M. Current DOD regulations require that 80 percent of the annual O&M appropriation be obligated by the end of each July. Since OMB currently only updates its forecast of inflation rates in December and August, DOD officials would have difficulty determining how much O&M funds to reserve for changes in the inflation rate.

Also, the actual GNP deflator for all the years over which a given appropriation year would outlay funds would sometimes not be known for a number of years. Thus, flexibility would be required to deal with the lag between the time a particular appropriation account expired and the time DOD received final reports on the funds outlayed for inflation in all the years involved. It might be practical and acceptable for DOD to use the most recent forecast known shortly before an appropriation account

expires to measure the final amount of inflation funds required. Estimates for inflation at that time would usually be closer to the final forecasts.

Congressional Decision on the Disposition of Inflation Funds

An option to requiring that excess inflation funds lapse is to have DOD report differences between budgeted and actual or more current inflation estimates to the Congress. It could be done if the Congress earmarked funds for inflation. If an inflation dividend exists, based on actual values or more current forecasts of the GNP deflator, DOD could report the amount of this dividend. Since the Congress could decide to dispose of this dividend by reducing DOD's funding, DOD would need to be sure that funds are available and are not committed to a particular program. DOD would probably suggest where it thinks the funds could best be used, but their final disposition would likely reflect a combination of DOD and congressional priorities.

In its annual report on the status of inflation funds to the Committees on Armed Services, DOD currently is required to disclose the disposition or proposed disposition of any excess funds. To allow the Congress to take action on excess inflation funds would require DOD to report all proposed distributions to the Congress before they occur.

An additional option, which has been used to some extent, is for the Congress to adjust the appropriation currently being considered for past inflation variances. For example, the amount to be appropriated could be reduced or increased for inflation differences in past years.

Conclusions

Several ways exist for the Congress to restrict or control the use of inflation funds. Each approach we identified raises questions about additional administrative detail and loss of flexibility. In our opinion, the most promising approach is for the Congress to obtain regular and clear reporting on inflation funds, like that described in chapter 3, and to decide, in consultation with DOD, the disposition of any inflation dividends. We believe that this collaborative approach should be tried before a more burdensome and restrictive approach is adopted.

Agency Comments

DOD agreed with our discussion of these options and reiterated in its comments that the detailed accounting and reporting of the contractual

data necessary to make a separate fund for inflation a meaningful management tool would add greatly to an already burdened reporting system for defense and the private sector. DOD, thus, is opposed to the establishment of a separate fund for inflation.

Feasibility of Providing Separate Inflation Estimates in the SARs

DOD created the SARs in 1967 to provide summary information on the cost, quantity, schedule, and performance of each of its largest major weapon systems (as measured by specified dollar thresholds). The SARs now cover about 100 weapon systems whose estimated development and procurement costs total over \$800 billion. According to DOD Instruction 7000.3, the SARs are to be prepared each December,¹ and the costs reported in the December SARs must agree with the President's budget submitted the following January.

Since the weapon systems reported in the SARs are among the most visible items in the DOD budget and are very costly, they receive much congressional oversight. These systems are normally fully funded by appropriations that can be obligated and outlayed over many years. Because these systems are fully funded, large portions of DOD's inflation funds are contained in the funds appropriated for them.

Inconsistencies in SAR data are a continuing problem in SAR reporting, including that for inflation. We reviewed the calculation of inflation adjustments for three SAR systems—the Army's M-1 battle tank, the Navy's F/A-18 fighter plane, and the Air Force's F-15 fighter plane—to obtain an indication of the SAR reporting practices. While they do not represent a statistically valid sample, these systems are well established programs and should have mature reporting systems. We found that reporting of prior years' inflation for these systems in the SARs varies in both the index used and the number of prior years for which adjustments are reported.

Major SAR Limitations

In February 1986 DOD reported to the Congress on SARs in a report entitled Recommendations for Improving the Acquisition Reporting Process. The report states that since their creation, the SARs have been altered many times to meet the evolving informational needs of a wide spectrum of congressional and DOD officials. In almost all cases, these changes involved adding information to the SARs. The result, according to this report, is that the SARs now contain a variety of information designed to meet the oversight and information needs of many individual interests. Consequently, the report concludes the SARs generally satisfy neither members of Congress nor top DOD managers and do not contain "decision quality" data.

¹Quarterly reports are required if cost growth for a specific system exceeds specified ceilings.

We reported² that the SAR data have major limitations. Some of the limitations are

- reliance on contract and other information that does not necessarily tie to DOD's accounting systems and can be reconciled to the budget only in December;
- information on the same weapon systems being reported differently from year to year, with changes not always being clearly explained;
- the same type of information (e.g., inflation costs) not being reported comparably for all weapon systems included in the SARs; and
- information in the SARs not always being consistent with that in other budget documents provided to the Congress.

Current SAR Inflation Reporting Practices Vary

The SARs contain amounts estimated for inflation for the life of each acquisition program which differ from budget inflation requests. The SARs show changes in estimated inflation costs, by appropriation account,³ in the "current economic change" line of the cost variance analysis (section 13c). This line shows total inflation cost increases or decreases over the life of a program as compared to the initial, baseline estimate. It does not show inflation variances by fiscal year. A DOD official told us that the SARs are inconsistently prepared, contain errors, and have other quality control problems, including the inflation calculations.

We reviewed the calculation of the current economic change line in the December 31, 1986, SARs for the three selected programs. Each of these SARs had reported inflation for the budget year and for future years based on the GNP deflator, and this calculation is apparently comparable among all SAR systems. However, we found considerable differences in the way adjustments were made to prior years' inflation estimates. The two basic differences in these inflation adjustments were

- the index used for adjusting inflation in prior years was either an industry-specific index or the GNP deflator and
- the number of years for which prior year adjustments were reported varied.

²Managing the Cost of Government: Building an Effective Financial Management Structure (GAO/AFMD-85-35, February 1985) and Procurement: Selected Acquisition Report: Suggested Approaches for Improvement (GAO/NSIAD-86-118, July 1986).

³The SARs generally show inflation costs separately for three appropriation accounts: procurement; research, development, test and evaluation; and military construction.

For example, the program office for the Navy's F/A-18 fighter used program-specific inflation indexes to calculate prior years' inflation adjustments, while the Air Force's F-15 program office used the GNP deflator for all SAR inflation adjustments. As approved by DOD, the M-1 program office used the Bureau of Economic Analysis DOD Combat Vehicle deflators for fiscal years prior to 1983. In addition, in its December 31, 1986 SAR, the M-1 tank program office reported adjustments only for fiscal years 1986 forward, while the F-15 program office reported adjustments from 1980 forward. Both program offices calculated adjustments back to the base year of the programs, but the M-1 office ignored adjustments prior to 1986 because it said the funds had been obligated. Had the M-1 office reported adjustments for the years before 1986, it would have reported an additional inflation savings of \$141.7 million. Conversely, the F-15 program office would have reported \$89 million less in inflation savings if it, like the M-1, had reported adjustments only for fiscal years 1986 forward.

Thus, variances in the indexes used for prior years and the number of prior years for which adjustments are reported can make a considerable difference in the amount of inflation cost increases or decreases reported among SAR systems. How the current economic change line is calculated and reported for any particular SAR system cannot be determined without examining each calculation worksheet individually.

Conclusions

It is feasible to provide the Congress information on the inflation estimates for individual SARs, that would show the inflation amounts estimated by projections of the GNP implicit price deflator. However, figures reported in the economic change line of the SARs reviewed were not consistent in either the index used or the number of prior years for which adjustments were reported. To be of any use to DOD or the Congress, the calculation of inflation amounts should be consistent across SAR systems, as required by DOD.

Recommendation

We recommend that the Secretary of Defense ensure that inflation amounts included in SARs are computed and adjusted consistently by using the GNP deflator.

Agency Comments

DOD agreed that inflation computations should be done in accordance with established policy and stated it will ensure that its requirements are followed.

Our draft report proposed that the inflation amounts included in the SARs be broken out by fiscal year. DOD expressed concern with this proposal, noting that the SARs, in effect, display annual inflation amounts. We agree; however, the problem this suggestion was meant to address was inflation amounts which tie to the budget request and which are not shown. Displaying this information would require a change in the SAR format and since we are currently conducting a review which could result in additional suggestions for format changes, we have deleted this part of our recommendation.

The Proper Base for Inflation Budgeting

To incorporate into its budgeting the effect of inflation, DOD must project inflation rates and make assumptions about spendout rates¹ for each of the next 5 to 7 years. This appendix contains a hypothetical example that illustrates how a year's budget request, which had been built up from specific real program and inflation assumptions, would be affected by subsequent changes in inflation assumptions and how this, in turn, would affect the budget base used to calculate the next year's request. While the principles elaborated in this example are critical for proper inflation budgeting, the numbers in the example are hypothetical.

Suppose that in January 1986 DOD proposes a fiscal year 1987 program that is expected to cost \$200 billion in 1986 dollars. (Call this the "real 1987 program.") The actual outlays that would flow from this requested budget authority are as shown in the second column of table I.1; that is, the \$200 billion appropriation is assumed to be spent over the next 5 years, reflecting particularly the slow spendout rates in such accounts as procurement of ships and other major weapons systems.

Table I.1: Building a Current Dollar Budget Request From a Real Program

(Dollars in billions)

Fiscal year	1987 real program outlays	Inflation factor ^a	1987 program outlays
1987	\$40	1.040	\$41.6
1988	80	1.082	86.6
1989	40	1.125	45.0
1990	20	1.170	23.4
1991	20	1.217	24.3
Total	\$200		\$220.9

^aAssumes inflation of 4 percent a year for 1987-1991.

Finally, assume that, in drawing up this budget, DOD's inflation rate was 4 percent for each year.² The inflation factors anticipated for each year shown in the third column reflect the compounding of 4 percent annual inflation since 1986. For example, the inflation factor for 1988 is 1.082, the result of compounding 2 years of 4 percent inflation ($1.082 = 1.04 \times 1.04$).

¹A spendout rate is the fraction of budget authority for a given year (e.g., 1987) that is spent in any particular year (e.g., 1989).

²We recognize that DOD currently uses separate indexes for fuel, military and civilian pay, and all other defense purchases. The principles of proper inflation budgeting, as discussed in this appendix, apply regardless of which price index DOD uses.

The fourth column displays the actual appropriation for fiscal year 1987 needed to buy the real program (in 1986 dollars), which is the result of adjusting the constant dollar outlays in the second column for the prices anticipated for each future year. For example, multiplying the \$80 billion of 1988 real outlays by the 1988 inflation factor—1.082—yields the current dollar cost of those outlays—\$86.6 billion for 1988. Repeating this calculation for the other years in table I.1 and summing the resulting entries in the fourth column yield the current dollar value of the fiscal year 1987 program—\$220.9 billion. This is the amount we assume the Congress appropriated for fiscal year 1987.

Assume that a year later, in January 1987, inflation for fiscal year 1987 is estimated to be 3 percent, but the inflation estimate for subsequent years is unchanged (4 percent). What amount would have been appropriated by the Congress if this new information about inflation had been available in January 1986? The data necessary to answer that question are displayed in table I.2.

Table I.2: Repricing the 1987 Program Given New Inflation Estimates

(Dollars in billions)

Fiscal year	1987 real program outlays	New inflation factor ^a	Repriced 1987 program outlays
1987	\$40	1.030	\$41.2
1988	80	1.071	85.7
1989	40	1.114	44.6
1990	20	1.159	23.2
1991	20	1.205	24.1
Total	\$200		\$218.8

^aAssumes inflation of 3 percent in 1987 and 4 percent per year for 1988-1991.

The third column of the table shows the new inflation factors, which are lower than the old ones. However, the inflation factors for 1988 on are also reduced. This reflects the compounding effect of lower inflation in 1987 on the inflation factors for subsequent years.³ The last column of this table shows the result of adjusting the 1987 real program (the second column) for these new inflation assumptions. Summing the entries in the last column gives the value of the repriced 1987 program—\$218.8 billion. Thus, the amount we assumed the Congress appropriated—\$220.9 billion—exceeds the amount actually needed by over \$2 billion,

³For example, the new 1988 inflation factor is $(1.03) \times (1.04) = 1.071$, which is less than the original 1988 factor of 1.082.

given the new estimate of inflation. Furthermore, the proper base upon which the current dollar budget for the next fiscal year (i.e., 1988) should be built is \$218.8 billion. That number represents the most up-to-date and presumably the most accurate information about the funds actually required to purchase the real 1987 program. Use of the proper base in inflation budgeting prevents errors which were made in prior forecasts of inflation from being carried forward and compounded in succeeding budget requests and authorizations.

DOD does not, however, currently follow this procedure when preparing its budget submission. Instead, DOD develops its budget total for the next fiscal year based on the enacted appropriation for the prior fiscal year. Because, in our example, the projected outlays for 1987 assumed 4 percent inflation, not the 3 percent that actually transpired, DOD's budget for 1988 begins from a higher base than it should. As a result, DOD's 1988 budget request would exceed a budget embodying the same real growth and inflation assumptions for future years, but built on the proper base.

Our example assumes inflation is overestimated. If it were underestimated (as it was in the late 1970s), the proper base would exceed the prior year's appropriations. The principles enunciated in the text and in this appendix are, however, the same, regardless of whether inflation is over- or underestimated.

Agency Comments

DOD did not agree with this appendix, stating that the DOD budget request always reflects the most current economic assumptions of the administration. DOD stated that the annualized effects of lower inflation rates than projected in prior years are recognized and adjusted. We agree that where DOD has revised its inflation estimates and the Congress has transferred prior year inflation funds to reduce amounts appropriated for later years, the base has been reduced for overestimated inflation. However, where DOD's inflation dividends have been used for reprogrammings and rescissions or lapsed and returned to the Treasury, the base for future appropriations has not been reduced.

The Importance of Outlay Rates in Estimating Inflation Amounts

DOD uses historical outlay data to develop an estimated spendout rate for each appropriation account—that is, the percentage of budget authority that is expected to be turned into outlays each year until an appropriation is totally expended. For example, a research, development, test, and evaluation account may outlay 30 percent of budget authority in the first year of an appropriation, 30 percent in the second, 20 percent in the third, and 20 percent in the fourth. DOD officials use the historical data, along with their knowledge about current and future events that could affect the rate at which funds are outlayed in the future to estimate inflation amounts in DOD's budget request.

A small shift in the estimated outlay rates can result in different inflation dividends or shortfalls if inflation is rapidly changing. Tables II.1 and II.2 demonstrate the differences in the amounts needed for a program under differing assumptions on outlay rates.

Table II.1: Fiscal Year 1985 Budget Request

(Dollars in billions)

	Estimated inflation rate	Resulting inflation index	Estimated spendout rate	Inflation index x outlay rate	Estimated outlay
1985	0.0%	\$100 x 1.00 = \$100.00	10%	\$100 x .10 = \$10.00	
1986	6.0	100 x 1.06 = 106.00	20	106 x .20 = 21.20	
1987	5.6	106 x 1.056 = 111.94	30	111.94 x .30 = 33.58	
1988	5.2	111.94 x 1.052 = 117.76	30	117.76 x .30 = 35.33	
1989	4.8	117.76 x 1.048 = 123.41	10	123.41 x .10 = 12.34	
Total					\$112.45 Total budget authority needed per \$100 in fiscal year 1985 funds requested.

Table II.2: Fiscal Year 1985 Budget Request With Revised Outlay Rates

(Dollars in billions)

	Revised spendout rate	Revised estimated outlays (inflation rates remain same)
1985	5%	\$100 x .05 = \$5.00
1986	15	106.0 x .15 = 15.90
1987	35	111.94 x .35 = 39.18
1988	35	117.76 x .35 = 41.22
1989	10	123.41 x .10 = 12.34
Revised total		\$113.64 Total budget authority needed per \$100 in fiscal year 1985 funds requested.

**Appendix II
The Importance of Outlay Rates in
Estimating Inflation Amounts**

For a \$100 billion program the change in outlay rates shown above results in an additional \$1.19 billion needed to fund inflation. This means it is important to have the most accurate outlay rates possible.

Agency Comments

DOD agreed with this appendix, noting that it is most important to use the most accurate outlay rates possible.

Comments From the Assistant Secretary of Defense (Comptroller)

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



COMPTROLLER

ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, DC 20301-1100

FEB 9 1988

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report "DOD INFLATION: Budgeting and Monitoring Inflation Funding in the Department of Defense" dated December 14, 1987 (GAO Code 394189), OSD Case 7488. The DoD agrees in part with the draft report.

The DoD agrees that the Congress needs adequate visibility over DoD inflation funding, and that inflation amounts should be consistently calculated and reported. The DoD, however, already supplies the Congress with a great deal of supplemental information to support the budget request, including information identifying inflation included in each appropriation account. A new requirement was also included in the FY 1987 DoD Authorization Act that requires close monitoring of changes in inflation and periodic reporting to the Congress. As recognized by the GAO, the various options that have been suggested to restrict the use of inflation funds each have inherent problems and complications that do not appear warranted. The mechanisms now in place should provide the type of visibility sought by the GAO.

Additional comments on the findings and recommendation are enclosed. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

Robert W. Helm
Assistant Secretary of Defense
(Comptroller)

Enclosure

GAO DRAFT REPORT - DATED DECEMBER 14, 1987
(GAO CODE 394189) OSD CASE 7488

"DOD INFLATION: BUDGETING AND MONITORING INFLATION FUNDING IN
THE DEPARTMENT OF DEFENSE"

DEPARTMENT OF DEFENSE COMMENTS

FINDINGS

- o **FINDING A: Budgeting Separately For Inflation.** The GAO found that, as part of the budget preparation process, the DoD Comptroller calculates estimates of the funds needed for inflation in each appropriation account. The GAO reported that these internally prepared estimates have not been routinely included as part of the budget submission. The GAO pointed out, however, that at the request of the Senate Committee on Appropriations, the DoD provided information showing inflation funds contained in each appropriation account for the FY 1987 budget submission. The GAO noted that, according to DoD officials, this information can be reported to the Congress on a recurring basis. The GAO concluded, therefore, that it is feasible for the DoD to routinely provide Congress with information on the amounts budgeted for inflation for each appropriation account. The GAO presented a sample format suggested by the Congressional Budget Office (CBO) and concluded that the format is a practical and effective way for the DoD to present its funding needs and proposals for real growth. The GAO further concluded that this same information, updated by more current estimates, could be used by the Congress to determine the changes resulting from more current information on inflation. The GAO noted that the inflation information can be provided either as supplemental material to the budget request or it can be required as part of the President's budget if 31 United States Code 1105(a) is amended. (pp. 4-5, pp. 22-26/GAO Draft Report)

Now on pp. 3 and 13-16.

DOD COMMENTS: Partially concur. The DoD agrees that it is feasible to provide the Congress with inflation information for each appropriation account and, in fact, did so for the FY 1987 budget, as recognized by the GAO. In addition, as discussed in the DoD response to Finding B, the FY 1987 Authorization Act established new periodic reporting requirements for inflation. It should also be recognized that the DoD provides a great deal of supplemental information in support of the budget request. For several years, the DoD has included in this package, a bridge between the actual year and the budget year that identifies the amount added to each appropriation account for inflation and program. The DoD can continue to provide this information. The DoD does not agree that it is necessary to amend 31 United States Code 1105(a).

- o **FINDING B: Feasibility Of Monitoring Inflation Funds.** The GAO reported that, for oversight purposes, the Congress needs to know how much the DoD is gaining and losing from misestimates of inflation. The GAO also reported that the DoD monitors the adequacy of its inflation funds through inflation indices that are developed after its budget request is prepared, and periodically updates the inflation amounts needed in each account. The GAO found that, when updating the estimates, the DoD uses defense purchase indices. The GAO pointed out, however, that in its September 1985 report (OSD Case 6826), the GAO had concluded that the Gross National Product (GNP) price deflator is the best index to measure inflation for nonpay, nonfuel accounts. The GAO further pointed out that the DoD budgets for anticipated inflation based on a projection of the GNP deflator. The GAO acknowledged that prices in specific sectors, such as defense, may grow faster or slower than the GNP deflator. The GAO observed, however, that the deviations tend to cancel out over time. The GAO also noted that monitoring inflation below the appropriation account level would be difficult and inconsistent with the way inflation estimates are made in the budgeting process. The GAO concluded that inflation can be monitored and updated by appropriation account. The GAO also concluded that, since the GNP price deflator is used in preparing the original budget request, it should also be used to monitor and update the results. The GAO acknowledged a system that monitors inflation and includes regular reports to the Congress will not, in itself, produce savings. The GAO concluded, however, that such a system would provide the Congress with the information needed to facilitate funding adjustments. (pp. 5-6, p. 8, pp. 27-34/GAO Draft Report)

DOD COMMENTS: Concur. The DoD agrees that a system to monitor and periodically report on inflation is the best approach. In fact, such a system is now in place. Section 1307 of the FY 1987 DoD Authorization Act amended Chapter 131 of the United States Code to add a new section 2215 that addresses changes in program estimates as well as unanticipated cost increases due to changes in inflation and other factors. Therefore, there is a congressional requirement to monitor inflation and report to the Congress on February 1, April 25, and August 15 of each year.

- o **FINDING C: Restricting The Use Of Inflation Funds-- Establishing A Separate Fund.** The GAO reported that several approaches have been suggested to restrict the use of funds appropriated for inflation. The GAO reported that one option is to establish a separate fund for DoD inflation funds. According to the GAO, under this option funds would be placed in a special inflation fund and would not be available for other purposes. The GAO noted that, at times, the fund would carry more surpluses than at other times, but

Now on pp. 3-4 and 17-23.

See comment 1.

Now on pp. 4, 24, and 26.

theoretically would balance out over time. The GAO pointed out, however, that periodically having large balances in the fund would pose the risk that the funds could be easily transferred to other programs, and thus undercut the basis for the fund. In addition, the GAO reported that DoD officials believe that administering the separate inflation fund could be complicated and require a more detailed reporting system. The GAO concluded that before such an approach is adopted, a method to report and monitor inflation funds, such as that described under Finding B, should first be tried. (p. 6, pp. 35-36, p. 40/GAO Draft Report)

DOD COMMENTS: As recognized by the GAO, establishing a separate fund for inflation would not only create additional administrative complications and reduce management flexibility, it would also increase the risk that the funds would be improperly used. Accordingly, the Department is opposed to the establishment of a separate fund for inflation. The detailed accounting and reporting of contractual data necessary to make such a fund a meaningful management tool would add greatly to an already burdened reporting system for defense and the private sector. New contractor accounting systems would be required to enable contractors to identify inflation costs on a line item basis and bill separately for inflation so that applicable costs would be charged to a defense inflation account and reported through the accounting system. Furthermore, contractors would undoubtedly pass on the government the increased overhead expenses resulting from this larger reporting burden, increasing total contract costs without adding any benefits of either better management or increased military capability. The DoD agrees that increased monitoring and reporting, as is now being done, is a much better approach.

- o FINDING D: Restricting The Use Of Inflation Funds--Lapsing Of Excess Funds. The GAO reported that another suggested approach to restrict the use of inflation funds is that excess inflation funds would either lapse and be returned to the Treasury, or would be rescinded. The GAO pointed out that since inflation funds would be estimated based on the changing GNP price deflator, the final deflator would not be known until the year is over. The GAO concluded, therefore, that flexibility would be necessary to allow for the time lag between estimates and actual information. In addition, the GAO reported that a means to manage the use of the funds would have to be established. The GAO further reported that an option to the lapsing of funds is to have the DoD report differences to the Congress between budgeted and more current inflation estimates, with the DoD suggesting how to best use the funds. The GAO noted that an additional option, that has been used to some extent, is for the Congress to adjust the appropriation currently being considered for past inflation variances. As with the option

to establish a separate fund (Finding C), the GAO concluded that these approaches raise questions about additional administrative detail and loss of flexibility. The GAO further concluded, therefore, that a method to monitor and report inflation funds similar to that described in Finding B should first be considered. (pp. 6-7, pp. 37-40/GAO Draft Report)

DOD COMMENTS: Concur.

- o FINDING E: Report On Inflation Budgeting. The GAO reported that the National Defense Authorization Act for FY 1987 required that annual reports on the overall status of the DoD inflation funding be submitted to the Committees on Armed Services each February. The GAO pointed out that the report is to include a comparison of amounts appropriated, and estimated amounts necessary, to offset anticipated inflation. In addition, the GAO stated that the report is to include identification and discussion of inflation variances for the funds appropriated in each of the two prior fiscal years. The GAO pointed out that, while the Act requires the DoD to disclose the disposition of any excess funds, it does not require that excess inflation funds be lapsed, rescinded, or be kept available for possible action by the Congress. The GAO noted that, since the first report is not due until February 1988, its use cannot yet be evaluated. The GAO concluded, however, that the report appears to have the attributes needed to monitor the DoD inflation amounts. (p. 7, pp. 28-30/GAO Draft Report)

DOD COMMENTS: Concur.

- o FINDING F: Feasibility Of Providing Separate Inflation Estimates In The Selected Acquisition Reports. The GAO reported that the Selected Acquisition Reports (SARs) provide summary information, including cost, for each of the largest DoD major weapon systems. The GAO noted that the SARs now include estimated inflation amounts over the life of the acquisition program. The GAO pointed out, however, that both it and the DoD have previously identified major limitations in the SAR information. According to the GAO, these limitations include the SAR inflation estimates. The GAO found, for example, that the SAR inflation estimates are not being computed consistently, nor do the reports provide inflation amounts broken out by fiscal year. The GAO pointed out that the DoD requires that the GNP implicit price deflator be used for adjusting SAR inflation amounts unless an exception is granted, but this requirement is not being followed. The GAO concluded that it is feasible to provide the Congress information on the inflation estimates for individual SARs. The GAO also concluded, however, that

Now on pp. 4 and 25-26.

Now on pp. 4 and 17-20.

Now on pp. 5 and 28-31.

to be of any use to the DoD or the Congress, the inflation calculations should be consistent across the SAR systems, as currently required by the DoD. (p. 8, pp. 41-46/GAO Draft Report)

DOD COMMENTS: Partially Concur. Base-year and then-year dollar amounts are reported by fiscal year in the Selected Acquisition Reports (SARs) (Section 16c). Annual escalation for prior years and outyear inflation estimates over the life of the program can be derived by subtracting the base-year from the then-year dollar amounts shown. Regarding inconsistent inflation computations in the SAR, the DoD agrees these should be done in accordance with established policy. DoD Instruction 7000.3 requires that DoD-directed rates be used unless alternate rates have been approved by the ASD(C). The DoD will ensure that these requirements are followed. Concerning the three programs examined by the GAO, the calculations are in compliance with DoD policy.

•• The escalation computations for the F-15 were validated in September 1987; the GAO also found them to be accurate.

•• DoD-directed rates were used by the F-18 program for FY 1983 and beyond. Prior to FY 1983, program-specific rates were used for procurement. Although approval for the use of these rates was not formally obtained from the Office of the Secretary of Defense (OSD), additional funds were requested by DoD and appropriated by the Congress in FY 1981 and FY 1982 to cover inflation shortfalls actually experienced by the program.

•• The GAO is incorrect with respect to the M1 program. An exception to OSD policy was granted in November 1982 for M1 to use the BEA DoD Combat Vehicles deflators in FY 1982 and prior (not "program-specific" indices). Subsequent years reflect the DoD-directed indices. The GAO conclusions based on this error lack substance.

See comment 2.

- o **FINDING G: The Proper Base For Inflation Budgeting.** The GAO presented a hypothetical example to illustrate how one year's budget request that had been built up from specific real program and inflation assumptions, would be affected by subsequent changes in inflation assumptions and, in turn affect the budget base used to calculate the next year's request. Based on its example, the GAO concluded that use of the proper base in inflation budgeting prevents inflation forecasting errors from being carried forward and compounded in succeeding budget requests and authorizations. The GAO pointed out, however, that the DoD currently does not follow this procedure when preparing its budget submission. Instead, the GAO reported that the DoD develops its budget total for the next fiscal year based on the budget authorization for the prior fiscal year. For its example, the GAO assumed that inflation is overestimated. According

Now on pp. 32-34.

to the GAO, this would mean that the next year's budget estimate would begin from a higher base than it should, resulting in a request that would exceed a budget embodying the same real growth and inflation assumptions for future years, but built on the proper base. The GAO noted that these principles are the same, regardless of whether inflation is over- or underestimated. (pp. 47-51/GAO Draft Report)

DOD COMMENTS: Nonconcur. The DoD budget request always reflects the most current economic assumptions of the administration. The annualized effects of lower inflation rates than projected in prior years is recognized and adjusted.

- o FINDING H: The Importance Of Outlay Rates In Estimating Inflation Amounts. The GAO reported that the DoD uses historical outlay data to develop an estimated spendout rate for each appropriation account. According to the GAO, DoD officials use the historical data, along with their knowledge about current and future events that could affect the rate, to estimate inflation amounts in the DoD budget request. The GAO presented an example illustrating how a small shift in the estimated outlay rates can result in different inflation dividends or shortfalls if inflation is rapidly changing. Based on these results, the GAO concluded that it is important for the DoD to have the most accurate outlay rates possible. (pp. 52-54/GAO Draft Report)

Now on pp. 35-36.

DOD COMMENTS: Concur. The DoD agrees that it is most important to use the most accurate outlay rates possible. That is the reason that the DoD conducts an annual rate review to reflect an additional year of actual outlay experience and make adjustment for shifts in spending patterns.

RECOMMENDATION

- o RECOMMENDATION: The GAO recommended that the Secretary of Defense ensure that the inflation amounts included in the SAR reports are broken out by fiscal year and are computed and adjusted consistently by using the GNP deflator. (p. 8, p. 46/GAO Draft Report)

Now on pp. 5, 34.

DOD COMMENTS: Partially concur. Since the difference between the base-year and then-year dollars is inflation, the SARs do, in effect, display annual inflation amounts. The economic cost variance calculations are periodically reviewed on each of the approximately 100 SAR programs. The DoD will continue to review the economic adjustments reported in the SAR for proper compliance with established policy and will take corrective action when warranted.

MATTER FOR CONGRESSIONAL CONSIDERATION

- o **SUGGESTION:** The GAO suggested that the Congress may want to consider amending 31 United States Code 1105(a) to require that the President's annual budget request show inflation amounts separately for each appropriation account for the defense function. (pp. 8-9, p. 26/GAO Draft Report)

DOD COMMENTS: Nonconcur. As discussed in the DoD response to Findings A and B, recent additional monitoring and reporting requirements should make any change to 31 United States Code 1105(a) unnecessary.

Now on pp. 5 and 16.

The following are GAO's comments on the DOD letter dated February 9, 1988.

GAO Comments

1. In its comments, DOD stated that there is a congressional requirement to monitor inflation and report to the Congress on February 1, April 25, and August 15 of each year. We recognize that title 10, United States Code, section 2215 requires DOD to provide information on unobligated balances and inflation budgeting to the Committees on Armed Services on February 1, April 25, and August 15 each year. However, this requirement only applies to unobligated balances. It does not require reporting of revised inflation estimates for the total amount appropriated. Section 2216 of title 10 does require an overall status report on inflation each February 1, and this is the report referred to in our report.
2. Our report has been adjusted to reflect DOD's comment on the M-1 tank. Our report now notes that DOD approved the use of Bureau of Economic Analysis DOD Combat Vehicle deflators for fiscal years prior to 1983 for the M-1 program.



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