INFLATION AND REAL GROWTH HANDBOOK
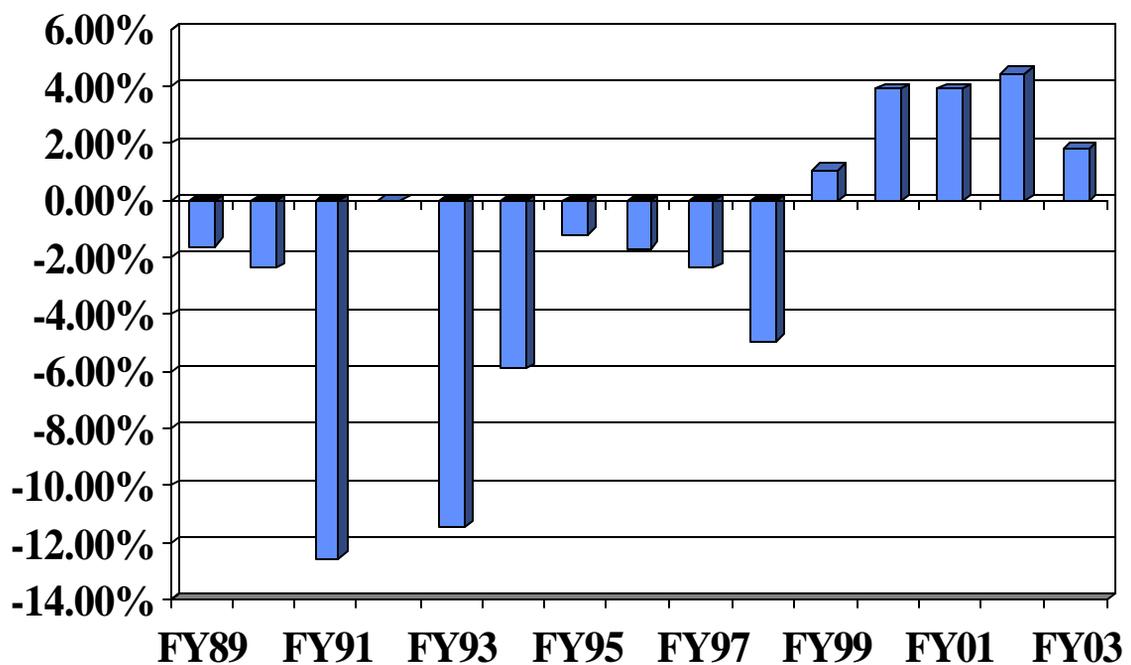
ARMY TOA TRENDS (NORMALIZED)

Chart: % TOA CHANGE, FY89–FY03

Fiscal Year	% TOA CHANGE (approx.)
FY89	-1.50%
FY90	-2.50%
FY91	-12.50%
FY92	-0.25%
FY93	-11.50%
FY94	-6.00%
FY95	-1.25%
FY96	-1.75%
FY97	-2.50%
FY98	-5.00%
FY99	1.00%
FY00	3.75%
FY01	3.75%
FY02	4.25%
FY03	1.75%

ARMY BUDGET OFFICE
APRIL 2002

INFLATION HANDBOOK

Introduction

The annual defense budget process is characterized by comparisons of budget figures that reflect Congressional and Executive branch action on the budget from year to year. Analytical reviews of the budget may be based on constant dollars. Constant dollars are adjusted for changes in prices (inflation) that take place which show the real purchasing power of the dollar. Analyses, which use current dollars, do not take into account the fact that dollars lose their value at different rates of inflation. The purpose of this handbook is to provide an introduction on how the Army budgets and programs for inflation. An understanding of the theory of how inflation is computed enables analysts to use another analytical tool to portray the Army's budget trends.

The Army Budget Office, SAFM-BUC-F, is the lead office for inflation and real growth/real spending computation for the Army. The official Army nonpay inflation indices are developed by this office and published annually in conjunction with the President's Budget. The nonpay inflation indices are electronically available on ASAFM Website http://www.asafm.army.mil/

Questions about this handbook and the inflation indices should be referred to Army Budget Office, Budget Formulation Division, ATTN: SAFM-BUC-F (Larry Stopher), Room 3D349, Army 109, Pentagon, 20310-0109, DSN: 222-7372, COM: (703) 692-7372 or E-MAIL at Stopher@HQDA.Army.Mil

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BACKGROUND

1. Inflation is defined as an increase in the general level of prices in the economy. Inflation does not mean that prices rise evenly or that all prices are rising. Prices of some commodities (e.g. utilities, lumber, food) may rise or fall faster than others due to differences in the magnitude and direction of changes in the supply and demand in various markets. Fuel prices are extremely volatile. Prices rise and fall due to global economic conditions, OPEC production combined with ability/inability of OPEC to reach production quota agreements with non-OPEC nations, UN mandated Iraqi oil quotas/smuggling, November-March Northeast US temperatures above or below normal, level of US oil inventories, and number of refineries undergoing maintenance and/or reconfiguration of fuel products by season.

2. OMB Circular A-11, Preparation and Submission of Budget Estimates, permits agencies to budget for price changes for goods and services (other than Federal employee pay) in all appropriations. Therefore, budgets and programs are formulated to include inflation in the non-pay portion of all accounts. Inflationary pressure applies to all sectors of the economy and all Federal programs and particularly to DoD. DoD, as the largest percentage of discretionary spending in the federal budget, influences the surplus/deficit position of the federal budget. In addition, several DoD programs have long production lead times. DoD's full-funding acquisition policy provides for anticipated future inflation up front rather than on a yearly basis, and makes assumptions about future inflation, which are particularly important for the budget and the POM development. If the initial assumptions about future inflation are too low, the DoD must either request more funding or buy less. Program delays and extensions expose programs to higher than planned levels of inflation, thereby increasing costs. Conversely, if the assumptions about future inflation are too high, then DOD has over budgeted for inflation and the excess inflation dollars can be withdrawn from DoD Total Obligation Authority (TOA) appropriations. The excess inflation dollars may revert to OMB, may be applied to the

Administration's higher priority programs, pay down the federal deficit, or be returned to the services as a plus up. From the DoD perspective, there are four types of inflation. Each type generally inflates at a different rate.

     a. Nonpay Inflation (All Army Appropriations). PBD 604, Nonpay Inflation, reflects the Administration's assumptions on nonpay inflation for the President's Budget. PBD 604 can either provide the Army additional inflation dollars as a result of an increase in inflation or decrement the Army's account due to a decline in inflation. When OSD adds/withdraws inflation dollars from the Army, these dollars are adjusted by individual appropriation. From the appropriation level adjustments, the appropriation sponsors usually pass the adjustments to the commands. The appropriation sponsors determine the appropriate adjustments to the commands based on a predetermined formula. This handbook concentrates on discussing nonpay inflation. Nonpay portion of an appropriation is programmed to outlay at a certain percentage over several years until the percentage totals 100%.

     b. Pay (MILPERS, O&M, RDTE, MCA, AFHO) Appropriations with personnel salaries are linked to private sector comparability scales. Therefore, the pay appropriations are more predictable than nonpay. PBD 606 Military and Civilian Pay establish pay raises. DoD considers that the pay portion of an appropriation will outlay at 100% in the first year.

     c. Fuel (O&M, RDTE, AFHO). This is the most unpredictable type of inflation. Fuel prices can be positive or negative between years. PBD 602 Fuel Inflation establishes the fuel inflation rate and the per barrel price. DoD considers that the fuel portion of an appropriation will outlay at 100% in the first year.

     d. Medical Health Care Accrual (MILPERS). The medical health care accrual inflation was introduced in FY03. Medical Health Care Accrual uses the CPI-U Medical rate of inflation. Medical Health Care Accrual portion of MILPERS is programmed to outlay at 100% in the first year.

3. Action officers should use the inflation indices
published by SAFM-BUC-F to compute inflation and real
growth/spending for the nonpay portion of an
appropriation.

    a. The official indices published by the SAFM-BUC-F
are based on OSD-provided rates, which are averages for
use in budget preparation. Inflation calculated with
these indices may vary from the actual inflation
experienced in many programs. However, at the
appropriation or title level, official OSD inflation
rates must be used for computing inflation in the budget
even though the resulting amounts expended may be
different.

    b. Certain Procurement, RDTE, and MILCON contracts
have built-in escalation clauses with rates that differ
from the standard rates. In these cases, the actual
contract rates should be used.

Definitions and Explanations This section provides definitions and examples for terms commonly used when discussing inflation and real growth.

1. <u>Base Year (BY)</u> The Base Year is a point of reference year representing a fixed price level, and is expressed as 1.000 (e.g. FY 2003 = 1.000).

2. <u>Budget Authority</u> The authority becoming available during the year to enter into obligations that result in immediate or future outlays of Government funds. Most DoD budget authority is provided by Congress in the form of enacted appropriations. Besides enacted appropriations, budget authority includes the authority to borrow, contract authority, and spending authority from offsetting collections. Offsetting collections are deducted from gross budget authority and are referred to as "negative budget authority." Budget Authority differs from Total Obligation Authority (TOA) in that Budget Authority is a portion of the aggregate TOA. For example, Rocky Mountain Arsenal receipts, offsetting receipts, and trust funds are counted as Budget Authority. These accounts are excluded from TOA.

3. <u>Composite Inflation Indices</u> A composite inflation index is a multiplication factor for compounding inflation which takes into account spend out rates over an entire spending pattern, and is used for converting base year constant/current dollars to current/constant dollars in another year. Multiplying a series of compound indices by the corresponding outlay rates and summing the results derive composite indices. DoD publishes the outlay rates in the Revised Inflation Guidance memo for use in developing the President's Budget. At Enclosure 3 is the Revised Inflation Guidance memo for the FY03 President's Budget. The same outlay table is republished in the National Defense Budget Estimates Table 5-11 at www.dtic.mil/comptroller/. The OMA outlay rate is extracted from these tables. Outlay rates generally change each year. Outlays over a given period of time always equal 100%. Composite indices are always displayed in the Army's nonpay inflation indices. The following example shows how the composite indices are computed.

EXAMPLE: Compute the composite index for OMA for FY 2003 using FY 2003 as the Base Year. The compound indices (the next paragraph describes how compound indices are computed) found in the OMA table at Enclosure 1 (FY03-06 indices are 1.0000; 1.0170; 1.0353; 1.0550); the outlay rates shown below were provided by OSD - Revised Inflation Guidance memo/FY03 National Defense Budget Estimates Table 5-11.

HOW TO:

	FY03	FY04	FY05	FY06
Outlay rate	0.3897	0.4362	0.1017	0.0724
Compound rate	1.0000	1.0170	1.0353	1.0550

Composite index = (1.0000)*(0.3897)+
                  (1.0170)*(0.4362)+
                  (1.0353)*(0.1017)+
                  (1.0550)*(0.0724)+

                = 1.0150 for FY 2003

4. Compound Inflation Indices The compound inflation index for a given Army appropriation is a multiplication factor for compounding inflation amounts from a given base year over a period into the future, and is used for converting base year constant dollars to constant dollars in another year. Compound indices are obtained by multiplying a series of annual escalation indices provided in the rate tables. DoD escalation rates are published in the Revised Inflation Guidance memo. At Enclosure 3 is the Revised Inflation Guidance memo for the FY03 President's Budget. The same escalation rates are republished in the National Defense Budget Estimates Table 5-2 at www.dtic.mil/comptroller/. Compound indices are always displayed in the Army's nonpay inflation indices. The following example shows how the compound rates are computed.

Example: Compute the compound inflation index for OMA for FY 2005 in Base Year FY 2003.

HOW TO: The compound index for FY 2005 in Base Year 2003 is the product of the escalation rates from FY 2004 to FY 2005. The escalation rates in the OMA table at Enclosure 1(FY 2004/2005 are 1.017 and 1.018).

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      Compound index FY 2005 = (1.017)*(1.018)
                             = 1.0353
```

5. <u>Constant Dollars</u> Constant dollars are uninflated dollars, which measure the value of purchased goods and services in terms of the price level in a given base year. Constant dollar analysis is the most appropriate way to evaluate dollars from year-to-year because the value of the dollar changes over time--whether the dollars are future projections, actual appropriations, or obligations. Constant dollar analysis is done by adjusting current dollars with a price index that relates the value of the dollars to a fixed point in time (a base year). The term "FY XX constant dollars" is used when amounts do not contain any adjustments for inflationary changes that have occurred prior to/or are forecast to occur after, the base fiscal year. All fiscal years preceding the base year are adjusted (inflated) so that amounts are in base year (FY XX) dollars; all fiscal years following the base year are deflated so that the amounts are in base year dollars. The same dollar amount is used when both the current and constant values are in the same base year; this is a rule of logic rather than a mathematical rule (i.e., the FY 03 constant dollar and current dollar representations for FY 03 are the same). This handbook focuses on constant/current dollar conversions of the non-pay portion of Army appropriations. When constant dollar conversion is required for an appropriation with a mix of nonpay, pay, fuel, or Medical Health Care Accrual (identified in BACKGROUND section), each type of inflation must be converted to constant dollars by its unique inflation factors).

6. <u>Current Dollars</u> The cost in current dollars is the dollar value of goods and services in terms of the prices and estimated inflation at the time of purchase. Current dollars are used when fiscal year amounts contain all increases needed to cover inflation and those price increases expected to occur in a program over the duration of the appropriation's outlay/spend out rate. This term is often used interchangeably with budget dollars and then-year dollars. The use of current dollars distorts time-series analysis by failing to reflect the greater purchasing power of the dollar in

earlier years or the declining purchase power in later years. At the appropriation level, TOA numbers published by SAFM-BUC-F are displayed in current dollars. Inflation is built into the program and budget estimates for each appropriation.

7. Inflation Rates/Escalation Rates An annual inflation rate is year-to-year rate of change in prices. Usually, inflation implies an increase in prices; yet, some prices decline such as the price per barrel of oil in the past years. The inflation rates used in preparation of the Army's budget are based on economic assumptions provided by OMB. The rates are published in February in Table S-4 Comparison of Economic Assumptions in the Budget of the United States.

    a. PBD 604 Nonpay Inflation announces the new inflation rate for the upcoming President's Budget. An annual escalation rate is a multiplication factor for inflating prices in one year to prices in the next year. The escalation rate is the inflation rate plus 1. Looking at the example in Enclosure 1, the yearly escalation factor for all appropriations in 2002 was 1.017 and 1.013 in 2003 which means that the rate of inflation for 2002 was 1.7% and 2003 is 1.3%, etc. An annual inflation rate of .017 for FY 2002 means that FY 02 prices are 1.7% percent higher than FY 01 prices.

    b. Inflation rate for the outyears are estimates, which are usually adjusted annually by the Administration.

    c. The escalation indices are always based on outlays.

    d. At this time, the nonpay escalation rate is the same from all Army TOA appropriations.

8. Outlays Outlays are the net amount of funds (disbursements and receipts) paid out in a given year. Outlays in a given fiscal year may represent the liquidation of obligations incurred over a number of years. There is a time lag between the budgeting of funds, signing contracts or orders, receiving goods or services, and making payments. Outlays for pay are usually expended in the same year of obligation, while

building an aircraft carrier may require payments over 10 years or more. As a point of reference, the federal budget is based on outlays and revenues.

Federal Spending (Outlays)>Revenues = Deficit
Federal Spending (Outlays)<Revenues = Surplus

9. Outlay/Spendout Rate The outlay or spend out rate represents the actual disbursements for a given appropriation and is expressed as the percent of the appropriation expected to be expended in a given year.

     a.   Outlay rates, see paragraph 3 above, are published annually and are unique for each appropriation, varying from a two-to-three year spending pattern in the pay accounts to a several years in the investment accounts. This is a result of the time lag purchasing goods and services and the payment or expenditure of the funds. As the payments are made over time, they are influenced by inflation. As discussed in this handbook, outlay rates spread over time are used for calculating the nonpay composite rate of each appropriation. For example, the outlay rate for Military Personnel nonpay is 75% in the first year, 20% in the second year, and 5% in the third year. The outlay rate used for the development of the inflation indices is different from the outlay rates used for outlays execution plans.

     b.   Outlay rates for execution planning include the pay portion of an account and, therefore reflect a higher outlay rate. The Military Personnel account is approximately 75% pay and medical pay accrual. Pay and medical pay accrual outlays at a faster rate than nonpay. For execution planning, the Military Personnel outlays (nonpay, pay, and medical pay accrual) are 93% in the first year and 6% in the second year. Considerably more than the 75% outlay rate for the nonpay portion

10. Real Growth/Real Spending The real growth of a program or appropriation is the actual change in purchasing power between any two fiscal years. It is computed by converting all values or amounts to the same base year (constant dollars) and then adjusting for increases/decreases that do not affect purchasing power. Real growth always implies a relationship between two or more time periods with a common base year. Real growth

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can be positive or negative: "negative real growth" is a decline in funding or obligations after inflation has been factored out from the base year TOA. Positive real growth is the increase in funding or obligations after inflation has been factored out. Recently, the term "real spending" has been used interchangeably with real growth.

a. In the DoD computation of real growth, only the between year dollars are used to compute real growth. See the National Defense Budget Estimates, Table 6-16.

a. The calculation of real growth is limited in that it separates all dollars into two categories-- inflationary and real program changes. Real growth does not measure changes in management efficiencies. A price increase due to inefficient production quantities may appear to be a "real" program increase, and a price decrease due to an improvement in productivity may appear to be a "real" program decrease. In both cases, of course, the real program does not change. Other factors, such as the number of tanks or aircraft being procured or operated, or the unit cost of such items, are often more appropriate measures of real program growth.

11. Real Growth/Real Spending (Normalization) Further refining real growth calculation, Army uses the term "normalization" as a program base that excludes the transfer in or out of resources/missions (Desert Storm in FY 1991). Real growth/real spending computation by OSD does not account for normalization of TOA. A drawback to normalization is that it very subjective when compared to year-to-year standard real growth calculations. An analyst doing normalization has to make subjective choices about which programs to include or exclude in a normalization analysis.

12. Total Obligation Authority (TOA) TOA is a DoD financial term, which expresses the value of the direct DoD program for a fiscal year. TOA is equivalent to (1) new budget authority granted or requested, plus (2) any additions or subtractions from this amount due to proposed or Congressionally directed transfers of funding or credits from prior years, rescissions, supplementals, etc., and (3) unobligated balances from previous years which remain available for obligation. TOA is most often

expressed in current dollars and includes estimates of
the additional dollars required to cover expected price
increases over the duration of the appropriation's spend
out, particularly if it is a multiyear appropriation.
Besides the examples cited in the Budget Authority
paragraph, carryover funds such as "X" year funds are
counted as TOA. These carryover accounts are excluded
from Budget Authority.

WHEN TO USE INFLATION INDICES

Inflation indices are derived from economic assumptions provided by OMB and are used for adjusting values for the effects of inflation over time. Inflated estimates are reflected in the formulation and presentation of the Budget Estimates Submission (BES), President's Budget, Selected Acquisition Reports (SARs), and Program Objective Memorandum (POM).

The inflation indices should be applied to the purchase or nonpay portion of accounts unless superseded by specific guidance. If specific guidance is not available for the outyear pricing of any items, the rates published annually by SAFM-BUC-F should be used for estimating purposes.

Compound Indices Use compound indices to change from one constant dollar base to another constant dollar base. If the estimate is in any one of the base years provided, use that base year to update the estimate in constant dollars.

Composite Indices Use composite indices to change between constant and current dollar values, as well as between current and current dollar values in different fiscal years. Composite indices reflect both the effect of inflation and the outlay rate applied to each year.

Summary The following chart summarizes the application of inflation indices:

Use Compound Indices:

- to convert constant dollars to constant dollars

Use Composite Indices:

- to convert constant dollars to current dollars

- to convert current dollars to constant dollars

- to convert current dollars to current dollars

CONVERTING CONSTANT DOLLARS TO CONSTANT DOLLARS The basic rule for converting constant dollars in one year to constant dollars in another year is:

CONSTANT FY ZZ $ = (CONSTANT FY XX $) x (COMPOUND INDEX FOR FY ZZ IN BY XX)

Example: The Weapons and Tracked Combat Vehicle (WTCV) Appropriation Sponsor plans to buy 700 modification kits
for $100 million in constant FY 2001 prices. What is the equivalent cost in FY 2007 constant dollars?

HOW TO:

Step 1: The compound index for FY 2007 in BY 2001 in the WTCV table is at Enclosure 1. The index is 1.1075.

Step 2: Apply the formula:

CONSTANT FY 2007 $ = (CONSTANT FY 2001$)*(COMPOUND INDEX FOR FY 2007 IN BASE YEAR FY 2001)

    Constant FY 2007   = ($100M)*(1.1075)

                        = $110.75M

CONVERTING CURRENT DOLLARS TO CONSTANT DOLLARS: Since this is the reverse of converting constant dollars to current dollars, the formula for current dollars is:

CONSTANT FY XX $ = CURRENT FY ZZ $/COMPOSITE INDEX FOR FY ZZ IN BY XX

This formula works whether or not FY XX is prior to FY ZZ provided the correct composite index is used. The Base Year must be the FY of the constant dollars.

Example: Convert an RDTE program (nonpay only) that costs $100 million in FY 2003 to FY 2002 constant dollars. The RDTE rates are in Enclosure 1. The composite index is 1.0283.

HOW TO:

CONSTANT FY 2002 $ = (CURRENT FY 2003$)/(COMPOSITE INDEX FOR FY03 IN BASE YEAR FY 2002)

        CONSTANT FY 2002 = $100M/1.0283
                         = $97M

CONVERTING CURRENT DOLLARS TO CURRENT DOLLARS: The basic formula to follow when converting FY XX current dollars to FY ZZ current dollars is:

CURRENT FY ZZ $=(CURRENT FY XX $)*[(COMPOSITE INDEX FOR FY ZZ IN BY VV)/(COMPOSITE INDEX FOR FY XX IN BY VV)]

This formula also works whether or not FY XX is prior to FY ZZ. Notice that any available base year (BY VV) may be used for the indices. If no base year is specified, it is recommended that the analyst use the current FY as Base Year XX.

Example: A WTCV program to buy 400 IAVs for $800 million in FY 2003 current dollars. What would the same number of IAVs cost in the FY 2004 budget?

HOW TO:

Step 1: Find the composite index for FY 2004 in Base Year 2003 and composite index for FY 2003 in Base Year 2003 in the WTCV table at Enclosure 1. They are 1.0423 and 1.0236.

Step 2: Apply the formula:

CURRENT FY 2004 $ = (CURRENT FY 2003$) * (COMPOSITE INDEX FOR FY 2004 IN BASE YEAR 2003)/COMPOSITE INDEX FOR FY 2003 IN BASE YEAR 2003)

```
CURRENT FY 2004    = ($800M)*(1.0423/1.0236)
                           = $815M
```

AMOUNT OF INFLATION IN CURRENT DOLLARS COMPARED TO BASE YEAR DOLLARS: The method cited in the above example may be used to determine the amount of inflation in current dollars compared to any base year.

Example: How much inflation is contained in an FY03 WTCV $800M IAV as compared to FY 2001?

HOW TO: The amount of inflation is found by taking the difference:

INFLATION = (CURRENT FY 2003 $ - CURRENT FY 2001 $)

Step 1: Use the "current to current" rule and Enclosure 1 to convert current FY 2003 dollars to current FY 2001 dollars. The composite indices in Enclosure 1 are .9909 for FY 2001 in Base Year 2003 and 1.0236 for FY 2003 in base year 2003.

CURRENT FY 2001 $ = (CURRENT FY 2003 $) x [(COMPOSITE INDEX FOR FY 2001 IN BASE YEAR 2003)/(COMPOSITE INDEX FOR FY 2003 IN BASE YEAR 2003)]

```
 Current FY 2001  = (800M)*[0.9909/1.0236]
                  = $774,443
```

Step 2: Compute the inflation.

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        ($800M - $774M = $26M) in Inflation
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SUMMARY:

The following formulas summarize the application of the inflation indices:

1) To express base year 2003 dollars as **constant** dollars for another year, <u>multiply</u> by the <u>compound</u> factor for the year in question.

2) To express base year 2003 dollars as **current** dollars for another year, <u>multiply</u> by the <u>composite</u> factor for the year in question.

3) To express **constant** dollars for a given year as base year 2003 dollars, <u>divide</u> by that year's <u>compound</u> index.

4) To express **current** dollars for a given year as base year 2003 dollars, <u>divide</u> by that year's <u>composite</u> index.

REAL GROWTH OR REAL SPENDING

Real Growth The real growth of a program or appropriation is the actual change in purchasing power between any two fiscal years. It is computed by converting all values or amounts to the same base year (constant dollars) and adjusting for increases/decreases that do not affect purchasing power.

% REAL GROWTH = (Current Year Constant $ – Prior Year Constant$)/Prior Year Constant $

PRIOR YEAR REAL GROWTH

Example: The FY 2003 Army WTCV budget request was $2,249 million and the FY 2002 WTCV column was $2,178 million. The total increase from FY 2003 to FY 2002 would be $71M ($2,249M (FY 2003) – $2,178 (FY 2002) or 3.2% (71M divided by 2,178M). As discussed in the Introduction, this does not reflect a true TOA change due to the reduced purchasing power of the dollar in FY 2003 compared to FY 2002. WTCV is all non-pay.

Find the real growth in dollars and percentage for WTCV from FY 2002 to FY 2003.

How To:

Inflate FY 2002 current dollars to FY 2003 constant dollars before the comparison.

Step 1:

The composite indices in the WTCV table at are 1.0059 for FY 2002 in Base Year 2003 and 1.0236 for FY 2003 in Base Year 2003

CURRENT FY 2003 $ = (CURRENT FY 2002 $) x [(COMPOSITE INDEX FOR FY 2002 IN BY 2003)/(COMPOSITE INDEX FOR FY 2003 IN BASE YEAR 2003)]

    FY03 CONSTANT $ = (2,178)/(1.0059/1.0236)
                            = $2,216

Step 2: Calculate the amount of real growth.

REAL GROWTH AMOUNT = (Current Year Constant$ – Prior Year Constant$)

        33M   = ($2,249M - 2,216M)

<u>Step 4:</u> The formula in Step 1 s used to calculate the percentage real growth:

   % REAL GROWTH = (Current Year Constant$ – Prior Year Constant$)/Prior Year Constant

  % REAL GROWTH = (33M)/2,216M
             = 1.5%

When inflation is factored out of the comparison, the real growth of 1.5%, which is considerably less than the 3.2%. The 3.2% only compares current $ changes between years.

OUTYEAR REAL GROWTH

A similar methodology is used to project real growth % for the outyear comparisons. Again, the FY 2003 Army WTCV budget request was $2,249 million and the FY 2004 WTCV column was $2,563 million.

Step 1

The composite indices in the WTCV table at are 1.0236 for FY 2003 in Base Year 2003 and 1.0423 for FY 2004 in Base Year 2003.

CONSTANT FY 2003 $ = (CURRENT FY 2004 $) x [(COMPOSITE INDEX FOR FY 2004 IN BY 2003)/(COMPOSITE INDEX FOR FY 2003 IN BASE YEAR 2003)]

   FY03 CONSTANT $ = (2,563)/(1.0423/1.0236)
                         = $2,517

<u>Step 2:</u> Calculate the amount of real growth.

REAL GROWTH AMOUNT = (Outyear Constant $ – Prior Year Constant$)

$$268M = (\$2,517M - 2,249M)$$

Step 4: The formula is used to calculate the percentage real growth:

% REAL GROWTH = (Outyear Constant$ – Prior Year Constant$)/Prior Year Constant

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% REAL GROWTH  = (268)/2,249
              = 11.9%
```

Note: As a general rule, in constant dollars conversions from a Base Year of 1.000, the prior years current $ amounts when converted to constant dollars are always greater. When the outyear current dollar $ are converted to constant dollars, the dollar amounts are always less. This rule does not apply when the inflation is negative between years as fuel prices. See National Defense Budget Estimates, Table 5-2.

AN OVERVIEW OF OTHER TYPES OF INFLATION CALCULATIONS

UPDATING TOA ESTIMATES FOR REVISED RATES OF INFLATION. As stated above, DoD publishes revised inflation guidance prior to the President's Budget submission to Congress. The Budget Estimates Submission (BES) is calculated using the previous year's President's Budget inflation rates. The revised inflation nonpay guidance is published in PBD 604. Depending on the administration's revised escalation rates, PBD 604 can either increase or decrease funds from Army appropriations. SAFM-BUC-F does an analysis of PBD 604 comparing DoD adjustments to the Army's anticipated adjustments. In the following example, using the nonpay portion of the MCA appropriation, OMB/DoD forecasts that FY 2003 inflation will drop from 1.6% to 1.3.

Example. Analyze the impact of revised inflation rates on the MCA appropriation from the Budget Estimate Submission (BES) to the President's Budget. The FY 2003 MCA is $1,477M. The pay portion of this TOA is $396M. OMB/DoD has revised the inflation rates for FY 2003 from 1.6% in the BES to 1.3% for the President's Budget. What is the net effect of these revised inflation rates upon MCA non-pay TOA?

HOW TO. Since pay and fuel inflate at different rates subtract the pay portion from the MCA total.

$$\$1,477M - (\$396M \ (pay) = \$1,081M \ (nonpay)$$

Assume Base Year 2000, and that the old composite rate used to construct the BES was 1.0923 based on 1.6% inflation (this was published in the previous year inflation indices), and that the revised composite rate is 1.0854 based on 1.3% inflation.

NEW INFLATED TOA = (OLD INFLATED TOA/OLD COMPOSITE RATE) x NEW COMPOSITE RATE

$$\$YB = (\$1081M/1.0923)*1.0854$$
$$= \$1,074M$$

$1,081M (MCA at 1.6% inflation – $1,074M (MCA new 1.3% inflation) = 7M

Since the rate of inflation dropped .3%, the Army calculated that MCA should be reduced by $7M. In PBD 604, OSD reduced the MCA nonpay TOA by $7M. By independent analysis, the DoD reduction of $7M was in concert with the Army projection. This analysis confirmed that $7M over budgeted for inflation.

PAY INFLATION

The next example replicates the DoD's calculation for computing constant dollar pay adjustments.

Locate the pay raises in the Revised Inflation Guidance memo or Table 5-2 in the National Defense Budget Estimates.

 Civilian Pay Raise:

             FY02=4.6% or 1.046
             FY03=2.6% or 1.026
             FY04=3.4% or 1.034

HOW TO:
FOR FY02, using the MCA civilian pay, what would the pay dollars be in FY03 constant$?

FY02 in Constant FY03$ = Current$/(FY03 Base Year/FY03 Rate of Inflation)

             $406M = $396M/(1.000/1.026)

HOW TO:
FOR FY04: using the MCA civilian pay, what would the pay dollars be in FY03 constant dollars?

FY04 in Constant FY03$ = Current$/(FY03 Base Year*FY04 Rate of Inflation)

           $383M = $396M/(1.000*1.034) = $383M

FUEL INFLATION
The next example replicates the DoD's calculation for computing constant dollar fuel adjustments.

Example: The fuel portion of the AFHO account in FY03 is 3.15M. What is the $3.15M fuel portion for FY02 and FY04 in FY03 constant dollars?

Locate the fuel rates in the Revised Inflation Guidance memo or Table 5-2 in the National Defense Budget Estimates. Fuel inflation is computed differently as the rates represent the difference in fuel prices between years

Fuel Inflation:

            FY02= -1.0% or -.010
            FY03= -16.0% or -.16
            FY04= 0.0% or 0.00

HOW TO:
FOR FY02:

FY02 in CONSTANT FY03= Current$/(FY03 Base Year/(Change Between Years-Rate of inflation for FY03))

    $2.65M = 3.15/(1.000/(1+-.16))
(Unlike other types of inflation, the fuel rate is based on the change in inflation between years.   Another anomaly is that prices will decline in FY03)

HOW TO:
FOR FY04:

FY04 in CONSTANT FY03= Current$/(FY03 Base Year/(Change Between Years-Rate of inflation for FY03))
    $3.15M = 3.15$/(1.000/(1.000-0.00))

(There is no change in price for FY04)

MEDICAL HEALTH CARE ACCRUAL
Medical Health Care Accrual was included in the FY03 President's Budget. This type of inflation only applies to the MILPERS account from FY03 through the outyears.

Example: The MILPERS Medical Health Accrual is 3.301B in
FY03. What are the Medical Health Care Accrual in FY04
and FY05 in FY03 constant dollars?
Locate the CPI-U Medical rate of inflation in the Revised
Inflation Guidance Memo:

            FY03=Base Year 1.000
            FY04=3.9% or 1.039
            FY05=4.0% or 1.040

HOW TO:

FOR FY04:

FY04 in Constant FY03 =Current$/(FY04 Rate of CPI-U
Inflation)

            $3.301B/(1.039) = $3.177B

HOW TO:
FOR FY05:

 FY05 in Constant FY03 = Current$/(FY04 Rate of
Inflation*FY05 Rate of Inflation)

        3.301B/(1.039*1.040) = $3.056B

NORMALIZATION OF TOA GROWTH

In the past, the actual change in purchasing power between years has been referred to as real growth or real spending; however, the real growth calculation does not take into consideration changes to the TOA base year as a result of transfers (e.g. foreign currency, Counter-drug), supplementals, rescissions, etc. These adjustments to TOA are usually for a specific mission. When adjustments are factored (normalized) into the Army TOA, it can portray a more accurate display of the resource levels. What may look as down year in resources may in reality is positive. A substantial transfer out of Army TOA may be responsible for the decline. It is computed by converting all values or amounts to the same base year (constant dollars) and adjusting for increases/decreases that do not affect purchasing power.

Example: In FY02 and FY03, the MILPERS appropriations totaled $30.433B and 35.620B in current dollars (an increase of 5.187B). Knowing that current dollar comparisons are unreliable, when these two years are converted to constant dollars using the total (weighed combination of pay and nonpay) MILPERS factor (.9669) in Enclosure 2, FY02 MILPERS converted to FY02 constant dollars is $31.475B. FY03 as the base year, constant and current dollars = 1.000. Factoring out inflation, the FY03 increases $4,145B over FY02, an increase of 13%. Knowing that the FY03 pay raise is 4.1% and nonpay inflation is 1.3%, the large growth in the MILPERS appropriation cannot completely be attributed to inflation. At this time, additional analysis is required. Beginning in FY03, Medical Health Care Accrual is included in the MILPERS account. In FY03, $3.301B in Medical Health Care Accrual funds was included in the MILPERS TOA. Therefore, when subtracting $3.301B from FY03, our formula for growth would be:
  (FY03 MILPERS TOTAL – FY03 Medical Care Accrual) – (FY02 MILPERS in Constant FY03 $)/FY02 in FY03 Constant $

   (($35.620-$3.301) - $31,475))/$31,475 = 2.7%.

As a caution, the normalization process is subjective and requires information that is not readily

available in reviewing TOA changes or standard rates of information. Normalizing TOA requires documenting historical and current information on supplementals, transfers, etc. An analyst must decide whether an event should or should not be included in a normalization display. At times, simply computing a traditional real growth percentage based on unadjusted TOA may show a large decline or increase which resulted from other factors beside inflation. Other examples of events which may be normalized in comparisons: Desert Storm, Contingency operations in Bosnia and Kosovo, transfer in/out of missions/appropriations, Chem-Demil transferring to the Army in FY98 as the sixth Procurement Account, BRAC becoming an Army Appropriation in FY94, and revolving funds identified as TOA accounts in FY90 and again beginning in FY00

DOD DEFLATORS PUBLISHED IN "NATIONAL DEFENSE BUDGET ESTIMATES FOR FYXXXX" As noted above, the National Defense Budget Estimates is the source document for escalation rates, nonpay outlay rates, and total appropriation constant/current dollar conversion factors. These tables provide a recognized source document for calculating inflation. This document provides selected growth, current and constant dollar historical time series to include individual service TOA, Budget Authority and Outlays from 1945 to the present; military and civilian pay raises since 1945, Federal budget data, and selected US economy-wide indices.

   a.   Two commonly used tables are Table 5-4 and 5-5 – DoD Deflators TOA. These tables provide deflators for general DoD appropriation titles ("Procurement" "MILCON"). The DoD real growth numbers can found in Tables 6-8 to 6-24. The tables have an overall O&M factor, O&M less fuel and pay, procurement, military pay, and nonpay military deflators. These deflators have been calculated for all service appropriations and are not as precise as individual service calculations.

   b.   At Enclosure 2 is a comparison between selected DoD Deflator tables and the Army Deflator table by title. The unique Army deflator table is a calculation of pay, nonpay, fuel, and Medical Health Care Accrual in FY03 Constant dollars

DOD PA&E PRESENTATION ON DISCOUNTED PRESENT VALUE, INFLATION ACCOUNTING, AND SPECIAL ECONOMIC TOPICS

At the following link http://www.ra.pae.osd.mil/adodcas/docs/inflate.pdf is an excellent presentation by Dr. Bryan Jack and Ms Susan Edelman, DoD (PA&E) entitled Discounted Present Value, Inflation Accounting, and Special Economic Topics. The presentation discusses Discounting, Inflation Accounting, Making Budgets Using Deflators, and Special Economic Topics.

ENCLOSURES:
Enclosure 1 - The FY03 nonpay inflation indices for OMA, WTCV, and RDTE.
Enclosure 2 - An extract from National Defense Budget Estimates providing DoD deflators for converting O&M, RDTE, Procurement and Army deflators.
Enclosure 3 – Revised Inflation Guidance Memo, dated 8 Jan 2002

NONPAY INFLATION INDICIES

OMA

FY	ESC. RATE	Base Year 2001 Compound	Base Year 2001 Composite	Base Year 2002 Compound	Base Year 2002 Composite	Base Year 2003 Compound	Base Year 2003 Composite
1990	1.041	0.8039	0.8159	0.7904	0.8023	0.7803	0.7920
1991	1.043	0.8384	0.8504	0.8244	0.8362	0.8138	0.8255
1992	1.030	0.8636	0.8740	0.8491	0.8594	0.8382	0.8484
1993	1.024	0.8843	0.8976	0.8695	0.8826	0.8584	0.8712
1994	1.020	0.9020	0.9157	0.8869	0.9004	0.8755	0.8888
1995	1.019	0.9191	0.9291	0.9038	0.9136	0.8922	0.9019
1996	1.020	0.9375	0.9487	0.9218	0.9328	0.9100	0.9208
1997	1.018	0.9544	0.9597	0.9384	0.9437	0.9264	0.9316
1998	1.007	0.9611	0.9679	0.9450	0.9517	0.9329	0.9395
1999	1.008	0.9688	0.9799	0.9526	0.9635	0.9403	0.9511
2000	1.014	0.9823	0.9940	0.9659	0.9773	0.9535	0.9648
2001	1.018	1.0000	1.0123	0.9833	0.9953	0.9707	0.9826
2002	1.017	1.0170	1.0292	1.0000	1.0120	0.9872	0.9990
2003	1.013	1.0302	1.0457	1.0130	1.0282	1.0000	1.0150
2004	1.017	1.0477	1.0643	1.0302	1.0465	1.0170	1.0330
2005	1.018	1.0666	1.0841	1.0488	1.0660	1.0353	1.0523
2006	1.019	1.0869	1.1047	1.0687	1.0862	1.0550	1.0723
2007	1.019	1.1075	1.1257	1.0890	1.1069	1.0750	1.0926

WTCV

FY	ESC. RATE	Base Year 2001 Compound	Base Year 2001 Composite	Base Year 2002 Compound	Base Year 2002 Composite	Base Year 2003 Compound	Base Year 2003 Composite
1990	1.041	0.8039	0.8544	0.7904	0.8401	0.7803	0.8293
1991	1.043	0.8384	0.8801	0.8244	0.8654	0.8138	0.8543
1992	1.030	0.8636	0.8989	0.8491	0.8839	0.8382	0.8726
1993	1.024	0.8843	0.9167	0.8695	0.9013	0.8584	0.8898
1994	1.020	0.9020	0.9333	0.8869	0.9177	0.8755	0.9060
1995	1.019	0.9191	0.9492	0.9038	0.9333	0.8922	0.9213
1996	1.020	0.9375	0.9620	0.9218	0.9459	0.9100	0.9338
1997	1.018	0.9544	0.9707	0.9384	0.9545	0.9264	0.9422
1998	1.007	0.9611	0.9823	0.9450	0.9658	0.9329	0.9534
1999	1.008	0.9688	0.9898	0.9526	0.9732	0.9403	0.9608
2000	1.014	0.9823	1.0067	0.9659	0.9898	0.9535	0.9771
2001	1.018	1.0000	1.0209	0.9833	1.0038	0.9707	0.9909
2002	1.017	1.0170	1.0363	1.0000	1.0190	0.9872	1.0059
2003	1.013	1.0302	1.0546	1.0130	1.0369	1.0000	1.0236
2004	1.017	1.0477	1.0738	1.0302	1.0558	1.0170	1.0423
2005	1.018	1.0666	1.0940	1.0488	1.0757	1.0353	1.0619
2006	1.019	1.0869	1.1148	1.0687	1.0962	1.0550	1.0821

| 2007 | 1.019 | 1.1075 | 1.1360 | 1.0890 | 1.1170 | 1.0750 | 1.1027 |

RDTE

FY	ESC. RATE	Base Year 2001 Compound	Base Year Composite	Base Year 2002 Compound	Base Year Composite	Base Year 2003 Compound	Base Year Composite
1990	1.041	0.8039	0.8270	0.7904	0.8132	0.7803	0.8027
1991	1.043	0.8384	0.8582	0.8244	0.8439	0.8138	0.8330
1992	1.030	0.8636	0.8782	0.8491	0.8636	0.8382	0.8525
1993	1.024	0.8843	0.8990	0.8695	0.8839	0.8584	0.8726
1994	1.020	0.9020	0.9157	0.8869	0.9004	0.8755	0.8888
1995	1.019	0.9191	0.9335	0.9038	0.9179	0.8922	0.9061
1996	1.020	0.9375	0.9501	0.9218	0.9343	0.9100	0.9223
1997	1.018	0.9544	0.9610	0.9384	0.9449	0.9264	0.9328
1998	1.007	0.9611	0.9690	0.9450	0.9528	0.9329	0.9405
1999	1.008	0.9688	0.9804	0.9526	0.9640	0.9403	0.9516
2000	1.014	0.9823	0.9958	0.9659	0.9792	0.9535	0.9666
2001	1.018	1.0000	1.0125	0.9833	0.9956	0.9707	0.9828
2002	1.017	1.0170	1.0281	1.0000	1.0109	0.9872	0.9979
2003	1.013	1.0302	1.0458	1.0130	1.0283	1.0000	1.0151
2004	1.017	1.0477	1.0644	1.0302	1.0466	1.0170	1.0332
2005	1.018	1.0666	1.0842	1.0488	1.0661	1.0353	1.0524
2006	1.019	1.0869	1.1048	1.0687	1.0863	1.0550	1.0724
2007	1.019	1.1075	1.1258	1.0890	1.1070	1.0750	1.0928

Enclosure 1

OVERALL DOD/ARMY DEFLATORS – TOA

FACTORS TO CONVERT CURRENT DOLLARS TO FY 2003 CONSTANT DOLLARS

MILPERS

FY	DOD MILPERS	Army MILPERS
1990	.6380	.6377
1991	.6710	.6738
1992	.6881	.6681
1993	.7186	.7184
1994	.7364	.7360
1995	.7545	.7546
1996	.7714	.7716
1997	.7944	.7950
1998	.8239	.8238
1999	.8493	.8490
2000	.8870	.8867
2001	.9165	.9161
2002	.9671	.9669
2003	1.0000	1.0000
2004	1.0309	1.0309
2005	1.0630	1.0630
2006	1.0958	1.0955
2007	1.1305	1.1298

O&M

FY	DOD O&M	Army O&M
1990	.7170	.7226
1991	.7778	.7738
1992	.7752	.7618
1993	.7849	.7849
1994	.8054	.7989
1995	.8211	.8215
1996	.8392	.8420
1997	.8562	.8578
1998	.8792	.8775
1999	.8990	.9066
2000	.9177	.9296
2001	.9545	.9564
2002	.9807	.9826
2003	1.0000	1.0000
2004	1.0248	1.0235
2005	1.0511	1.0482
2006	1.0791	1.0734
2007	1.1085	1.0990

Army O&M includes OMA, OMAR, OMNG, ERA, NBPRP

ENCLOSURE 2

RDTE

FY	DOD	ARMY
1990	.7806	.7526
1991	.8090	.7793
1992	.8317	.8084
1993	.8452	.8275
1994	.8623	.8336
1995	.8794	.8531
1996	.8962	.8654
1997	.9098	.8807
1998	.9203	.9000
1999	.9311	.9157
2000	.9486	.9395
2001	.9670	.9616
2002	.9845	.9831
2003	1.0000	1.0000
2004	1.0186	1.0212
2005	1.0384	1.0439
2006	1.0592	1.0668
2007	1.0806	1.0902

PROCUREMENT

FY	DOD	ARMY
1990	.7997	.8002
1991	.8237	.8245
1992	.8429	.8434
1993	.8600	.8605
1994	.8876	.8768
1995	.8911	.8927
1996	.9047	.9062
1997	.9153	.9155
1998	.9247	.9251
1999	.9375	.9378
2000	.9527	.9533
2001	.9683	.9689
2002	.9838	.9838
2003	1.0000	1.0000
2004	1.0181	1.0181
2005	1.0372	1.0372
2006	1.0569	1.0569
2007	1.0770	1.0770

Army Procurement includes: ACFT, MSLS, WTCV, AMMMO, OPA and CHEM-DEMIL

TOTAL ARMY

FY	DOD	ARMY
1990	.7223	.7022
1991	.7593	.7414
1992	.7700	.7422
1993	.7884	.7671

1994	.8052	.7829
1995	.8212	.8024
1996	.8394	.8232
1997	.8567	.8407
1998	.8780	.8627
1999	.8979	.8891
2000	.9215	.9173
2001	.9495	.9434
2002	.9786	.9769
2003	1.0000	1.0000
2004	1.0240	1.0255
2005	1.0491	1.0520
2006	1.0752	1.0788
2007	1.1019	1.1060

Sources:
DoD Deflator National Defense Budget Estimates for FY03 Table 5-4
Army Deflator: OSD Detailed Report FY03

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS
CHAIRMAN OF THE JOINT CHIEFS OF STAFF
UNDER SECRETARIES OF DEFENSE
ASSISTANT SECRETARIES OF DEFENSE
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE
INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE
DIRECTOR, OPERATIONAL TEST AND EVALUATION
COMMANDER IN CHIEF, U.S. SPECIAL OPERATIONS
   COMMAND
COMMANDER IN CHIEF, U.S. TRANSPORTATION COMMAND
ASSISTANTS TO THE SECRETARY OF DEFENSE
DIRECTORS OF THE DEFENSE AGENCIES
DIRECTOR, WASHINGTON HEADQUARTERS SERVICES
DIRECTOR, INTELLIGENCE COMMUNITY STAFF

SUBJECT: Revised Inflation Guidance

The attached inflation and spendout rates supersede those used in preparation of the President's fiscal year (FY) 2002 Budget.

These rates are to be reflected in the FY 2003 President's Budget submission and supporting congressional justification materials; the FY 2004-FY 2009 Program Objective Memoranda (POM)/budget submissions; and the Selected Acquisition Reports (SARs) for December 2001 in accordance with guidelines and procedures contained in DoD Regulation 5000.2-R, dated June 2001, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs."

Lawrence J. Lanzillotta
Principal Deputy and Deputy Under Secretary
of Defense for Management Reform

Attachments
As stated

PRICE ESCALATION INDICES
(Annual Rates in Percentages)

OUTLAYS

Fiscal Year	Proc.	RDT&E	Mil Con FH Const	O&M (Excl Fuel & DHP)	O&M Fuel	Mil [1]/ Pers Non-Pay	[5]/ DHP	CPI-U Medical
2000	1.4	1.4	1.4	1.4	-25.3	1.4	3.7	3.9
2001	1.8	1.8	1.8	1.8	62.9	1.8	4.0	4.5
2002	1.7	1.7	1.7	1.7	-1.0	1.7	3.8	3.7
2003	1.3	1.3	1.3	1.3	-16.0	1.3	6.7	3.9
2004	1.7	1.7	1.7	1.7	0.0	1.7	6.7	3.9
2005	1.8	1.8	1.8	1.8	1.2	1.8	6.8	4.0
2006	1.9	1.9	1.9	1.9	2.4	1.9	6.8	4.0
2007 **3**/	1.9	1.9	1.9	1.9	2.3	1.9	6.8	4.0

BUDGET AUTHORITY 2/

Fiscal Year	Proc.	RDT&E	Mil Con FH Const	O&M (Excl Fuel & DHP)	O&M Fuel	Mil [1]/ Pers Non-Pay	[5]/ DHP	CPI-U Medical
2000	1.6	1.6	1.6	1.5	-25.3	1.4	3.8	3.9
2001	1.7	1.7	1.7	1.7	62.9	1.8	4.2	4.5
2002	1.5	1.5	1.6	1.6	-1.0	1.7	4.6	3.7
2003	1.6	1.5	1.6	1.5	-16.0	1.3	6.7	3.9
2004	1.8	1.8	1.8	1.8	0.0	1.7	6.7	3.9
2005	1.9	1.8	1.9	1.8	1.2	1.8	6.8	4.0
2006	1.9	1.9	1.9	1.9	2.4	1.9	6.8	4.0
2007 **3**/	1.9	1.9	1.9	1.9	2.3	1.9	6.8	4.0

PAY RAISE ASSUMPTIONS 4/

	ECI	Military	Civilian
FY 2002	4.1	6.9 *	4.6
FY 2003	3.6	4.1	2.6
FY 2004	3.4	3.4	3.4
FY 2005	3.4	3.4	3.4
FY 2006	3.4	3.4	3.4
FY 2007 **3**/	3.4	3.4	3.4

* Includes targeted pay raises.

1/ Not to be used to inflate accounts fixed by statute.

2/ These are composite rates at the title level. Inflation rates for specific accounts are a function of the spend out profiles and will vary within each title.

3/ These rates are to be used for all years beyond 2007.

4/ All pay raises effective January 1.

5/ Private sector care elements of TRICARE at flat rate of 7%; Pharmacy costs at flat rate of 10.5%

OUTLAY RATES TO BE USED FOR INCREMENTAL CHANGES IN BA PURCHASES
(as Percent of BA Purchases)

	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR	FIFTH YEAR	SIXTH YEAR	SEVENTH YEAR
MILITARY PERSONNEL							
Army	75.59	19.88	4.53				
Navy	88.69	8.34	2.98				
Marines	83.42	10.80	5.78				
Air Force	76.69	19.48	3.83				
Army Reserve	67.64	22.59	9.78				
Navy Reserve	69.51	17.30	13.19				
Marine Reserve	72.41	22.89	4.70				
AF Reserve	76.36	16.39	7.25				
Army Guard	69.91	23.64	6.45				
AF Guard	83.86	14.12	2.02				
OPERATION AND MAINTENANCE							
Army	38.97	43.62	10.17	7.24			
Navy	62.05	28.92	4.52	4.51			
Marines	48.27	42.06	7.37	2.30			
Air Force	59.81	31.50	4.92	3.77			
Defense Wide	56.39	34.96	4.33	4.32			
Army Reserve	53.21	37.76	6.57	2.46			
Navy Reserve	54.54	35.36	3.61	6.49			
Marine Reserve	59.72	27.28	10.20	2.80			
AF Reserve	47.53	40.99	11.48				
Army Guard	53.70	37.40	8.90				
AF Guard	55.20	38.83	5.97				
Inspect General	50.86	40.95	2.46	5.73			
Drug Interdict	74.50	19.90	3.30	1.10	1.20		
Court Mil Appeals	57.68	22.79	19.53				
Environmental	22.00	45.00	22.00	6.00	5.00		
Def Health Program	75.78	16.77	4.88	2.57			
Human Assistance	22.00	46.70	23.20	5.00	3.10		
PROCUREMENT							
Army							
Army Aircraft	25.10	42.50	22.00	5.00	5.40		
Army Missiles	8.20	30.00	51.00	6.20	4.60		
Army W&TCV	14.00	52.00	25.00	6.00	1.00	2.00	
Army Ammunition	20.00	45.00	22.00	8.00	2.00	3.00	
Army Other	25.90	50.30	15.70	4.20	1.50	2.40	
Defense Agencies/Defense Wide							
Procurement Def Wide	33.50	37.20	18.70	8.20	2.40		
Def Prod Act	0.10	9.90	30.00	40.00	15.00	5.00	
Chemical Agents	59.96	30.10	4.83	2.77	2.34		

OUTLAY RATES TO BE USED FOR INCREMENTAL CHANGES IN BA PURCHASES
(as Percent of BA Purchases)

	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR	FIFTH YEAR	SIXTH YEAR	SEVENTH YEAR
Navy							
Navy Aircraft	16.00	39.50	32.20	5.90	4.10	2.30	
Navy Weapons	20.50	31.30	25.30	14.00	5.70	3.20	
Navy Ships	7.29	17.88	22.51	19.42	13.25	9.83	9.82
Navy Ammo	13.60	36.70	31.40	8.60	7.50	2.20	
Navy Other	36.00	39.36	16.10	4.30	2.00	2.24	
Procurement MC	25.00	37.00	25.90	8.70	1.50	1.90	
Air Force							
AF Aircraft	24.50	42.00	18.90	8.00	3.00	3.60	
AF Missiles	35.37	37.76	16.14	4.89	2.81	3.03	
AF Ammo	10.30	44.10	28.20	12.30	2.60	2.50	
AF Other	60.29	28.32	7.84	1.91	1.64		
RDT&E							
Army	38.83	45.91	8.83	3.15	3.28		
Navy	52.33	38.19	6.13	1.50	1.85		
Air Force	60.18	32.26	4.37	1.68	1.51		
Defense Wide	47.70	42.35	7.59	2.36			
Dir OT&E	44.30	43.70	6.00	1.80	4.20		
MILITARY CONSTRUCTION							
Mil Con Army	5.10	38.10	31.20	12.80	8.80	4.00	
Mil Con Navy	11.00	50.30	28.00	4.20	4.00	2.50	
Mil Con Air Force	13.00	47.40	30.50	5.00	1.50	2.60	
Mil Con Defense Wide	13.50	43.00	22.30	12.50	5.00	3.70	
Mil Con Army Guard	7.20	38.30	22.00	17.40	11.10	4.00	
Mil Con Army Reserve	12.60	38.40	25.50	12.20	8.00	3.30	
Mil Con Air Guard	8.80	50.70	23.40	10.00	4.00	3.10	
Mil Con Navy Reserve	18.10	30.60	20.00	13.60	12.10	5.60	
Mil Con AF Reserve	8.50	55.00	27.50	5.30	2.00	1.70	
NATO	50.00	25.00	25.00				
Base Closure, A	26.20	43.40	14.00	10.00	3.90	2.50	
Base Closure, N	38.60	32.50	13.90	10.20	2.10	2.70	
Base Closure, AF	40.00	37.00	18.00	3.00	2.00	0.00	
Base Closure, DE	11.10	45.30	17.90	14.50	5.40	5.80	
BRAC Environ	75.50	18.90	3.10	2.50			
FAMILY HOUSING							
Opns & Debt Army	69.49	23.33	5.03	2.15			
Opns & Debt Navy	59.97	29.90	4.05	6.08			
Opns & Debt Air Force	66.96	22.88	4.27	5.89			
Opns & Debt Def Wide	70.00	14.00	8.00	3.00	5.00		
FH Const Army	0.90	30.00	37.00	21.00	8.00	3.10	
FH Const Navy	5.00	31.30	28.40	17.00	8.00	10.30	
FH Const AF	7.50	46.00	20.00	15.00	8.00	3.50	
FH Const Def Wide	7.00	12.00	20.00	42.00	19.00	0.00	
Def Sealift Fund	46.40	31.30	7.20	5.00	4.00	6.10	