### My Risk Results Don't Make Sense!

#### Kelly Grey & Sue Catala

ACEIT User's Workshop 18-19 September 2012

# **The Problem**

- In ACE sessions that are parametrically modeled, a user may enter a risk distribution that may not reflect the estimator's intent
- While this may not cause a fatal error, the risk results may be different than what the estimator expected to see.
- This presentation will walk through several methods in troubleshooting an ACEIT model

### Ways to Troubleshoot Results

#### • ACE

- Input Results Viewer (BY Risk Statistics View)
- Traceback Navigator
- POST & CO\$TAT
  - Risk Statistics Report
  - Tornado Report
  - JCL Report and Distribution Finder

### Disclaimer

# All Data Shown is Fake!

### A Simple Model

/ 💙 Sm	all Example.aasic (BY2012\$K) \									
	WBS/CES Description	Unique ID	Point Estimate	Equation / Throughput	Distribution Form	PE Position in	Low (% of PE)	High (% of PE)	Low (Percentile)	High (Percentile)
1	*Demo File #1 - Small Example Estimate	*Estimate								
2										
3	DBA Cost		\$ 2,000.000 *	FTEs*LR\$						
4										
5	*INPUT VARIABLES	*IN_VAR								
6										
7	Number of Servers	Servers	1,000.000 *	1000						
8	Servers per DBA	Ratio	100.000 *	100	Triangular	Mode	10	600		
9										
10	# of FTEs	FTEs	10.000 *	Servers/Ratio						
11										
12	Labor Rate (Yearly)	LR\$	\$ 200.000 *	200						
13										



### What Happened?

Non-         Version         V	💟 ACE 7.3 - [Small Ex	cample.	aceit - Inputs/Results Viewer (BY	(2012\$K)]										
BY Rok Statistics         Phenod by Case         Image: Statistics         Phenod by Case         Image: Statistics         Phenod by Case         Image: Statistics         Im	:🏥 Eile Edit View	Mode 🤇	<u>C</u> alc C <u>a</u> ses <u>R</u> eports <u>T</u> ools <u>W</u> indo	ow <u>H</u> elp										_ 8 ×
Image: Second	BY Risk Statistics	Phased b	y Case 🔹 🛛 🔡 🕴 🗊 🌴	i 🎒 • 🌆 🔍 🛊 🗣 🦧 🏸 i I										
Image: Solution         Image: Solution         Image: Solution	: 🖻 🍫 📑 🔜 😫 式													
5         Control Example.accit. /r. Basic (SY2012\$K)         Small Example.accit. /r. Basic (SY2010\$K)	🛃 🗈 🖺 🔊 (° 1.	10 10	100% 🔹 💂											
▼ Snall Example.actK Basic (BY20128)         Small Example.actK Basic (BY20128)           Point Estimate         WBX/ES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%           Point Estimate         WBX/ES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%           Paint Estimate         WBX/ES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%           Under "3         Under "4         System Inflation Table         mment Indices for FY 2012,008/x0121         mment Indices for FY 2012,008/x0121         mment Small Example acetit	-5 •	fx 🛍 🤮	2											
Point Estimate         WBS/CES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%           1         "Configuration Information         2012         2         2         2         2         2         2         2         30%         35%           1         "Configuration Information         2012         2	Small Example.acei	K Basic (B	(Y2012\$K) 🔚 Small Example.awer (	(BY2012\$K)										÷,
1         *Configuration Information         2012         20	Noint Estimate		WBS/CES Description	Point Estimate	Mean	Std Dev	CV	5%	10%	15%	20%	25%	30%	35%
*2         Base Year         2012         Image: Second S		×1	*Configuration Information											
13         Units         K <td></td> <td>*2</td> <td>Base Year</td> <td>2012</td> <td></td>		*2	Base Year	2012										
44         System Inflation Table         Imment Indices for PY 2012, 00M ar2012         Imm		*3	Units	K										
Session Name         Custom Cachor         Small Example.aceel         S		×4	System Inflation Table	rnment Indices for FY 2012, 08Mar2012										
*6         Session Name         Small Example.aceit         Image: Small Example.aceit		×5	Custom Inflation Table	Custom Cache										
*7         Session Path         sktop\AUUW Paper\Small Example.aceit		×6	Session Name	Small Example.aceit										
*8       Time Last Calculated       21:00:27  <	I	×7	Session Path	sktop\AUW Paper\Small Example.aceit										
9       Date Last Calculated       02Aug2012       Image: Calculated       02Aug2012       Image: Calculated       Image: Calculated       02Aug2012       Image: Calculated       Image:		×8	Time Last Calculated	21:00:27										
"10       Time Last Saved       20:58:27       Image: Construction of the construction o		×9	Date Last Calculated	02Aug2012										
"11       Date Last Saved       002Aug2012 <td></td> <td>×10</td> <td>Time Last Saved</td> <td>20:58:27</td> <td></td>		×10	Time Last Saved	20:58:27										
**12       Risk Iterations       500	I	×11	Date Last Saved	02Aug2012										
*13         ····································	I	×12	Risk Iterations	500										
1         "Demo File #1 - Small Example Estimate         Image: Constraint of the file file file file file file file fil		×13												
2       3       DBA Cost       \$2,000.000 (84%)       \$2,038.733       \$8,267.791       4.055358       \$252.150       \$285.135       \$316.950       \$350.841       \$387.120       \$425.842       \$469.1         4       1 <t< td=""><td>I  </td><td>1</td><td>*Demo File #1 - Small Example Estimate</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	I	1	*Demo File #1 - Small Example Estimate											
3       DBA Cost       \$ 2,000.000 (84%)       \$ 2,008.733       \$ 8,267.791       4.055358       \$ 252.150       \$ 285.135       \$ 316.950       \$ 350.841       \$ 387.120       \$ 425.842       \$ 469.1         4       INPUT VARIABLES       Image: Second		2												
4		3	DBA Cost	\$ 2,000.000 (84%)	\$ 2,038.733	\$ 8,267.791	4.055358	\$ 252.150	\$ 285.135	\$ 316.950	\$ 350.841	\$ 387.120	\$ 425.842	\$ 469.121
5         *INPUT VARIABLES         6         7         Number of Servers         1,000,000		4												
6         7         Number of Servers         1,000,000         1,000,		5	*INPUT VARIABLES											
7         Number of Servers         1,000.000 <t< td=""><td>I  </td><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	I	6												
8         Servers per DBA         100.000 (16%)         350.087         236.727         0.676196         35.446         66.882         96.249         123.560         151.626         181.057         211.3           9         10         # of FEs         10.000 (84%)         10.194         41.339         4.055358         1.261         1.426         1.585         1.754         1.936         2.129         2.3           11		7	Number of Servers	1,000.000	1,000.000			1,000.000	1,000.000	1,000.000	1,000.000	1,000.000	1,000.000	1,000.000
9         10         # of FTEs         10.000 (84%)         10.194         41.339         4.055358         1.261         1.426         1.585         1.754         1.936         2.129         2.3           11         12         Labor Bate (Yearly)         \$ 200,000         \$ 200		8	Servers per DBA	100.000 (16%)	350.087	236.727	0.676196	35.446	66.882	96.249	123.560	151.626	181.057	211.395
10         # of FTEs         10.000 (84%)         10.194         41.339         4.055358         1.261         1.426         1.585         1.754         1.936         2.129         2.3           11         10         5200.000         \$ 200.00		9												
11 12 Labor Bate (Yearly) \$ 200,000		10	# of FTEs	10.000 (84%)	10.194	41.339	4.055358	1.261	1.426	1.585	1.754	1.936	2.129	2.34E
12 Labor Bate (Yearly) \$ 200,000 \$ 2		11												
		12	Labor Rate (Yearly)	\$ 200.000	\$ 200.000			\$ 200.000	\$ 200.000	\$ 200.000	\$ 200.000	\$ 200.000	\$ 200.000	\$ 200.000

 The Mean FTE is higher than the Point Estimate

### What Happened?, cont.

• In a small file, it's easy to pinpoint the line where the error occurs

6										
7	Number of Servers	Servers	1,000.000 *	1000						
8	Servers per DBA	Ratio	D.000 (16%) *	100	Triangular	Mode	10	600		
9										

 In this case, the low and high percentiles were not filled out and ACE's default 15 / 85 interpretations were used

### A Larger File

#### In a large file, a visual check of every row is not always possible

💟 ACE 7	7.3 - [Large Example.aceit - Methodology (BY2012\$M)]							
🕴 💌 Eile	Edit View Documentation Calc Cases Reports Tools	<u>W</u> indow	Help					_ & ×
ED 💕	H 🖀 H A N A 🖬 🖪 🟈 🐝 🤊 🕾 🐎	10 10	<∎ >≣   100°	% 🔻 🔤 Arial	<b>v</b> 10	• <u>A</u> • 🖄 • <b>B</b> I	<u>U</u> \$,,	
Methodo	loov • • • • • • • • • • • • • • • • • •	<i>7</i> 7 0	: B.   E. F		163.1 %	5.5.5.5.° m × √	: 🗐 🔊	
*Demo Pri	portan • 6 10 30 *Demo Program #2							
		(PV2012#M	0					- ×
	ge Exampleogy (6+2012\$)*)	(B12012\$M			0		DI :	
	WBS/CES Description	Approp	(*) Spare	Unique ID	Count (i) Count	Baseline	Phasing Method	Equation / Throughput
58	*Demo Program #2			*Estimate				
59	NON-RECURRING							
60	RECURRING							
61	Total Program			Total_Program		\$ 190.541 (9%) *	F	
62	Increment 1	3600				\$ 20.744 (10%) *	F	
63	PMP	3600		Inc1_PMP\$\$		\$ 11.059 (9%) *	F	
64	Hardware	3600		Inc1_HW\$\$		\$ 4.477 (24%) *	F	
65	HWCI 1	3600			1	\$ 0.053 (32%) *	F	MatDot(Num_HWCI, 1, Count, @Inc1_
66	HWCI 2	3600			2	\$ 3.190 (32%) *	F	MatDot(Num_HWCI, 1, Count, @Inc1_
67	HWCI 3	3600			3	\$ 0.191 (32%) *	F	MatDot(Num_HWCI, 1, Count, @Inc1_
68	HWCI 4	3600			4	\$ 0.510 (32%) *	F	MatDot(Num_HWCI, 1, Count, @Inc1_
69	HWCI 5	3600			5	\$ 0.532 (32%) *	F	MatDot(Num_HWCI, 1, Count, @Inc1_
70	Application Software	3600		Inc1_App_SW\$\$		\$ 3.476 (14%) *	F	
71	CSCI 1	3600				\$ 0.114 (19%) *		
72	Developed Software	3600				\$ 0.092 (24%) *	F	(Inc1_CSCI1_phased/Productivity)*(SW_Dev_LR\$
73	COTS Software	3600				\$ 0.021 (32%) *	F	Inc1_Ap
74	CSCI 2	3600				\$ 0.200 (22%) *		
75	Developed Software	3600				\$ 0.184 (23%) *	F	(Inc1_CSCI2_phased/Productivity)*(SW_Dev_LR\$
76	COTS Software	3600				\$ 0.016 (32%) *	F	Inc1_Ap
77	CSCI 3	3600				\$ 0.341 (19%) *		
78	Developed Software	3600				\$ 0.277 (25%) *	F	(Inc1_CSCI3_phased/Productivity)*(SW_Dev_LR\$
79	COTS Software	3600				\$ 0.064 (32%) *	F	Inc1_Ap
80	CSCI 4	3600				\$ 0.369 (26%) *		
81	Developed Software	3600				\$ 0.369 (26%) *	F	(Inc1_CSCI4_phased/Productivity)*(SW_Dev_LR\$
82	COTS Software	3600				\$ 0.000 *	F	Inc1_Ap
83	CSCI 5	3600				\$ 0.461 (22%) *		~
<								>

### So What do I look for?

- Using the BY Risk Statistics View on the Inputs / Results Viewer
  - The Overall Confidence Level of the Point Estimate
  - The Overall CV of the Session
  - The 5<sup>th</sup>, 90<sup>th</sup> and 95<sup>th</sup> percentile does the cost suddenly increase / decrease?

Mode         Calc         Cases         Reports         Tools         Window         Help           Phased by Case	PX											)]	aceit - Inputs/Results Viewer (BY2012\$M)	ple.ad	7.3 - [Large Exe	💟 ACE 7
EY Risk Statistics       Phased by Case       Image Statistics       Phased by Case       Image Statistics         59       Image Statistics       100%       Image Statistics       100%       Image Statistics         59       Image Statistics       Image Statistics       100%       Image Statistics       100%         Seseline       Image Statistics       Image Statistics       100%       15%       20%       25%       30%       35%         59       Image Statistics       Image Statistics       Image Statistics       10%       15%       20%       25%       30%       35%         59       Image Statistics       Image Statistics       Image Statistics       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25       44%       25	_ 8 ×												alc C <u>a</u> ses <u>R</u> eports <u>T</u> ools <u>W</u> indow <u>H</u> elp	le <u>⊂</u> a	N.	****
Second       Std Dev       CV       5%       10%       15%       20%       25%       30%       35%         Baseline       WBS/CES Description       Point Estimate       Mean       Std Dev       CV       5%       10%       15%       20%       25%       30%       35%         Baseline       WBS/CES Description       Point Estimate       Mean       Std Dev       CV       5%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       15%       20%       25%       30%       35%       10%       35%       10%       35%       10%       35%       10%       35%       10%       35%       10										0 -	2 🏏 🖻	1 🗣 🛊 🗣 🕯	/ Case 🔹 🔹 📳 📑 🗗 🏹 🔹 🔟	sed by v	Statistics P	BY Risk S
Image: Second															- 😭 📴 🎽 🔫	: 🔢 Jay
59         ▲ a a           59         ▲ a a           ✓ Large Exampleeeology (BY2012\$M)         ▲ Large Examplewer (BY2012\$M)         ▲ Large Examplewer (BY2012\$M)           Baseline         WBS/CES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%           59         Total Program         \$ 190.541 (9%)         \$ 220.647         \$ 128.347         0.556467         \$ 184.973         \$ 191.298         \$ 196.096         \$ 199.350         \$ 202.034         \$ 205.591         \$ 208.615         \$ 20           60         Increment 1         \$ 20.744 (10%)         \$ 28.609         \$ 6.71         0.234926         \$ 199.336         \$ 202.034         \$ 208.615         \$ 113.661           61         PMP         \$ 110.059 (9%)         \$ 15.452         \$ 3.588         0.232218         \$ 10.506         \$ 11.798         \$ 12.426         \$ 12.871         \$ 13.251         \$ 13.681           62         Hardware         \$ 4.477 (24%)         \$ 5.511         \$ 1.343         0.243747         \$ 3.889         \$ 4.107         \$ 4.323         \$ 4.4703         \$ 4.879           63         HwCl 1         \$ 0.053 (32%)         \$ 0.065													🎄 100% 🔹 📕	10 M		XB
V Large Example.aceology (BY2012#M)         Large Examplewer (BY2012#M)           Baseline         WBS/CES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%         10%           59         Total Program         \$190.541 (9%)         \$230.647         \$128.347         0.556467         \$184.973         \$191.298         \$196.096         \$199.350         \$202.034         \$205.591         \$208.615         \$2           60         Increment 1         \$20.744 (10%)         \$28.609         \$6.721         0.234926         \$19.934         \$20.2034         \$202.034         \$202.591         \$208.615         \$2           61         PMP         \$11.059 (9%)         \$15.452         \$3.588         0.232218         \$10.506         \$11.254         \$11.798         \$12.426         \$12.871         \$13.251         \$13.681           62         Hardware         \$4.477 (24%)         \$5.511         \$1.343         0.243747         \$3.311         \$3.389         \$4.107         \$4.323         \$4.4703         \$4.879           63         Hw/Cl 1         \$0.053 (32%)         \$0.065         \$0.022         0.330490         \$0.033         \$0.043														n A	-	59
Baseline         WBS/CES Description         Point Estimate         Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%           59         Total Program         \$190.541 (9%)         \$230.647         \$128.347         0.556467         \$184.973         \$191.298         \$196.096         \$199.350         \$202.034         \$205.591         \$208.615         \$2           60         Increment 1         \$20.744 (10%)         \$28.609         \$6.721         0.234926         \$19.934         \$20.333         \$22.017         \$23.028         \$23.754         \$24.448         \$25.414           61         PMP         \$11.059 (9%)         \$15.452         \$3.588         0.232218         \$10.506         \$11.254         \$11.798         \$12.426         \$12.871         \$13.251         \$13.681           62         Hardware         \$4.477 (24%)         \$5.511         \$1.343         0.243747         \$3.511         \$3.889         \$4.107         \$4.323         \$4.571         \$4.703         \$4.879           63         HwCl 1         \$0.053 (32%)         \$0.065         \$0.022         0.330588         \$0.043         \$0.046         \$0.049         \$0.052         \$0.055           64	Ţ×											n)	2012\$M) \$	v (BV2)	ge Example, aceo	V Larg
Mean         Std Dev         CV         5%         10%         15%         20%         25%         30%         35%         1           59         Total Program         \$190.541 (9%)         \$230.647         \$128.347         \$191.393         \$191.298         \$190.903         \$200.643         \$200.75         \$184.973         \$191.298         \$190.591         \$220.754         \$220.744         \$207.744         \$207.744         \$105.4193         \$10.234926         \$191.939         \$10.606         \$110.759         \$22.017         \$23.028         \$22.017         \$23.028         \$22.074         \$13.251         \$13.681           61         PMP         \$111.059         \$9%         \$5.511         \$1.343         0.243747         \$3.511         \$3.889         \$4.107         \$4.323         \$4.511         \$4.703         \$4.879           62         Hardware         \$4.477 (24%)         \$5.511         \$1.343         0.243747         \$3.511         \$3.889         \$4.107         \$4.323         \$4.511         \$4.703         \$4.879           63         HWCl 1         \$0.053         \$3.027         \$1.299         0.330698         \$1.071         \$4.042         \$0.052         \$0.055           64         HWCl 2         \$3.191 (32%) </td <td></td> <td><b>v</b> \</td> <td></td> <td>17 (0120</td> <td>line</td> <td>Receiv</td>												<b>v</b> \		17 (0120	line	Receiv
59         Total Program         \$190.541 (9%)         \$230.647         \$128.347         0.556467         \$184.973         \$191.298         \$196.096         \$199.350         \$202.034         \$205.591         \$208.615           60         Increment 1         \$20.744 (10%)         \$28.609         \$6.721         0.234926         \$19.334         \$20.833         \$22.017         \$23.028         \$23.754         \$24.484         \$25.414           61         PMP         \$11.059 (9%)         \$15.452         \$3.588         0.232218         \$10.506         \$11.254         \$11.798         \$12.426         \$12.871         \$13.261         \$13.681           62         Hardware         \$4.477 (24%)         \$5.511         \$1.343         0.243747         \$3.511         \$3.889         \$4.107         \$4.323         \$4.511         \$4.703         \$4.879           63         HWCl 1         \$0.053 (32%)         \$0.065         \$0.022         \$0.033         \$0.013         \$0.004         \$0.044         \$0.052         \$0.055           64         HWCl 2         \$3.190 (32%)         \$3.927         \$1.299         0.330650         \$1.137         \$2.300         \$2.551         \$2.762         \$2.947         \$3.119         \$3.279           65	40%	35%	30%	25%	20%	15%	10%	5%	CV	Std Dev	Mean	Point Estimate	WBS/CES Description			Jasein
60         Increment 1         \$20,744 (10%)         \$28,609         \$6,721         0.234926         \$19,334         \$20,833         \$22,017         \$23,028         \$23,754         \$24,484         \$25,514           61         PMP         \$11,059 (9%)         \$15,452         \$3,588         0.232218         \$10,506         \$11,254         \$11,798         \$12,426         \$12,871         \$13,251         \$13,681           62         Hardware         \$4,477 (24%)         \$5,5511         \$1,343         0.243747         \$3,3511         \$3,889         \$4,107         \$4,423         \$4,477         \$4,473         \$4,479         \$4,479         \$4,479         \$4,479         \$4,479         \$4,479         \$4,479         \$4,023         \$0,046         \$0,049         \$0,052         \$0,055         \$0,020         \$0,330490         \$0,033         \$0,044         \$0,049         \$0,052         \$0,055         \$4,477         \$4,319         \$3,279         \$5,51         \$1,263         \$0,022         \$0,330490         \$0,0145         \$0,049         \$0,052         \$0,055         \$4,470         \$4,279         \$3,279         \$5,51         \$1,2762         \$2,2477         \$3,119         \$3,279         \$5,55         \$4,4703         \$4,0479         \$0,055         \$4,019 <t< td=""><td>\$ 212</td><td>\$ 208 615</td><td>\$ 205 591</td><td>\$ 202 034</td><td>\$ 199,350</td><td>\$ 196 096</td><td>\$ 191 298</td><td>\$ 184 973</td><td>0.556467</td><td>\$ 128 347</td><td>\$ 230 647</td><td>\$ 190 541 (9%)</td><td>Total Program</td><td>59</td><td></td><td></td></t<>	\$ 212	\$ 208 615	\$ 205 591	\$ 202 034	\$ 199,350	\$ 196 096	\$ 191 298	\$ 184 973	0.556467	\$ 128 347	\$ 230 647	\$ 190 541 (9%)	Total Program	59		
61         PMP         \$11.059 (9%)         \$15.452         \$3.588         0.232218         \$10.506         \$11.254         \$11.798         \$12.426         \$12.871         \$13.251         \$13.681           62         Hardware         \$4.477 (24%)         \$5.511         \$1.343         0.243747         \$3.511         \$3.889         \$4.107         \$4.323         \$4.511         \$4.703         \$4.879           63         HwCl 1         \$0.053 (32%)         \$0.065         \$0.022         0.330490         \$0.033         \$0.038         \$0.046         \$0.049         \$0.052         \$0.055           64         HwCl 2         \$1.191 (32%)         \$0.232         \$0.078         \$0.033         \$0.038         \$0.046         \$0.049         \$0.052         \$0.055           65         HwCl 2         \$1.191 (32%)         \$0.226         \$0.070         0.330530         \$0.119         \$0.138         \$0.153         \$0.166         \$0.177         \$0.187         \$0.197           66         HwCl 4         \$0.510 (32%)         \$0.628         \$0.217         \$0.330570         \$0.1318         \$0.153         \$0.166         \$0.177         \$0.187         \$0.197           66         HwCl 4         \$0.510 (32%)         \$0.655         \$0.2	\$ 25	\$ 25,414	\$ 24,484	\$ 23,754	\$ 23.028	\$ 22.017	\$ 20.833	\$ 19.934	0.234926	\$ 6.721	\$ 28,609	\$ 20.744 (10%)	Increment 1	60		
62         Hardware         \$ 4.477 (24%)         \$ 5.511         \$ 1.343         0.243747         \$ 3.511         \$ 3.889         \$ 4.107         \$ 4.323         \$ 4.511         \$ 4.703         \$ 4.879           63         HwCl 1         \$ 0.053 (32%)         \$ 0.065         \$ 0.022         0.330490         \$ 0.033         \$ 0.038         \$ 0.046         \$ 0.049         \$ 0.052         \$ 0.052           64         HwCl 2         \$ 0.191 (32%)         \$ 0.236         \$ 0.078         0.330598         \$ 1.119         \$ 0.133         \$ 0.016         \$ 0.017         \$ 0.018           65         HwCl 3         \$ 0.191 (32%)         \$ 0.236         \$ 0.078         0.330530         \$ 0.119         \$ 0.138         \$ 0.153         \$ 0.0166         \$ 0.177         \$ 0.187         \$ 0.197           66         HwCl 4         \$ 0.510 (32%)         \$ 0.628         \$ 0.208         0.300570         \$ 0.330580         \$ 0.119         \$ 0.138         \$ 0.166         \$ 0.177         \$ 0.187         \$ 0.197           66         HwCl 4         \$ 0.510 (32%)         \$ 0.628         \$ 0.208         0.300574         \$ 0.384         \$ 0.405         \$ 0.442         \$ 0.472         \$ 0.499         \$ 0.524           67         HwCl 5         0.5	\$14	\$ 13.681	\$ 13.251	\$ 12.871	\$12.426	\$11.798	\$ 11.254	\$10.506	0.232218	\$ 3.588	\$ 15.452	\$ 11.059 (9%)	PMP	61		
63         HWCl 1         \$ 0.053 (32%)         \$ 0.065         \$ 0.022         0.330490         \$ 0.033         \$ 0.043         \$ 0.046         \$ 0.049         \$ 0.052         \$ 0.055           64         HWCl 2         \$ 3.190 (32%)         \$ 3.927         \$ 1.299         0.330590         \$ 1.977         \$ 2.300         \$ 2.551         \$ 2.762         \$ 2.947         \$ 3.119         \$ 3.279           65         HWCl 3         \$ 0.191 (32%)         \$ 0.236         \$ 0.070         0.330530         \$ 0.119         \$ 0.138         \$ 0.043         \$ 0.044         \$ 0.077         \$ 3.279           66         HWCl 3         \$ 0.191 (32%)         \$ 0.236         \$ 0.070         0.330530         \$ 0.119         \$ 0.138         \$ 0.043         \$ 0.047         \$ 0.187         \$ 0.137           66         HWCl 4         \$ 0.510 (32%)         \$ 0.628         \$ 0.208         0.330530         \$ 0.386         \$ 0.440         \$ 0.442         \$ 0.472         \$ 0.439         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.451         \$ 0.452         \$ 0.546         \$ 0.546	\$5	\$ 4.879	\$ 4.703	\$ 4.511	\$ 4.323	\$ 4.107	\$ 3.889	\$ 3.511	0.243747	\$ 1.343	\$ 5.511	\$ 4.477 (24%)	Hardware	62		
64         HWCl 2         \$ 3.190 (32%)         \$ 3.927         \$ 1.293         0.330658         \$ 1.977         \$ 2.300         \$ 2.551         \$ 2.762         \$ 2.947         \$ 3.119         \$ 3.279           65         HWCl 3         \$ 0.191 (32%)         \$ 0.236         \$ 0.078         0.330530         \$ 0.119         \$ 0.138         \$ 0.053         \$ 0.166         \$ 0.177         \$ 0.187         \$ 0.197           66         HWCl 4         \$ 0.510 (32%)         \$ 0.628         \$ 0.028         \$ 0.330530         \$ 0.1316         \$ 0.368         \$ 0.408         \$ 0.442         \$ 0.472         \$ 0.499         \$ 0.524           67         HWCl 5         \$ 0.523 (23%)         \$ 0.655         \$ 0.217         0.330777         \$ 0.384         \$ 0.425         \$ 0.4261         \$ 0.492         \$ 0.472         \$ 0.499         \$ 0.546           68         Application Software         \$ 3.476 (14%)         \$ 5.864         \$ 2.510         0.428007         \$ 2.809         \$ 3.148         \$ 3.530         \$ 3.835         \$ 4.104         \$ 4.370         \$ 4.555	\$0	\$ 0.055	\$ 0.052	\$ 0.049	\$ 0.046	\$ 0.043	\$ 0.038	\$ 0.033	0.330490	\$ 0.022	\$ 0.065	\$ 0.053 (32%)	HWCI 1	63		
65         HWCl 3         \$ 0.191 (32%)         \$ 0.236         \$ 0.078         0.30530         \$ 0.113         \$ 0.166         \$ 0.177         \$ 0.187         \$ 0.197           66         HWCl 4         \$ 0.510 (32%)         \$ 0.628         \$ 0.030530         \$ 0.136         \$ 0.048         \$ 0.442         \$ 0.472         \$ 0.499         \$ 0.524           67         HWCl 5         \$ 0.552 (32%)         \$ 0.655         \$ 0.217         \$ 0.3077         \$ 0.39         \$ 0.346         \$ 0.425         \$ 0.441         \$ 0.492         \$ 0.472         \$ 0.499         \$ 0.519         \$ 0.546           67         HWCl 5         \$ 0.552 (32%)         \$ 0.655         \$ 0.217         0.3077         \$ 0.384         \$ 0.425         \$ 0.445         \$ 0.492         \$ 0.472         \$ 0.499         \$ 0.519         \$ 0.546           68         Application Software         \$ 3.476 (14%)         \$ 5.864         \$ 2.510         0.428007         \$ 3.148         \$ 3.530         \$ 3.835         \$ 4.104         \$ 4.370         \$ 4.555	\$3	\$ 3.279	\$ 3.119	\$ 2.947	\$ 2.762	\$ 2.551	\$ 2.300	\$ 1.977	0.330698	\$ 1.299	\$ 3.927	\$ 3.190 (32%)	HWCI 2	64		
66         HWCl 4         \$ 0.510 (32%)         \$ 0.628         \$ 0.208         \$ 0.30548         \$ 0.016         \$ 0.342         \$ 0.442         \$ 0.472         \$ 0.499         \$ 0.524           67         HWCl 5         \$ 0.532 (32%)         \$ 0.655         \$ 0.217         0.33077         \$ 0.384         \$ 0.425         \$ 0.441         \$ 0.492         \$ 0.519         \$ 0.546           68         Application Software         \$ 3.476 (14%)         \$ 5.864         \$ 2.510         0.42807         \$ 3.3148         \$ 3.330         \$ 3.835         \$ 4.104         \$ 4.370         \$ 4.555	\$0	\$ 0.197	\$ 0.187	\$ 0.177	\$ 0.166	\$ 0.153	\$ 0.138	\$ 0.119	0.330530	\$ 0.078	\$ 0.236	\$ 0.191 (32%)	HWCI 3	65		
67         HwCl 5         \$ 0.532 (32%)         \$ 0.655         \$ 0.217         0.330777         \$ 0.329         \$ 0.384         \$ 0.425         \$ 0.461         \$ 0.492         \$ 0.519         \$ 0.546           68         Application Software         \$ 3.476 (14%)         \$ 5.864         \$ 2.510         0.428007         \$ 2.809         \$ 3.148         \$ 3.530         \$ 3.835         \$ 4.104         \$ 4.370         \$ 4.555	\$0	\$ 0.524	\$ 0.499	\$ 0.472	\$ 0.442	\$ 0.408	\$ 0.368	\$ 0.316	0.330548	\$ 0.208	\$ 0.628	\$ 0.510 (32%)	HWCI 4	66		
68 Application Software \$3.476 (14%) \$5.864 \$2.510 U.428007 \$2.809 \$3.148 \$3.530 \$3.835 \$4.104 \$4.370 \$4.555	\$0	\$ 0.546	\$ 0.519	\$ 0.492	\$ 0.461	\$ 0.425	\$ 0.384	\$ 0.329	0.330777	\$ 0.217	\$ 0.655	\$ 0.532 (32%)	HWCI 5	67		
	\$ 4	\$ 4.555	\$ 4.370	\$ 4.104	\$ 3.835	\$ 3.530	\$ 3.148	\$ 2.809	0.428007	\$ 2.510	\$ 5.864	\$ 3.4/6 [14%]	Application Software	68		
69 CSC11 \$0.114[193; \$0.188 \$0.093 0.435489 \$0.080 \$0.095 \$0.107 \$0.116 \$0.123 \$0.129 \$0.137	\$0	\$ 0.137	\$ 0.129	\$ 0.123	\$ 0.116	\$ 0.107	\$ 0.096	\$ 0.080	0.493489	\$ 0.093	\$ 0.188	\$ 0.114 (19%)	USU 1	59		
70 Developed Sortware \$ 0.032 (24%) \$ 0.035 \$ 0.032 0.052/03 \$ 0.054 \$ 0.055 \$ 0.055 \$ 0.053 \$ 0.011 \$ 0.109	\$0	\$ 0.109	\$ 0.101	\$ 0.093	\$ 0.085	\$ 0.075	\$ 0.065	\$ 0.054	0.582509	\$ 0.092	\$ 0.158	\$ 0.092 (24%)	Developed Software	70		
1 CUTS Software \$10021 [32:6] \$0.000 \$0.010 U.500481 \$1007 \$1011 \$1014 \$1016 \$10.010 \$10020 \$0.022	\$U ¢0	\$ 0.022	\$ 0.020 ¢ 0.220	\$ 0.019	\$ U.UI6 ¢ 0 195	\$ U.UI4 \$ 0.172	\$ U.UII ¢ 0 150	\$ U.UU7 \$ 0.125	0.500481	\$ U.UI5 ¢ 0 100	\$ U.U3U ¢ 0.227	\$ 0.021 (32%)	CCCL2	72		
73 Developed Software \$1014 (232) \$0.315 \$0.180 0.055420 \$0.131 \$0.150 \$0.172 \$0.150 \$0.20 \$0.226 \$0.242	\$0 \$0	\$ 0.242	\$ 0.228	\$ 0.210	\$0.155	\$ 0.172	\$ 0.130	\$ 0.130	0.533420	\$ 0.160	\$ 0.337	\$ 0.184 (23%)	Developed Software	73		

# How do I find the Rows that are Impacting the Risk Results?

- In ACE → Traceback Navigator
  - Which lines have an unusually high CV?

📲 Traceback Naviga	tor (Large Example.aceit)													
Row: 181: Operation	ns & Maintenance	Copy Contents												
Case: Baseline		Arrange Columns												
2000	lear History	Help Print Report												
		View Calc Details												
Traceback:														
Description		ID	Equation				Total	Unwrapp	Appropria.	Phasing	used	in C   ID	Refere	Ref Ty
- 🚅 181: Operations	& Maintenance													
🖃 🔄 Equation														
🔚 181: Oper	ations & Maintenance		Sum of children				\$ 44.938	(none)		F				
🖃 🔄 Predecessors														
- 🗏 182: Incre	ement 1						\$ 38.214	(none)	3400	F	(Child	)		
📃 195: Incre	ement 2						\$ 6.724	(none)	3400	F	(Child	)		
Successors	_		C (111				1 100 E 11			-	(5			
- E 59: Total P	Program	Total_Program	Sum of children				\$ 190.541			F	(Parer	nt)		
<										1				>
	181 Operations & Maintenar	nce	\$ 44 938 (20%)	\$ 62 864	\$ 126 874	2 018219	\$ 40 437	\$ 42 586	\$ 43 869	\$ 44 945	\$ 45 997	\$ 47 095	\$ 48 269	
	182 Increment 1	100	\$ 38.214 (17%)	\$ 46.639	\$ 40.824	0.875316	\$ 35.002	\$ 36.667	\$ 37.694	\$ 38.447	\$ 39.194	\$ 40.069	\$ 40.648	\$
	183 Hardware Mainten	iance	\$ 3.447 (34%)	\$ 4.250	\$ 1.682	0.395674	\$ 1.821	\$ 2.220	\$ 2.590	\$ 2.869	\$ 3.078	\$ 3.319	\$ 3.515	
	184 Software Maintena	ance	\$ 2.679 (34%)	\$ 7.668	\$ 40.285	5.253651	\$ 1.634	\$1.874	\$ 2.093	\$ 2.236	\$ 2.445	\$ 2.567	\$ 2.709	
	185 Developed Soft	ware Maintenace	\$ 2.041 (43%)	\$ 6.804	\$ 40.564	5.962039	\$ 0.954	\$1.067	\$1.216	\$1.345	\$1.503	\$1.636	\$ 1.807	
	187 Tech Befresh	Mantenance	\$ 954 (24%)	\$ 0.033 \$ 11.022	\$ 0.337	0.355044	\$ 0.332	\$ 0.464	\$ 0.026 \$ 8.214	310.071	\$ 0.622	\$ 0.672	\$ 0.724	•
	188 Hardware		\$ 8.954 (24%)	\$ 11.022	\$ 2.687	0.243747	\$ 7.023	\$ 7.779	\$ 8.214	\$ 8.646	\$ 9.022	\$ 9.406	\$ 9.758	ŝ
	189 Integration							• • • • • •						
	190 DBA / SA													
	191 Recurring Training	1												
	192 Sustaining Engine	ering	\$ 23.134 (42%)	\$ 23.666	\$ 2.138	0.090322	\$ 20.457	\$ 20.834	\$ 21.358	\$ 21.735	\$ 22.162	\$ 22.428	\$ 22.625	\$
	193 Civilian		\$ 4.840 (44%)	\$ 4.951	\$ 0.547	0.110413	\$ 4.065	\$ 4.233	\$ 4.357	\$ 4.461	\$ 4.555	\$ 4.640	\$ 4.717	
	195 Increment 2		\$ 18.234 (44%)	\$ 18.714	\$ 2.065 ¢ 05.070	0.110384 5.207624	\$ 15.379 \$ 4.792	\$ 10.98Z	\$10.465 ¢E707	\$ 15.870 ¢ £ 225	\$ 17.217	\$17.533	\$17.828	*
	196 Hardware Mainton	ance	\$ 0.724 (30%)	\$ 10.179 \$ 1.561	\$18.00 ¢	0.307624	\$ 4.732 \$ 0.632	\$ 0.301 \$ 0.792	\$ 0.767	\$ 0.225 \$ 1.018	\$ 0.514 \$ 1.107	\$ 5.703 \$ 1 100	\$ 5.340 \$ 1.262	
	197 Software Maintena	ance	\$ 3 448 (44%)	\$ 12 089	\$ 85 246	7.051683	\$1.616	\$1.796	\$ 2.034	\$ 2.340	\$ 2.536	\$ 2 801	\$ 2 983	
	198 Developed Soft	ware Maintenace	\$ 3.448 (44%)	\$ 12.089	\$ 85,246	7.051683	\$ 1.616	\$1.796	\$ 2.034	\$ 2.340	\$ 2.536	\$ 2.801	\$ 2,983	
	199 COTS Software	Maintenance	1							1				~
	<													>

10

Ready

# How do I find the Rows that are Impacting the Risk Results?

#### In POST → Risk Statistics Report

 Will Show the Mean, Standard Deviation, CV & Statistical Percentiles for selected rows

<b>C</b>	ਦੀ ਸਹੇ ਦੇ 🖉 📩					Large Ex	ample File	[Compati	ibility Mode	] - Microso	oft Excel							_ = x
	Home Insert	Page Layout	Formulas	Data	Review	View F	OST										0	_ = ×
Open Session I	View Cases Inputs/Results * Session	New Upc	Edit Cock For Lock For Link to a Reports	matting Different S	ession Pov	port Updat	e Cas Wo File ord Ma	ses orksheets es inage	<ul> <li>Options</li> <li>Help</li> <li>Tutorial</li> <li>Applic</li> </ul>	About X Close								
	1141 -	$f_{x}$	5.9620392098	2564														×
BC	:	D		E	F	G	н	- I	J	К	L	М	N	0	Р	Q	R	s =
2 3 4 5 6 7 8	RI\$K Statistics Rep Costs in BY2012 \$M, 500 Thursday, 02 August 2012 Rows BaseYear	Dort for Risk <i>I</i> iterations, Allocat ; 8:23 pm Case	Adjusted in Larg ted at Mean	je Example	aceit.													
10	RI\$K Statistics in 5%	í intervals																
12	Costs in BY2012 \$M																	
13	WBS			Point Estimat	Confidence	Mean	Std Dev	CV	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%
14	"Demo Program #2																	
15	Total Program			\$158.167	9%	\$197.527	\$128.276	0.6494	\$133.155	\$155.104	\$158.882	\$164.088	\$167.642	\$169.632	\$172.423	\$176.350	\$178.982	\$182.361
16	Increment 1			\$20.744	10%	\$28.609	\$6.721	0.234	\$15.947	\$19.934	\$20.833	\$22.017	\$23.028	\$23.754	\$24.484	\$25.414	\$25.876	\$26.509
17	PMP			\$11.059	9%	\$15.452	\$3.588	0.2322	\$8.512	\$10.506	\$11.254	\$11.798	\$12.426	\$12.871	\$13.251	\$13.681	\$14.086	\$14.399
18	Hardware			\$4.477	24%	\$5.511	\$1.343	0.243	7 \$2.537	\$3.511	\$3.889	\$4.107	\$4.323	\$4.511	\$4.703	\$4.879	\$5.003	\$5.118
19	HVCI1			\$0.053	32%	\$0.065	\$0.022	0.3305	5 \$0.022	\$0.033	\$0.038	\$0.043	\$0.046	\$0.049	\$0.052	\$0.055	\$0.057	\$0.060
20	HVCI2			\$3.190	32%	\$3.927	\$1.299	0.3307	7 \$1.213	\$1.977	\$2.300	\$2.551	\$2.762	\$2.947	\$3.119	\$3.279	\$3.439	\$3.608
21	HVCI3			\$0.191	32%	\$0.236	\$0.078	0.3305	5 \$0.079	\$0.119	\$0.138	\$0.153	\$0.166	\$0.177	\$0.187	\$0.197	\$0.206	\$0.216
22	HVCI4			\$0.510	32%	\$0.628	\$0.208	0.3305	5 \$0.214	\$0.316	\$0.368	\$0.408	\$0.442	\$0.472	\$0.499	\$0.524	\$0.550	\$0.577
23	HVCI5			\$0.532	32%	\$0.655	\$0.217	0.330	3 \$0.199	\$0.329	\$0.384	\$0.425	\$0.461	\$0.492	\$0.519	\$0.546	\$0.573	\$0.601
24	Application Softwar	re		\$3.476	14%	\$5.864	\$2.510	0.4280	\$1.629	\$2.809	\$3.148	\$3.530	\$3.835	\$4.104	\$4.370	\$4.555	\$4.816	\$5.086
25	CSCI1			\$0.114	19%	\$0.188	\$0.093	0.493	5 \$0.040	\$0.080	\$0.096	\$0.107	\$0.116	\$0.123	\$0.129	\$0.137	\$0.147	\$0.156
26	Developed Soft	tware		\$0.092	24%	\$0.158	\$0.092	0.582	5 \$0.027	\$0.054	\$0.065	\$0.075	\$0.085	\$0.093	\$0.101	\$0.109	\$0.116	\$0.125
27	COTS Software	•		\$0.021	32%	\$0.030	\$0.015	0.500	5 \$0.000	\$0.007	\$0.011	\$0.014	\$0.016	\$0.019	\$0.020	\$0.022	\$0.024	\$0.026
28	CSCI2			\$0.200	22%	\$0.337	\$0.180	0.5334	\$0.068	\$0.135	\$0.150	\$0.172	\$0.195	\$0.210	\$0.228	\$0.242	\$0.257	\$0.278
29	Developed Soft	tware		\$0.184	23%	\$0.315	\$0.180	0.5724	\$0.056	\$0.110	\$0.131	\$0.152	\$0.172	\$0.191	\$0.203	\$0.218	\$0.235	\$0.256
30	COTS Software	•		\$0.016	32%	\$0.022	\$0.01	0.5002	2 \$0.000	\$0.005	\$0.008	\$0.010	\$0.012	\$0.014	\$0.015	\$0.017	\$0.018	\$0.020
31	CSCI3			\$0.341	19%	\$0.562	\$0.279	0.4966	\$ \$0.100	\$0.241	\$0.276	\$0.310	\$0.345	\$0.369	\$0.392	\$0.418	\$0.444	\$0.472
32	Developed Soft	tware		\$0.277	25%	\$0.473	\$0.275	0.581	\$ \$0.063	\$0.164	\$0.200	\$0.233	\$0.253	\$0.277	\$0.298	\$0.329	\$0.354	\$0.371
33	COTS Software	,		\$0.064	32%	\$0.089	\$0.045	0.500	\$ \$0.001	\$0.022	\$0.033	\$0.042	\$0.049	\$0.055	\$0.061	\$0.067	\$0.072	\$0.078
34	CSCI4			\$0.369	26%	\$0.631	\$0.376	0.5950	\$0.152	\$0.223	\$0.266	\$0.306	\$0.331	\$0.362	\$0.400	\$0.438	\$0.474	\$0.493
35	Developed Soft	tware		\$0.369	26%	\$0.631	\$0.376	0.5950	\$0.152	\$0.223	\$0.266	\$0.306	\$0.331	\$0.362	\$0.400	\$0.438	\$0.474	\$0.493
36	COTS Software	•													4.6 812		44 537	<b>_</b> _
14 4 <b>F</b> FI	RI\$K Statistics /	Sheet1 / S	Sheet2 / Sheet	3 / 🖓 🖊		•n 700	40 ACG	0.6940	en 191	#0 277	4 P. 220	40 202I	#0.427	101.04	<b>40 616</b>	40 F.4 G	40 K77	◆n £21

# How do I find the Rows that are Impacting the Risk Results?

- In POST → Tornado Chart
  - Will Show the rows that are impacting the result row



# **Does the Distribution Result Match** What I put into ACE?

- In POST  $\rightarrow$  Joint Confidence Level (JCL) Chart
  - Will Show Individual Risk Iteration Results

Cn L	19 - (2	( <b>*</b> ) <b>*</b>							Larg
<u> </u>	Home	Insert	Page Layo	ut	Formulas	Data	Review		View
Open Session In	View puts/Resul	Cases Its	New	Up date	Edit Lock For Link to a	matting Different S	ession	Ex	port U
	JCF.	6		2	Reports			(104	i chi onn
	105	• (		Jx		-	-		-
B C	la constitución de la constituci	D	D			E	F		G
60	iteration	Results for	HISK Adju:	stea					
62			k da						
62	- Plot itera	tions from table	Delow			SLOC ParMa	intainar		
64	Point Est					20000 000			
65	Mean					97710 943			
65	StdDeu					56701633			
57	CV					0.590			
68					1	95515.073			
69						201047 298			
70					- 3	106819.964			
71					4	149658 385			
72					. 5	78911.000			
73					6	193200.598			
74					7	185803.294			
75					8	114829.585			
76					9	73185.598			
77					10	175820.162			
78					11	147158,113			
79					12	137363.218			
80					13	41697.669			
81					14	47910.463			
82					15	61942.069			
83					16	65540.995			
84					17	82455.261			
85					18	9363.360			
86					19	118354.318			
87					20	69624.845			
88					21	50303.012			
89					22	15350.092			
90					23	5709.652			
91					24	77629.132			
92					25	236076.124			
93					26	53617.481			
94					27	53243.322			
95					28	70061.270			
	Joint D	-	Chart 4	DICK	29 Statistics	Torpada (	bart	ch	not1
	JOINT PI	robability	unart	АцэК .	Statistics 2	Tomado (	andru 🔬	2116	seti /

# Does the Distribution Result Match What I put into ACE, cont.?

- In CO\$TAT  $\rightarrow$  Distribution Finder
  - Create a dataset in CO\$TAT using the JCL results. Run Distribution Finder on the dataset
  - Note: a large number of iterations in the JCL chart will cause the distribution finder's file size to be extremely large



	Sample	LogNormal	Normal	Triangular	Beta	Uniform
Mean	97,710.9426	100,025.6116	97,710.9423	97,711.4220	97,738.8567	97,710.9423
StdDev	56,701.6328	50,116.7895	55,988.2435	56,632.7796	56,314.6045	55,944.6526
CV	0.5803	0.5010	0.5730	0.5796	0.5762	0.5726
Min	237.9826			-16,345.2915	2,232.2380	811.9616
Mode		71,483.2160	97,710.9423	57,338.9064	61,773.3305	
Max	241,633.8061			252,140.6512	246,794.4427	194,609.9230
Alpha					1.3625	
Beta					2.1264	
Data Count	500	% < 0 =	4.05%	1.35%	None	None
Standard Error of Estin	nate	16,713.8632	9,077.3497	1,390.0427	1,644.3352	8,897.7515
Rank		5	4	1	2	3
SEE / Fit Mean		16.71%	9.29%	1.42%	1.68%	9.11%
Chi^2 Fit test 23 Bins,	Sig 0.05	Poor (0%)	Poor (0%)	Good (100%)	Good (100%)	Poor (0%)

# Does the Distribution Result Match What I put into ACE, cont.?

- Compare the Distribution Finder's Results to your ACE session
  - With extremely right-skewed triangular distributions, a low and high percentile are usually needed

UJT	· Jx uu XX										
🖉 Lai	rge Example.asic (BY2012\$M) 🌿 Large Example.aceiewer (	(BY2012\$M)									<b>→</b> ×
	WBS/CES Description	Unique ID	Baseline	Equation / Throughput	Distribution Form	PE Position in	Low (% of PE)	High (% of PE)	Low (Percentile)	High (Percentile)	Coefficie of Variat
627	*Software Maintenance Section	aintenance									
628	*Developed Software Maintenance										
629	SLOC Per Maintainer	Maintainer	70000.000 *	70000	Triangular	Mode	28	228			
630											
631	Increment 1 Developed Software	tal_devSW	35000.000 *	Inc1_total_Code_phased							
000		1	FO 10 1F 1 10 +	DUCC COLLATELE DUA							

	Sample	LogNormal	Normal	Triangular	Beta	Uniform
Mean	97,710.9426	100,025.6116	97,710.942	97,711.4220	97,738.8567	97,710.9423
StdDev	56,701.6328	50,116.7895	55,988.243	56,632.7796	56,314.6045	55,944.6526
CV	0.5803	0.5010	0.5730	0.5796	0.5762	0.5726
Min	237.9826			-16,345.2915	2,232.2380	811.9616
Mode		71,483.2160	97,710.9423	57,338.9064	61,773.3305	
Max	241,633.8061			252,140.6512	246,794.4427	194,609.9230
Alpha					1.3625	
Beta					2.1264	
Data Count	500	% < 0 =	4.05%	1.35%	None	None
Standard Error of Estin	nate	16,713.8632	9,077.3497	1,390.0427	1,644.3352	8,897.7515
Rank		5	4	1	2	3
SEE / Fit Mean		16.71%	9.29%	1.42%	1.68%	9.11%
Chi^2 Fit test 23 Bins,	Sig 0.05	Poor (0%)	Poor (0%	Good (100%)	Good (100%)	Poor (0%)

# Summary

- There are many different ways to review your Risk Results
  - -ACE
    - Input Results Viewer (BY Risk Statistics)
    - Traceback Navigator
  - POST & CO\$TAT
    - Risk Statistics Report
    - Tornado Report
    - JCL and Distribution Finder