



Automated Cost Estimating Integrated Tools

# Insight Into Inflation: Creating Custom Indices

ACEIT Users Workshop  
Sep 18-19, 2012  
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Each year the Office of the Secretary of Defense (OSD) publishes a table of inflation rates, outlay rates and preliminary military and civilian pay raise assumptions. These rates are used to prepare the President's Budget and to support congressional justification materials.

Unfortunately, many ACEIT users are realizing that their program's actual inflation is different from the rates handed down from OSD. As a result, users need to create indices that more accurately reflect their program's true inflation.

This presentation will cover all the steps necessary to prepare custom indices:

- Where do the indices in ACE come from?
- Why and how would I create them?
- What tools do I use to create these new indices?
- How do I use them once they're created?



- **Base Year (BY)**
  - A reference or starting year - the value of a dollar is 1
- **Escalation (Inflation) Rate**
  - The percent change in money's value from one year to another
- **Outlay Rate**
  - Percentages per year telling how funds are expended for a particular appropriation
- **Raw (Compound) Indices**
  - Indices calculated by compounding the inflation rate each year
- **Weighted (Composite) Indices**
  - Indices calculated using raw indices and outlay rates



# Where do the Indices Come From?



## ■ OSD releases inflation guidance each year



COMPTROLLER

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
1100 DEFENSE PENTAGON  
WASHINGTON, DC 20301-1100

FEB 10 2012

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS  
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DEPUTY CHIEF MANAGEMENT OFFICER  
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DIRECTORS OF THE DOD FIELD ACTIVITIES

SUBJECT: Inflation Guidance - Fiscal Year (FY) 2013 President's Budget

The attached inflation rates, outlay rates, and preliminary military and civilian pay raise assumptions supersede those used in preparation of the FY 2012 President's Budget. These rates are to be reflected in the FY 2013 President's Budget submission, as well as supporting congressional justification materials.



# Background (cont)

## ■ Guidance shows inflation rates

## ■ And outlay profiles

### Inflation Guidance - FY 2013 President's Budget

#### PRICE ESCALATION INDICES (Annual Rates in Percentages)

Fiscal Year	Proc	RDT&E	Mil Con <sup>1/</sup> FH Const	O&M (Excl Fuel and DHP)	Fuel	Mil Pers <sup>2/</sup> Non-Pay (Excl Med Accrual)	CPI-U Medical
<u>OUTLAYS</u>							
2011	2.0	2.0	2.0	2.0	24.2	2.0	3.0
2012	1.9	1.9	1.9	1.9	15.3	1.9	3.2
2013	1.7	1.7	1.7	1.7	-3.1	1.7	3.6
2014	1.6	1.6	1.6	1.6	-12.9	1.6	3.7
2015	1.8	1.8	1.8	1.8	-0.3	1.8	3.7
2016	1.8	1.8	1.8	1.8	0.3	1.8	3.7
2017	1.8	1.8	1.8	1.8	0.6	1.8	3.8

#### BUDGET AUTHORITY<sup>3/</sup>

2011	1.8	1.9	1.8	1.9	24.2	2.0	3.1
2012	1.7	1.8	1.7	1.8	15.3	1.9	3.3
2013	1.7	1.7	1.7	1.7	-3.1	1.7	3.6
2014	1.8	1.7	1.8	1.7	-12.9	1.7	3.7
2015	1.8	1.8	1.8	1.8	-0.3	1.8	3.7
2016	1.8	1.8	1.8	1.8	0.3	1.8	3.7
2017	1.8	1.8	1.8	1.8	0.6	1.8	3.8

#### PAY RAISE ASSUMPTIONS<sup>4/</sup>

	ECI <sup>5/</sup>	Military	Civilian
2011	1.4	1.4	0.0
2012	1.6	1.6	0.0
2013	1.7	1.7	0.5
2014	-	1.7	1.7
2015	-	0.5	0.5
2016	-	1.0	1.0
2017	-	1.5	1.5

### Outlay Rates To Be Used For Incremental Changes in BA Purchases

(As Percent of BA Purchases; Excludes Pay and Fuel Dollars)

	FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR	FIFTH YEAR	SIXTH YEAR	SEVENTH YEAR
<u>Procurement - Air Force</u>							
Air Force Aircraft	7.00	40.00	27.00	14.00	8.00	2.50	1.50
Air Force Missiles	30.00	31.00	23.00	8.00	4.00	2.00	2.00
Air Force Ammunition	4.50	45.00	30.50	9.20	5.00	3.00	2.80
Air Force Other	60.00	25.00	8.00	3.00	2.00	1.00	1.00
<u>Procurement - Defense Wide</u>							
Procurement, Def Wide	24.00	38.00	24.00	7.00	3.50	2.00	1.50
NG Equipment	3.00	20.00	40.00	27.00	10.00		
Defense Prod Act	59.00	25.00	16.00				
Chemical Demil	53.00	30.00	15.00	2.00			



# Background (cont)

## Services use this guidance to create inflation tables

APN = Aircraft Procurement, Navy (1506)

NAVY Base Year = 2012 18-Jul-12

Fiscal Year	Inflation Rate %	Raw Index	Weighted Index	Budget Year Index	Budget Year Inflation Rate %
1970	3.93%	0.1843	0.1948	0.1890	
1971	4.55%	0.1926	0.2030	0.1970	4.24%
1972	3.83%	0.2000	0.2127	0.2064	4.78%
1973	4.16%	0.2083	0.2347	0.2276	10.30%
1974	5.77%	0.2204	0.2459	0.2386	4.80%
1975	8.81%	0.2398	0.2594	0.2517	5.50%
1976	6.59%	0.2556	0.2768	0.2685	6.69%
1977	3.56%	0.2647	0.2928	0.2841	5.79%
1977	3.78%	0.2747	0.3069	0.2977	4.80%
1978	6.80%	0.2934	0.3366	0.3265	9.68%
1979	8.72%	0.3190	0.3765	0.3653	11.86%
1980	11.80%	0.3566	0.4200	0.4075	11.56%
1981	11.60%	0.3980	0.4676	0.4536	11.33%
1982	14.30%	0.4549	0.5080	0.4928	8.63%
1983	9.00%	0.4958	0.5404	0.5242	6.38%
1984	8.00%	0.5355	0.5621	0.5453	4.02%
1985	3.40%	0.5537	0.5784	0.5611	2.90%
1986	2.80%	0.5692	0.5960	0.5782	3.05%
1987	2.70%	0.5845	0.6169	0.5985	3.51%
1988	3.00%	0.6021	0.6437	0.6245	4.35%
1989	4.20%	0.6274	0.6695	0.6495	4.00%
1990	4.00%	0.6525	0.6926	0.6719	3.45%
1991	4.30%	0.6805	0.7125	0.6912	2.87%
1992	2.80%	0.6996	0.7285	0.7067	2.25%
1993	2.70%	0.7185	0.7421	0.7199	1.86%
1994	2.00%	0.7328	0.7558	0.7332	1.85%
1995	1.90%	0.7467	0.7680	0.7450	1.61%
1996	2.00%	0.7617	0.7788	0.7555	1.40%
1997	1.80%	0.7754	0.7855	0.7620	0.86%
1998	0.70%	0.7808	0.7946	0.7708	1.16%
1999	0.80%	0.7871	0.8048	0.7807	1.28%
2000	1.40%	0.7981	0.8155	0.7911	1.33%
2001	1.80%	0.8124	0.8252	0.8005	1.19%
2002	0.80%	0.8189	0.8356	0.8106	1.26%
2003	1.00%	0.8271	0.8523	0.8268	2.00%

OPR: SAF / FMCEE

Date of OSD Inflation Rates: 10-Feb-12

Date of SAF/FMCEE Issue: 5-Mar-12

Date of SMC/FMC Revised: 7-Mar-12

**USAF Raw Inflation Indices  
Based on OSD Raw Inflation Rates  
Base Year (FY) 2009**

Fiscal Year	Military Compensation			Retirement (3500)	General Services & Wage Board Pay (3400)	Operations & Maint. Non-Pay, Non-POL (3400)	Research, Develop., Testing, Evaluation (3600)	Military Construct. (3300)	Aircraft & Missile Procurement (3010/20)	Other Procurement (3080)	Fuel
	Pay Base (3500)	Other Expenses (3500)	Total (3500)		General Services & Wage Board Pay (3400)	Operations & Maint. Non-Pay, Non-POL (3400)	Research, Develop., Testing, Evaluation (3600)	Military Construct. (3300)	Aircraft & Missile Procurement (3010/20)	Other Procurement (3080)	
1949	0.053	0.097	0.058	0.100	0.050	0.124	0.127	0.124	0.116	0.126	0.068
1950	0.060	0.101	0.064	0.096	0.053	0.122	0.125	0.122	0.114	0.124	0.067
1951	0.063	0.109	0.065	0.155	0.052	0.130	0.133	0.130	0.122	0.132	0.073
1952	0.063	0.109	0.068	0.152	0.056	0.134	0.137	0.134	0.126	0.136	0.070
1953	0.067	0.110	0.071	0.154	0.057	0.137	0.139	0.137	0.128	0.139	0.071
1954	0.067	0.108	0.071	0.144	0.060	0.138	0.141	0.138	0.129	0.140	0.070
1955	0.068	0.111	0.073	0.152	0.064	0.140	0.143	0.140	0.131	0.142	0.074
1956	0.072	0.115	0.077	0.163	0.069	0.144	0.147	0.144	0.135	0.146	0.078
1957	0.071	0.120	0.076	0.169	0.072	0.149	0.152	0.149	0.140	0.152	0.083
1958	0.075	0.132	0.081	0.171	0.081	0.153	0.156	0.153	0.143	0.155	0.084
1959	0.080	0.134	0.085	0.183	0.086	0.156	0.159	0.156	0.146	0.158	0.086



# System Inflation Indices

■ **ACEIT contains system-provided databases containing OSD inflation indices for several Government agencies**

- Air Force
- Army
- Def Agency
- FAA
- MARAD
- NASA
- NAVSEA
- Navy
- USCG
- USMC

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**Inflation Indices 2012**

The installation file below will update your ACEIT system inflation database to include the latest version of the 2012 inflation indices.

In general, inflation rates have decreased slightly; the outlay rates/profiles have changed for several appropriations. Users will see a slight decrease in their budget estimates. [Download and installation instructions.](#)

The inflation indices are provided for use with ACEIT 7.0 and higher as of 13 March 2012.

**Available Indices by Agency and Date (As of 13 March 2012):**

Agency	2012*	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Air Force	X	X	X	X	X	X	X	X	X	X	X
Army	X	X	X	X	X	X	X	X	X	X	X
Def Agency	X	X	X	X	X	X	X	X	X	X	X
FAA										X	X
MARAD	X	X	X	X	X	X	X	X	X	X	X
NASA	X	X	X	X	X	X	X			X	X
NAVSEA	X	X	X	X	X	X	X	X	X	X	X
NAVY	X	X	X	X	X	X	X	X	X	X	X
NRO	X	X									
SOCOM		X	X								
USMC	X	X	X	X	X	X	X	X	X	X	X
USCG	X	X	X	X	X	X	X	X			
DoFA/Australia			X**				X	X	X	X	X

\* See below for details on all the indices that have been updated so far. Remember that the 2012 table contains the entire set of indices, but some of the rates are from the last available update.

■ **These indices are updated each year as they are released by OSD**

- ACEIT users with up-to-date DMS can download these updates from ACEIT.com
- These updates are self-installing programs which update the ACEIT system database to contain the latest system inflation indices



# Why and How do I create my own indices?



■ **There are many reasons you may need to create custom indices**

- The program is experiencing inflation at a different rate than what is reported by OSD
- You want future costs to reflect greater inflation than predicted
- Others?



■ **You need three pieces of information in order to manually calculate inflation indices**

1. Base year to create indices for, e.g., 2012
2. Escalation rate(s)
  1. You can have a single escalation rate, e.g., 3% per year
  2. You can have escalation rates that change each year, e.g., 2010 = 2%, 2011 = 2.2%, 2012 = 2.5%, etc.
3. Outlay Profiles (optional)
  1. For appropriations where all the money appropriated in one year gets spent in that year, outlay rates don't exist, e.g., Military Pay
  2. Number of years of outlay rates depend on life cycle phase
    - Typically Procurement contains the greatest number of outlay years; O&M contains the fewest
  3. Outlay rates add up to 100%



# Calculating Raw Indices

- The equation to calculate the index ( $I_n$ ) from base year  $b$  to year  $n$  is

- $I_n = (1+E_{b+1})*(1+E_{b+2})*...*(1+E_{n-1})*(1+E_n)$ 
  - where  $E_n$  is the escalation rate for year  $n$ .

- Example: Create index to inflate costs to 2015 from base year 2012

- $I_{2015} = (1+E_{2013})*(1+E_{2014})*(1+E_{2015})$
- Assume  $E_{2013} = 1.7\%$ ,  $E_{2014} = 1.6\%$ , and  $E_{2015} = 1.8\%$
- So  $I_{2015} = (1 + .017) * (1 + .016) * (1 + .018) = 1.0519$
- This means that you need to add 5.19% inflation to go from 2012 to 2015



# What are Outlay Rates?

- It takes time for the DoD to spend a given amount of money
- Funds, though obligated in one year, will be expended (or spent) over several subsequent years
- Outlay rates represent the percent of total obligation authority (TOA) expended in any particular year

Fiscal Year	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 8	Total
2010	32.77%	48.89%	12.22%	3.42%	1.83%	0.87%	0.00%	100.00%
2011	25.13%	55.50%	12.91%	3.61%	1.94%	0.91%	0.00%	100.00%
2012	24.31%	56.11%	13.05%	3.65%	1.96%	0.92%	0.00%	100.00%
2013	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2014	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2015	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2016	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2017	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2018	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2019	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2020	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2021	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2022	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2023	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2024	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%
2025	14.55%	56.53%	22.35%	3.68%	1.97%	0.92%	0.00%	100.00%



# Why we need Weighted Indices

- When applying an expenditure profile some money is spent in out years
- Out years have inflation which decreases the purchasing power
- Deflating using the yearly raw indices gives adjusted (BY) value

	FY 2012	FY 2013	FY 2014	FY 2015	Total
Total Funds Awarded	\$500.00				\$500.00
Outlay Rates	20%	50%	20%	10%	100%
Time Phased Costs	\$100.00	\$250.00	\$100.00	\$50.00	\$500.00
Raw Inflation Index	1.0000	1.0170	1.0333	1.0519	
Constant FY 2012 Equivalent	\$100.00	\$245.82	\$96.78	\$47.53	\$490.14

- Our real purchasing power is only \$490.14
- If we want \$500 of purchasing power throughout our spending period, we must begin with more money



# Why we need Weighted Indices

- We need to account for the additional inflation that occurs as the money is spent
- Do this by inflating the time phased costs using the yearly raw indices

	FY 2012	FY 2013	FY 2014	FY 2015	Total
Desired Purchasing Power	\$500.00				\$500.00
Outlay Rates	20%	50%	20%	10%	100%
Time Phased Costs	\$100.00	\$250.00	\$100.00	\$50.00	\$500.00
Raw Inflation Index	1.0000	1.0170	1.0333	1.0519	
Inflated Costs	\$100.00	\$254.25	\$103.33	\$52.59	\$510.17

- In order to get \$500 of purchasing power over our spending period we need \$510.17 awarded in the first year



# Calculating Weighted Indices

## ■ There are two different formulas used to calculate the weighted inflation index

- The general formula to calculate weighted index (WI), for year n, is defined as

- $WI_n = 1 / ((O_{(1)n} / I_n) + (O_{(2)n+1} / I_{n+1}) + \dots + (O_{(p)n} / I_{n+(p-1)}))$

- The Army and selected other services use the following equation

- $WI_n = (O_{(1)n} * I_n) + (O_{(2)n+1} * I_{n+1}) + \dots + (O_{(p)n} * I_{n+(p-1)})$

$O_{(p)n}$  is the decimal outlay percentage for out year p, in year n.

$I_n$  is the raw index for year n

## ■ The general formula is more accurate because the outlay profile is computed from and applies to then year dollars rather than constant year dollars



# How do you get from here

## Inflation Guidance - FY 2013 President's Budget

### PRICE ESCALATION INDICES (Annual Rates in Percentages)

Fiscal Year	Proc	RDT&E	Mil Con <sup>1/</sup> FH Const	O&M (Excl Fuel and DHP)	Fuel	Mil Pers <sup>2/</sup> Non-Pay (Excl Med Accrual)	OUTLAYS	
2011	2.0	2.0	2.0	2.0	24.2	2.0		
2012	1.9	1.9	1.9	1.9	15.3	1.9		
2013	1.7	1.7	1.7	1.7	-3.1	1.7		
2014	1.6	1.6	1.6	1.6	-12.9	1.6		
2015	1.8	1.8	1.8	1.8	-0.3	1.8		
2016	1.8	1.8	1.8	1.8	0.3	1.8		
2017	1.8	1.8	1.8	1.8	0.6	1.8		

# to here?

### APN = Aircraft Procurement, Navy (1506)

NAVY Base Year = 2012 1-Aug-12					
Fiscal Year	Inflation Rate %	Raw Index	Weighted Index	Budget Year Index	Budget Year Inflation Rate %
2011	2.00%	0.9814	1.0133	0.9830	1.81%
2012	1.90%	1.0000	1.0308	1.0000	1.73%
2013	1.70%	1.0170	1.0485	1.0172	1.72%
2014	1.60%	1.0333	1.0671	1.0352	1.77%
2015	1.80%	1.0519	1.0863	1.0538	1.80%
2016	1.80%	1.0708	1.1058	1.0728	1.80%
2017	1.80%	1.0901	1.1257	1.0921	1.80%
2018	1.80%	1.1097	1.1460	1.1118	1.80%
2019	1.80%	1.1297	1.1666	1.1318	1.80%
2020	1.80%	1.1500	1.1876	1.1521	1.80%
2021	1.80%	1.1707	1.2090	1.1729	1.80%
2022	1.80%	1.1918	1.2308	1.1940	1.80%
2023	1.80%	1.2132	1.2529	1.2155	1.80%
2024	1.80%	1.2351	1.2755	1.2374	1.80%

### Procurement - Navy

Navy Aircraft	13.00	35.00	26.50	14.00	7.00	3.00	1.50
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## ■ Use escalation rates to calculate raw indices

- Base Year = 2012

Escalation Rates

2011	2.0%
2012	1.9%
2013	1.7%
2014	1.6%
2015	1.8%
2016	1.8%
2017	1.8%



Calculated Inflation Indices

	Raw
2011	0.981354
2012	1
2013	1.017
2014	1.033272
2015	1.051871
2016	1.070805
2017	1.090079
2018	1.1097
2019	1.129675
2020	1.150009
2021	1.170709
2022	1.191782
2023	1.213234
2024	1.235072

$$R_{2011} = R_{2012} / (1 + E_{2012}) = 1 / 1.019$$

$$R_{2012} = 1.0$$

$$R_{2013} = R_{2012} * (1 + E_{2013}) = 1 * 1.017$$

$$R_{20xx} = R_{20xx-1} * (1 + E_{2017})$$

For xx = 17 through 24

$$R_{2017} = 1.0708 * 1.018$$

## ■ Use raw indices and outlay rates to calculate weighted indices

	Raw
2011	0.981354
2012	1
2013	1.017
2014	1.033272
2015	1.051871
2016	1.070805
2017	1.090079
2018	1.1097
2019	1.129675
2020	1.150009
2021	1.170709
2022	1.191782
2023	1.213234
2024	1.235072

Outlay Rates						
First Year	Second Year	Third Year	Fourth Year	Fifth Year	Sixth Year	Seventh Year
13.0%	35.0%	26.5%	14.0%	7.0%	3.0%	1.5%



	Weighted
2011	1.013318
2012	1.030798
2013	1.048482
2014	1.067073
2015	1.086281
2016	1.105834
2017	1.125739
2018	1.146002

$$W_{2012} = 1 / (O_{Y1}/R_{2012} + O_{Y2}/R_{2013} + O_{Y3}/R_{2014} + O_{Y4}/R_{2015} + O_{Y5}/R_{2016} + O_{Y6}/R_{2017} + O_{Y7}/R_{2018})$$

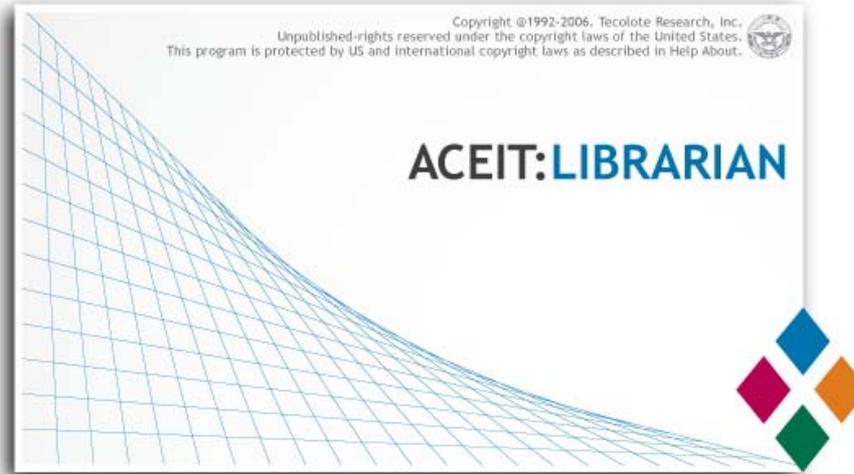
$$W_{2012} = 1 / (.13/1 + .35/1.017 + .265/1.0333 + .14/1.0519 + .07/1.0708 + .03/1.0901 + .015/1.1097)$$

**Note:** The Navy uses the general formula to calculate weighted indices. If you use the Army calculation, the resulting index for 2012 is 1.03133



Where do I create my own indices?

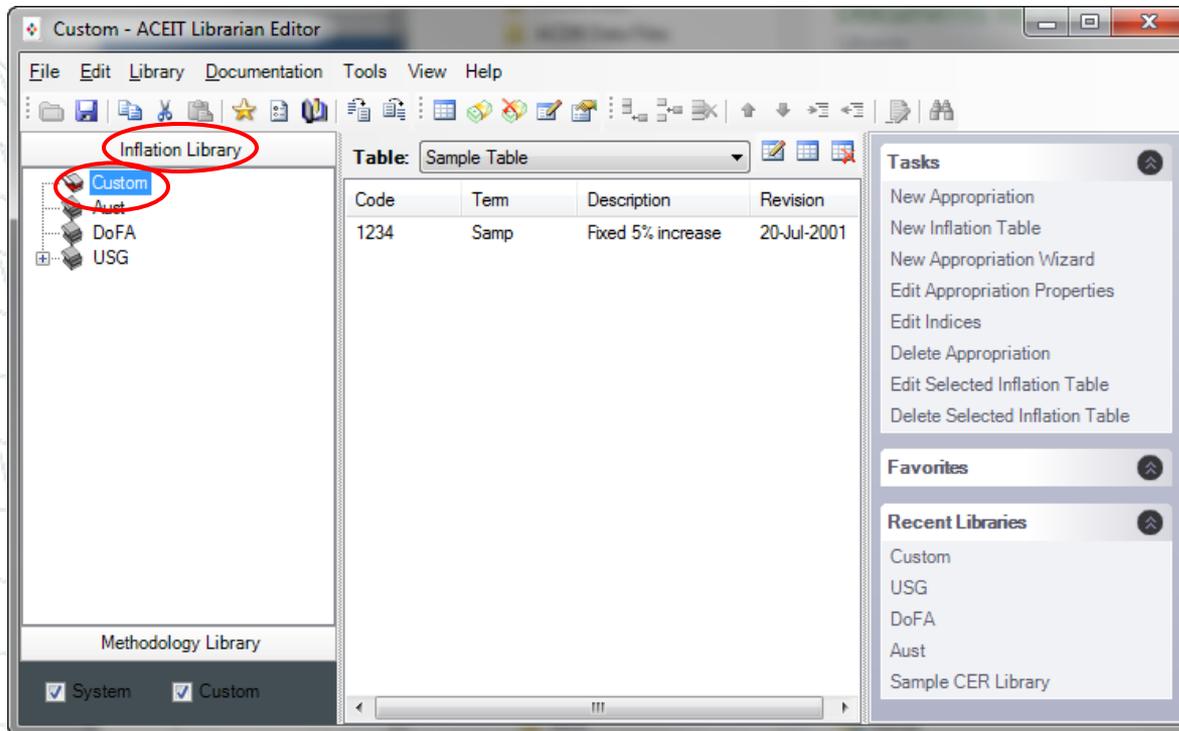




- **Librarian lets you build your own Inflation Indices and CER Libraries**
- **These user-created indices can be stored in a custom database and are portable; they can be accessed from multiple ACE sessions and can easily be shared with other ACE users**

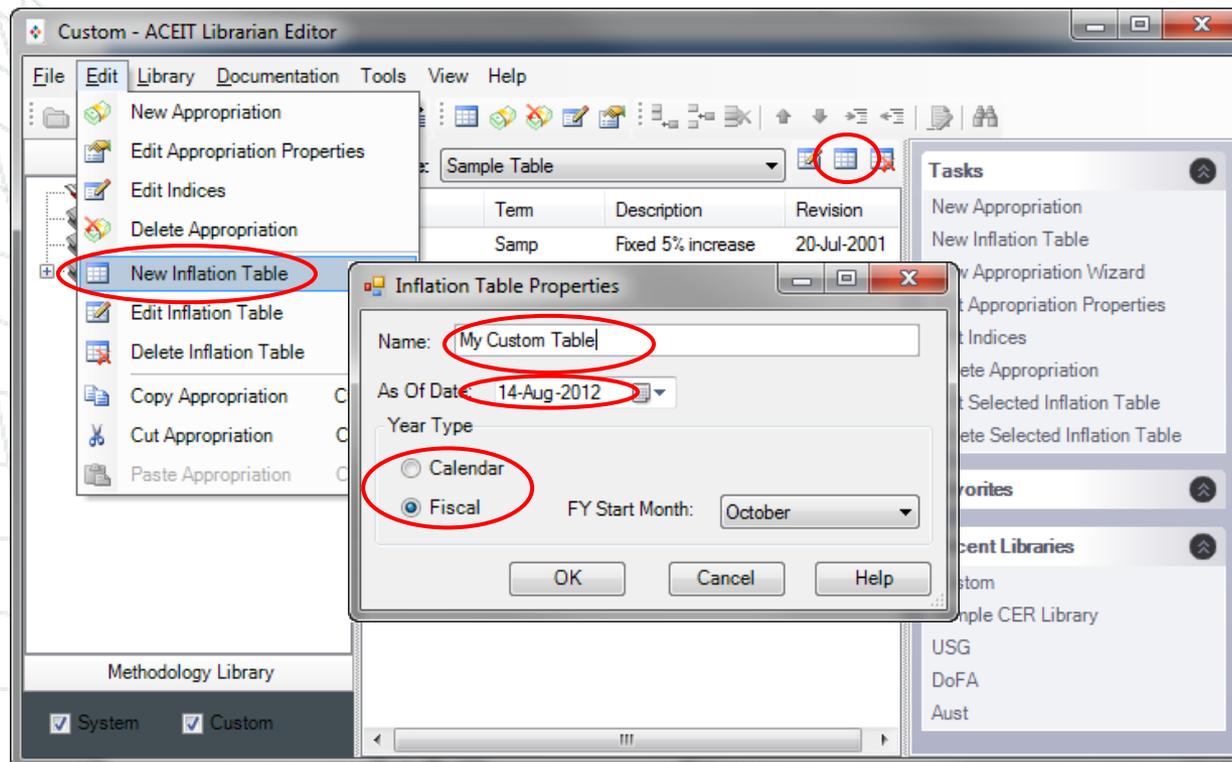
## 1. Open the Librarian

- Start > Programs > ACEIT > ACEIT Tools > ACEIT Librarian



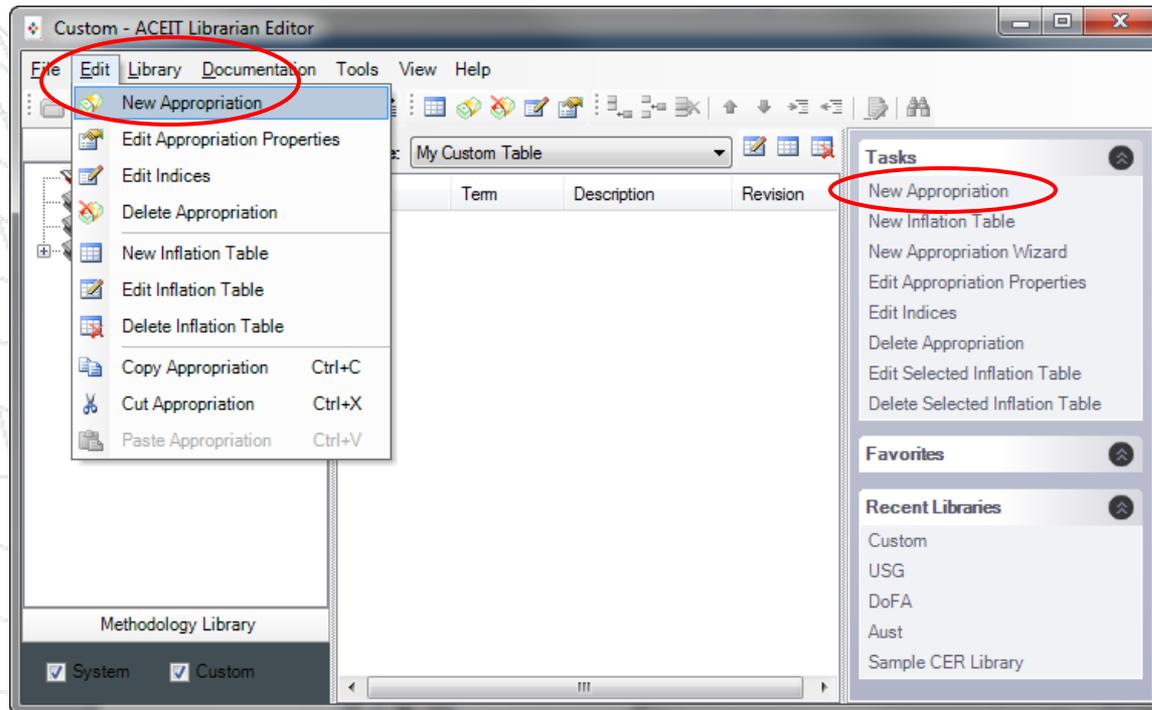
## 2. Create New Inflation Table

- Edit > New Inflation Table or New Table icon (📅)
- Enter table name, as of date and year type



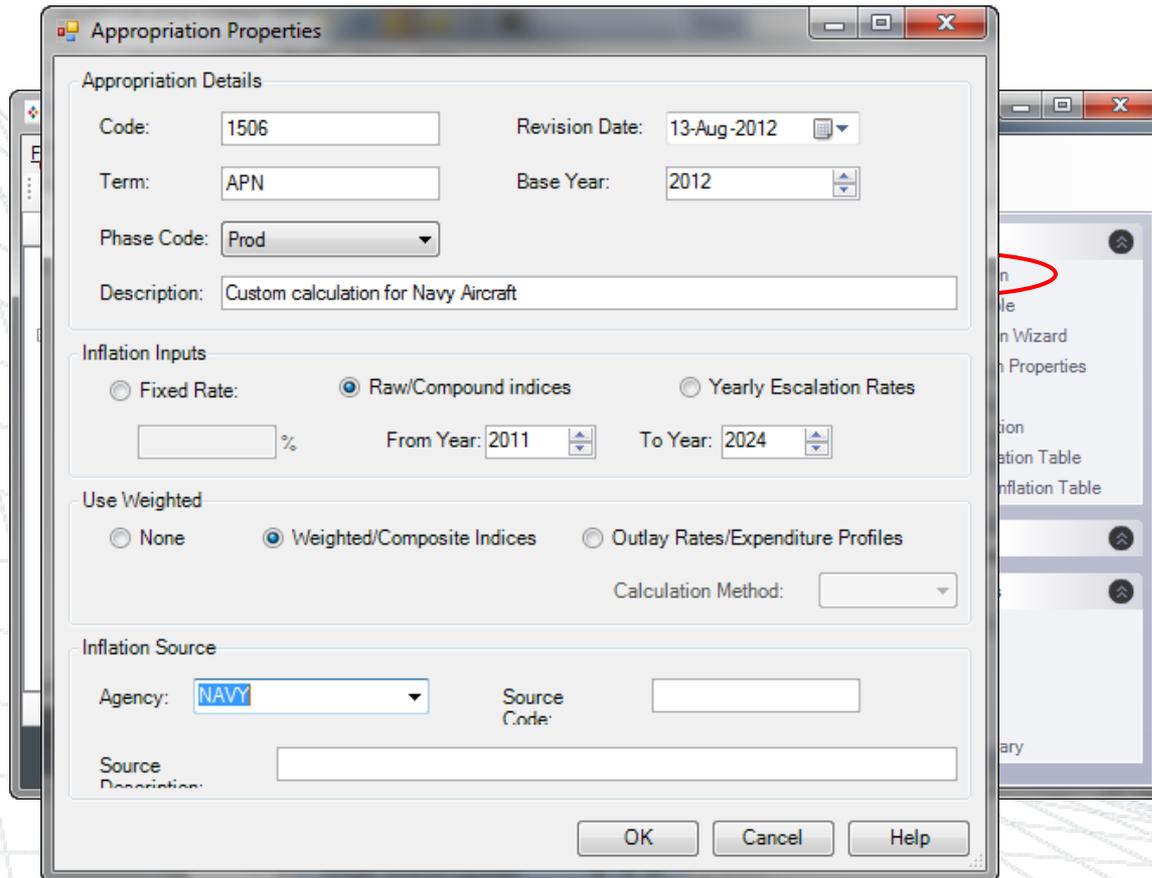
## 3. Create Custom Appropriation

- Edit > New Appropriation or select New Appropriation from Tasks window



## 3. Create Custom Appropriation

- Enter information about appropriation



**Appropriation Properties**

**Appropriation Details**

Code: 1506 Revision Date: 13-Aug-2012

Term: APN Base Year: 2012

Phase Code: Prod

Description: Custom calculation for Navy Aircraft

**Inflation Inputs**

Fixed Rate:  %  Raw/Compound indices  Yearly Escalation Rates

From Year: 2011 To Year: 2024

**Use Weighted**

None  Weighted/Composite Indices  Outlay Rates/Expenditure Profiles

Calculation Method:

**Inflation Source**

Agency: NAVY Source Code:

Source Description:

OK Cancel Help



# Inflation Inputs Options

Inflation Inputs

Fixed Rate:  %

Raw/Compound indices

Yearly Escalation Rates

From Year: 2011 To Year: 2024

Use Weighted

None

Weighted/Composite Indices

Outlay Rates/Expenditure Profiles

Calculation Method: Army Standard

## ■ Fixed Rate

- Simplest to define
- Enter fixed escalation rate
- Typically do not have weighted indices

## ■ Raw/Compound Indices

- Enter yearly inflation indices
- Specify which years you have calculated indices
- Typically entered with weighted indices but may not have weighted

## ■ Yearly Escalation Rates

- Enter yearly escalation rate
- Specify which years you have escalation rates
- Typically also specify outlay rates along with calculation method
- May not have weighted

## 4. Enter indices

- Depending on Inflation Inputs options, different inputs are required

Fixed Rate:

2.5 %

### Fixed Rate

- No additional inputs are required
- The Librarian uses the fixed rate to calculate inflation indices

Appropriation Indices - APN, 1506 - Custom calculation for Navy Aircraft (BY2012)

	Year	Escalation (%)	Compound	Composite
1	2002	2.500	.78119840172572	.78119840172572
2	2003	2.500	.80072836176887	.80072836176887
3	2004	2.500	.82074657081309	.82074657081309
4	2005	2.500	.84126523508341	.84126523508341
5	2006	2.500	.86229686596050	.86229686596050
6	2007	2.500	.88385428760951	.88385428760951
7	2008	2.500	.90595064479975	.90595064479975
8	2009	2.500	.92859941091974	.92859941091974
9	2010	2.500	.95181439619274	.95181439619274
10	2011	2.500	.97560975609756	.97560975609756
11	2012	2.500	1.00000000000000	1.00000000000000
12	2013	2.500	1.02500000000000	1.02500000000000
13	2014	2.500	1.05062500000000	1.05062500000000
14	2015	2.500	1.07689062500000	1.07689062500000
15	2016	2.500	1.10381289062500	1.10381289062500
16	2017	2.500	1.1314082128906	1.1314082128906
17	2018	2.500	1.1596934182128	1.1596934182128
18	2019	2.500	1.1886857536682	1.1886857536682
19	2020	2.500	1.2184028975099	1.2184028975099
20	2021	2.500	1.2488629699476	1.2488629699476
21	2022	2.500	1.2800845441963	1.2800845441963
22	2023	2.500	1.3120866578012	1.3120866578012
23	2024	2.500	1.3448888242463	1.3448888242463
24	2025	2.500	1.3785110448524	1.3785110448524

## 4. Enter indices

- Depending on Inflation Inputs options, different inputs are required

Appropriation Indices - APN, 1506 - Custom calculation for Navy Aircraft (BY2012)

	Year	Escalation (%)	Compound	Composite
1	2011		.98135426900000	1.0133179410000
2	2012	1.900	1.00000000000000	1.0307982070000
3	2013	1.700	1.01700000000000	1.0484822420000
4	2014	1.600	1.03327200000000	1.0670733990000
5	2015	1.800	1.05187089600000	1.0862807200000
6	2016	1.800	1.07080457200000	1.1058337730000
7	2017	1.800	1.09007905400000	1.1257387810000
8	2018	1.800	1.10970047700000	1.1460020790000
9	2019	1.800	1.12967508600000	1.1666301170000
10	2020	1.800	1.15000923800000	1.1876294590000
11	2021	1.800	1.17070940400000	1.2090067890000
12	2022	1.800	1.19178217300000	1.2307689110000
13	2023	1.800	1.21323425200000	1.2529227520000
14	2024	1.800	1.23507246900000	1.2754753610000

Raw/Compound indices

From Year: 2011 To Year: 2024

### Raw/Compound Indices

- Copy/paste from other source or type directly into white cells
- The Librarian calculates the escalation rate based on the indices

## 4. Enter indices

- Depending on Inflation Inputs options, different inputs are required

Appropriation Indices - APN, 1506 - Custom calculation for Navy Aircraft (BY2012)

	Year	Escalation (%)	Compound	Composite	Year 1 (%)	Year 2 (%)	Year 3 (%)	Year 4 (%)	Year 5 (%)	Year 6 (%)	Year 7 (%)
1	2011	2.000	.981354268	1.01331794	13.000	35.000	26.500	14.000	7.000	3.000	1.500
2	2012	1.900	1.000000000	1.03079820							
3	2013	1.700	1.017000000	1.04848224							
4	2014	1.600	1.03327200	1.06707339							
5	2015	1.800	1.05187089	1.08628072							
6	2016	1.800	1.07080457	1.10583377							
7	2017	1.800	1.09007905	1.12573878							
8	2018	1.800	1.10970047	1.14600207							
9	2019	1.800	1.12967508	1.16674101							
10	2020	1.800	1.15000923	1.18808446							
11	2021	1.800	1.17070940	1.21037284							
12	2022	1.800	1.19178217	1.23423104							
13	2023	1.800	1.21323425	1.26083267							
14	2024	1.800	1.23507246	1.29115403							

Yearly Escalation Rates

From Year: 2011 To Year: 2024

## Yearly Escalation Rates

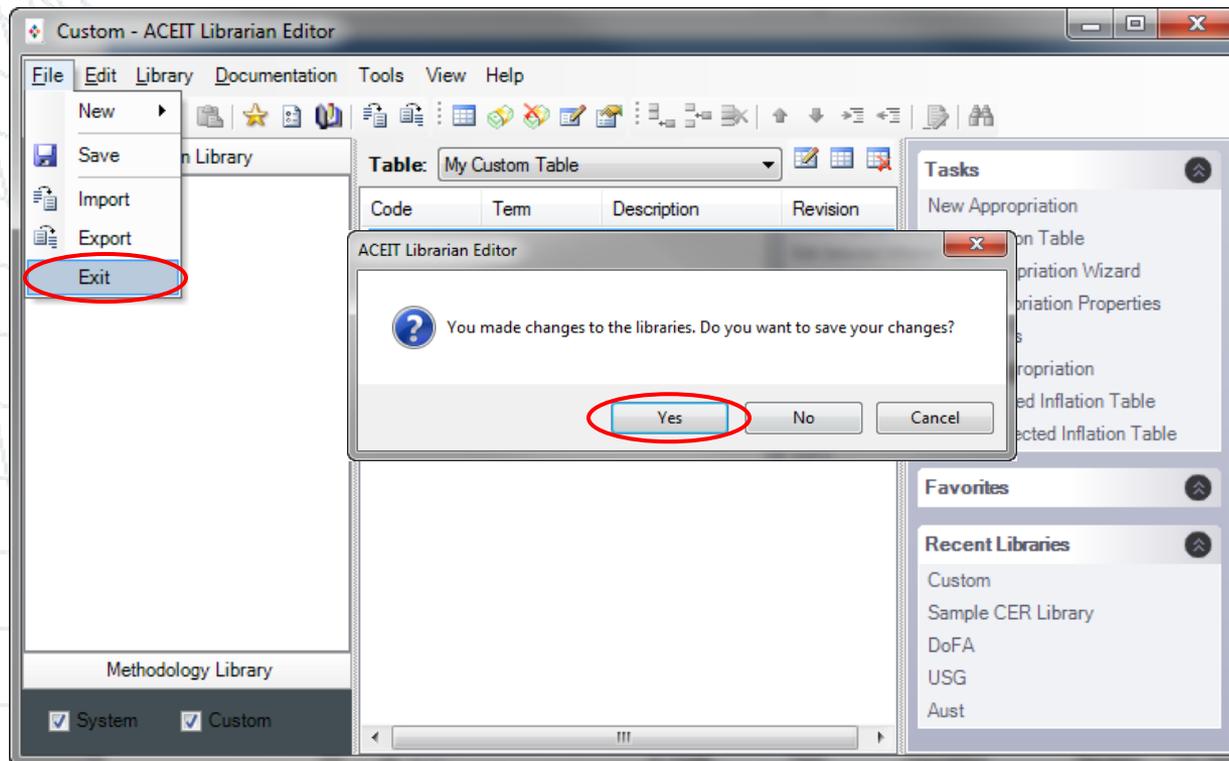
- Enter escalation and outlay rates into white cells
- The Librarian calculates the raw and weighted indices
- If no outlays are entered for a particular year, the Librarian uses the last entered rates

**Note:** Add additional outlay years from the Edit menu

## 4. Add additional appropriations as needed

- New appropriations will be added to the custom table

## 5. Exit the Librarian and Save changes

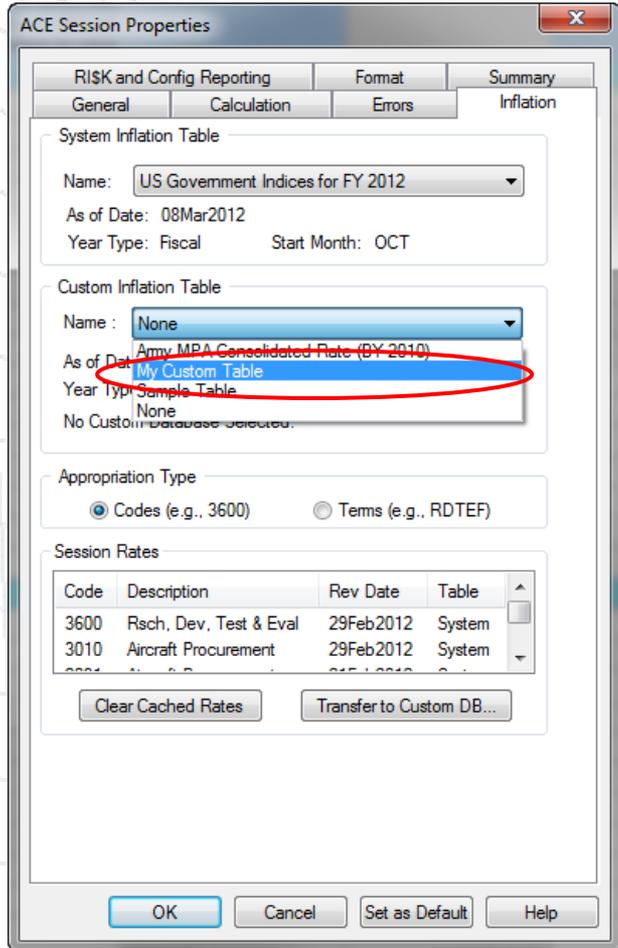
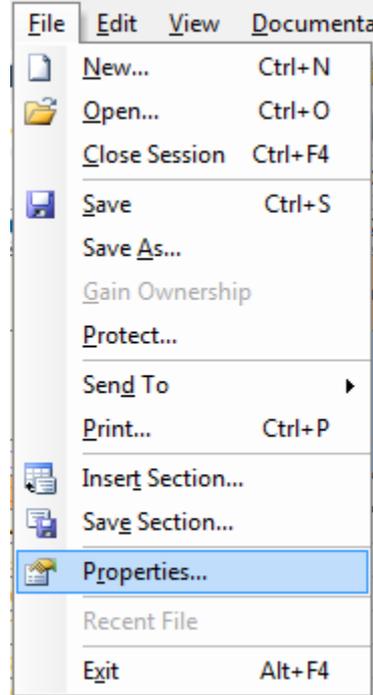




How do I use my custom indices?



- From ACE, open **Session Properties** dialog
  - Select File > Properties from the ACE main menu



- From the **Inflation** tab, select the **desired custom inflation table**
  - Note: Custom indices take precedence over System for appropriations with same Code/Term



# Using Custom Appropriation

## ■ Select appropriation from drop-down list

ACE 7.3 - [01 - Basic ACE - Methodology (BY2012\$K)]

Methodology

11 1506

07 - Detailed LCC...ology (BY2012\$K) 01 - Basic ACE -...ology (BY2012\$K)

	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year
1	** EXAMPLE FILE **						
2	*Estimate		*Estimate				
3	Total			\$ 113,256.736 *			
4	Manufacturing		PMP\$	\$ 82,284.922 *			
5	Air Vehicle	3010	AV\$	\$ 71,552.106 *	F	AV_UCS * BuyQty	
6	Integration	3010		\$ 10,732.816 *	F	0.15 * AV\$	
7	SEPM	3010		\$ 30,445.421 *	F	0.37 * PMP\$	
8	Other	3080		\$ 526.393 *	TY	[Cost Throughput]	
9							
10	*INPUT VARIABLES		*IN_VAR				
11	Air Vehicle First Unit Cost	1506	AV_UCS	\$ 10,221.729 *	C	$(959 * TW ^ .243 + 189 * RANGE ^ .652) / 2$	200
12	Air Vehicle Buy Quantity						
13		3010 - AIR FORCE	- Aircraft Procurement				
14	*Technical/Performance Characteristics	3080 - AIR FORCE	- Other Procurement				
15	Air Vehicle Takeoff Weight (lbs)	1506 - NAVY	- Custom calculation for Navy Aircraft				
16	Air Vehicle Range (nm)	3600 - AIR FORCE	- Rsch, Dev, Test & Eval				
17		3020 - AIR FORCE	- Missile Procurement				
18		3400 - AIR FORCE	- O&M - Non-Pay, Non-Pol				
19		3300 - AIR FORCE	- Military Construction				
20		3402 - AIR FORCE	- O&M - Fuel				
21		3730 - AIR FORCE	- MILCON - AF Reserve				
22		3830 - AIR FORCE	- MILCON - Air Natl Guard				
23		3740 - AIR FORCE	- O&M - AF Reserve				
		3840 - AIR FORCE	- O&M - Air Natl Guard				
		3500 - AIR FORCE	- Military Personnel - Total				
		3501 - AIR FORCE	- Military Personnel - Pay Base				
		3502 - AIR FORCE	- Military Personnel - Other Expenses				

WBS/CES \ Methodology \ Yearly Phasing /

Ready NUM

- **You can easily create custom indices for use in ACE**
- **System indices in ACE are based on OSD guidance**
- **You may need to create custom indices if your program experiences inflation different from what is projected by OSD**
- **Use the ACEIT Librarian to create indices**
- **Select the new table from the Inflation tab of the ACE Session Properties dialog**



# Questions?

## ■ Contact Information

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## ■ General ACEIT Support

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