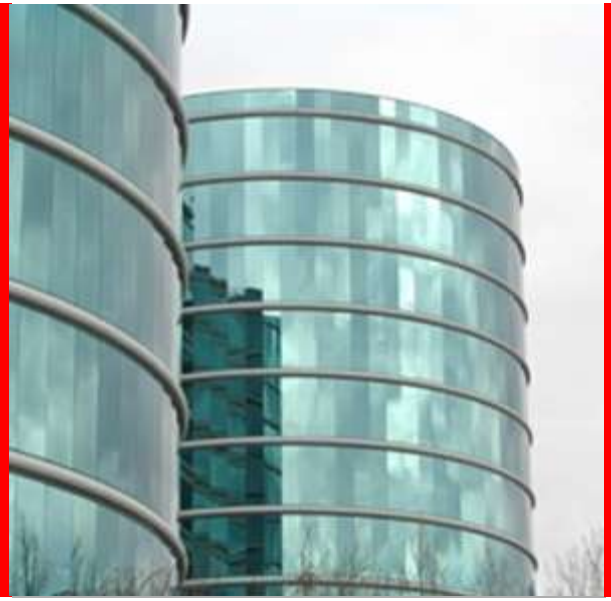


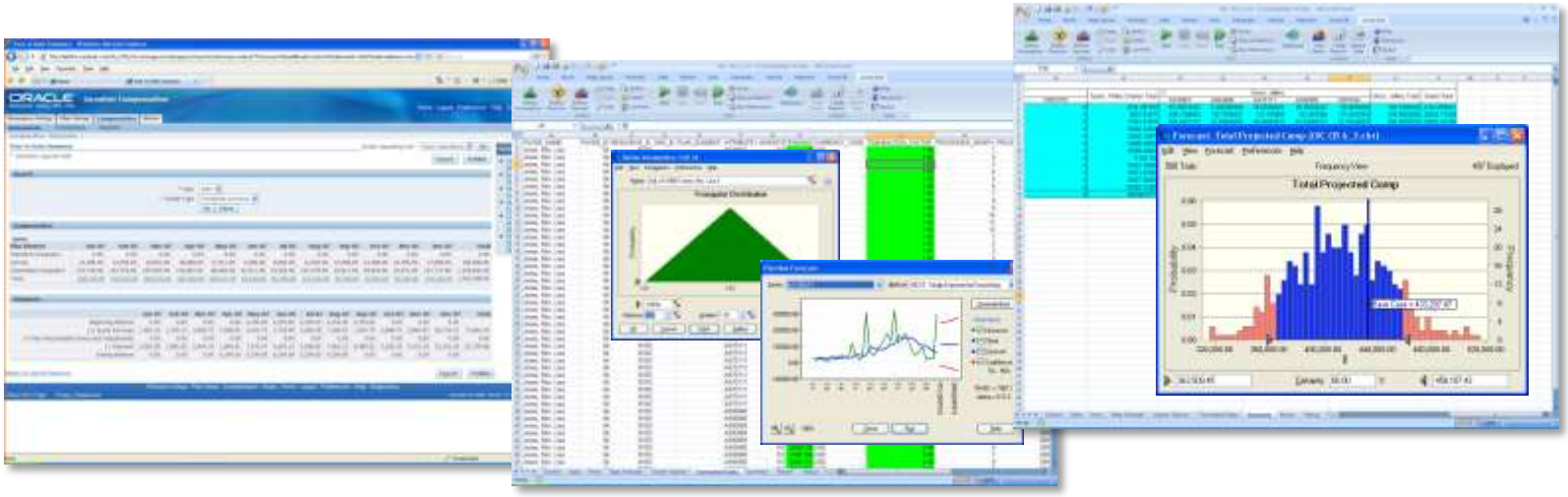
ORACLE

Extending OIC modeling to improve accuracy and confidence in forecasting expenses for accruals

An Oracle Incentive Compensation and Crystal Ball integrated demo

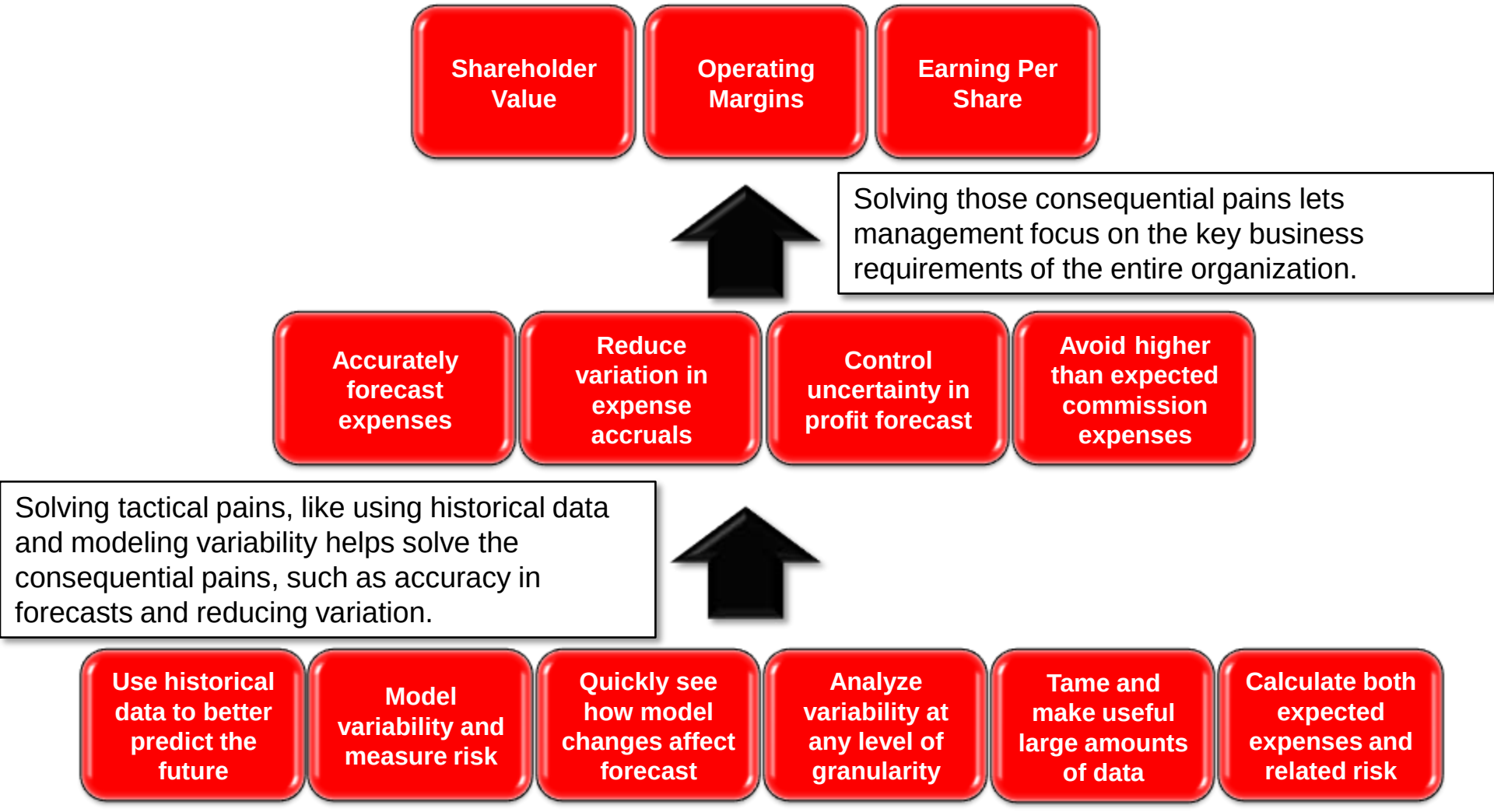
Oracle Solution

Measuring Risk and Uncertainty



- Incentive Compensation already accurately calculates your projected plan payout.
- Use statistical techniques to measure the certainty ranges around those payouts.
- These certainty ranges let you create better models, accounting for variability.
- Plus, use historical data to create better model inputs.

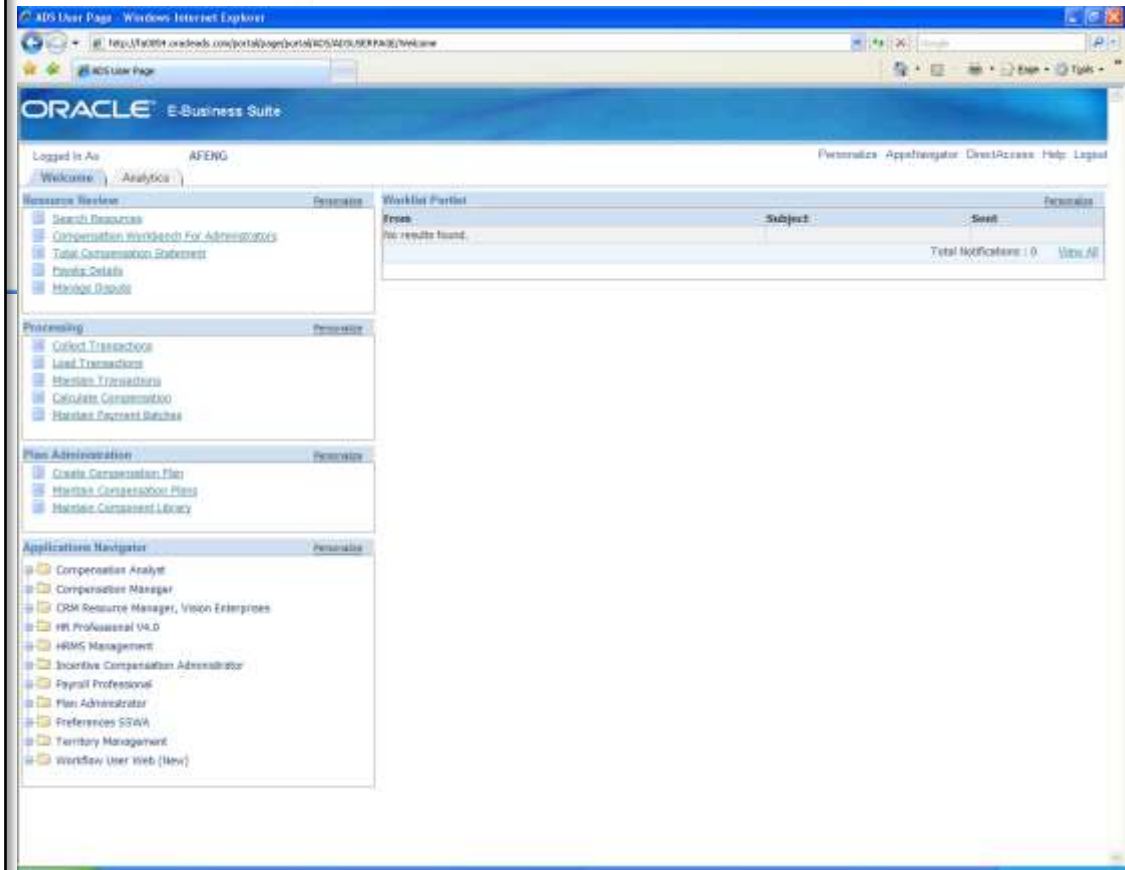
Solution Benefits

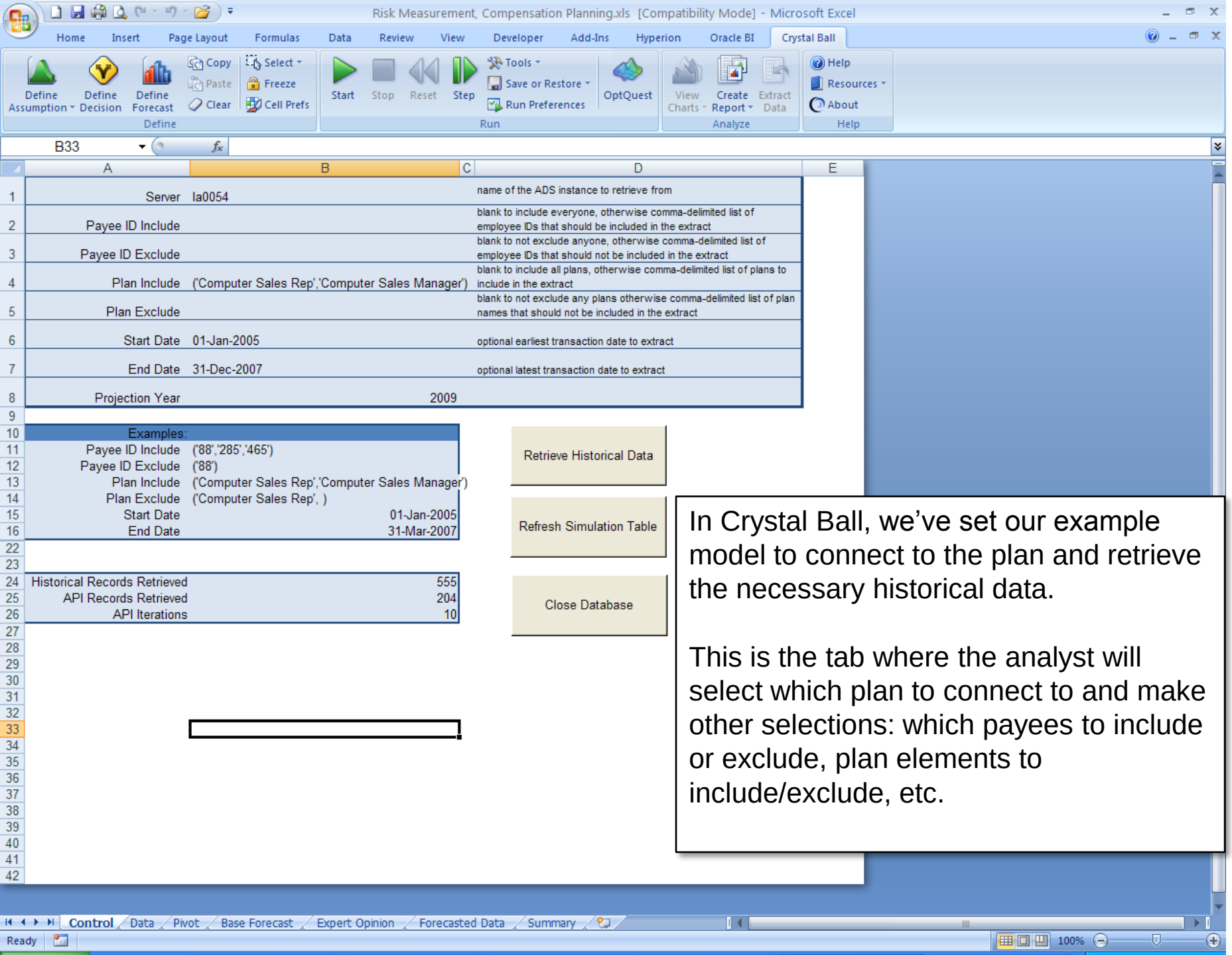


Let's assume that you're a compensation analyst who has been tasked with the project of calculating the projected comp expense for next year for a certain group, for purposes of accruals. While you can set this up in OIC and get the expense number, you're nervous about whether that number is too high or too low. Your boss always asks you: "how certain are you?"

For once, you'd like to be able to answer that question with confidence, with solid math to back up your analysis.

Let's answer that question.




Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
Home Insert Page Layout Formulas Data Review View Developer Add-Ins Hyperion Oracle BI Crystal Ball
Define Assumption
Define Decision
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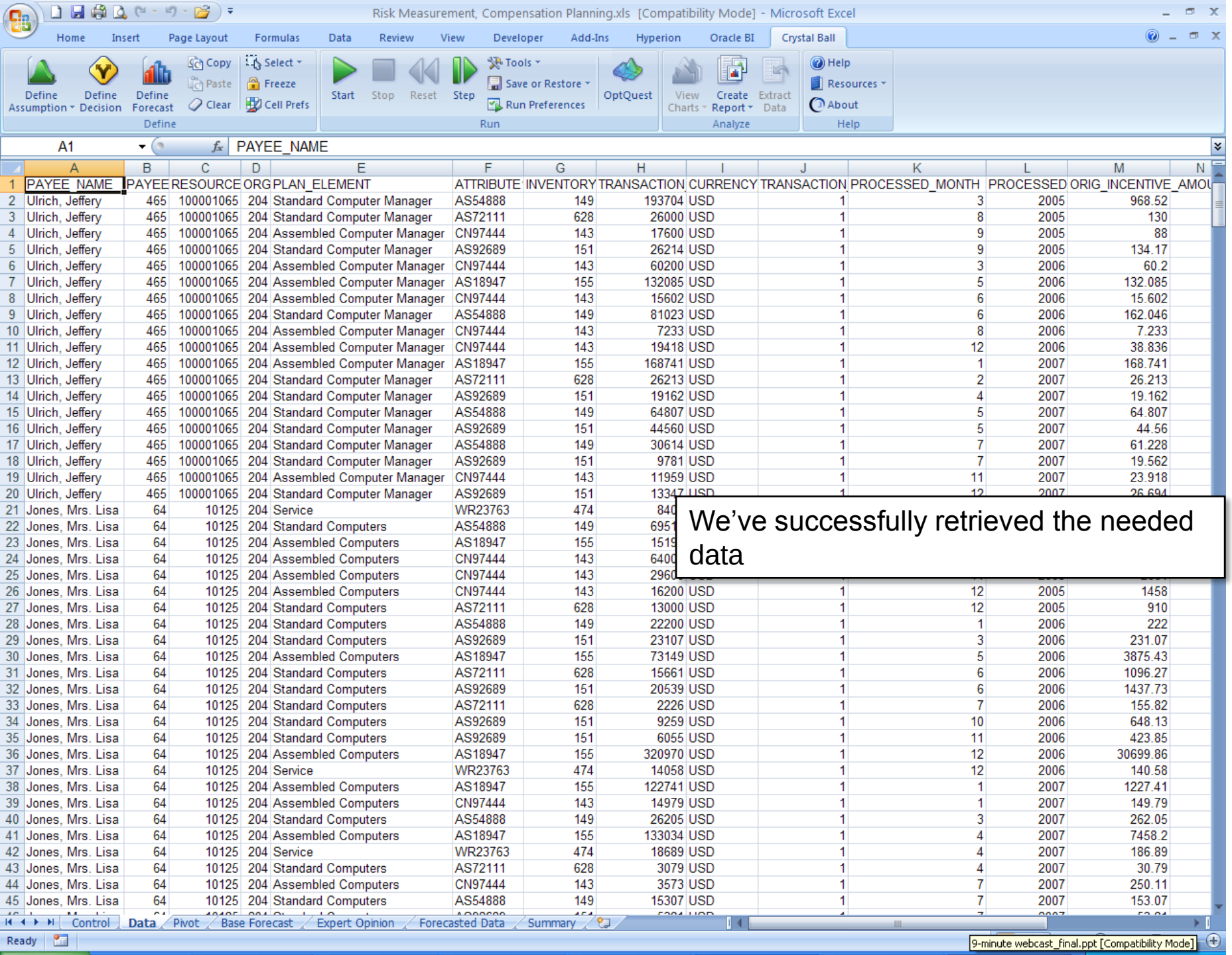
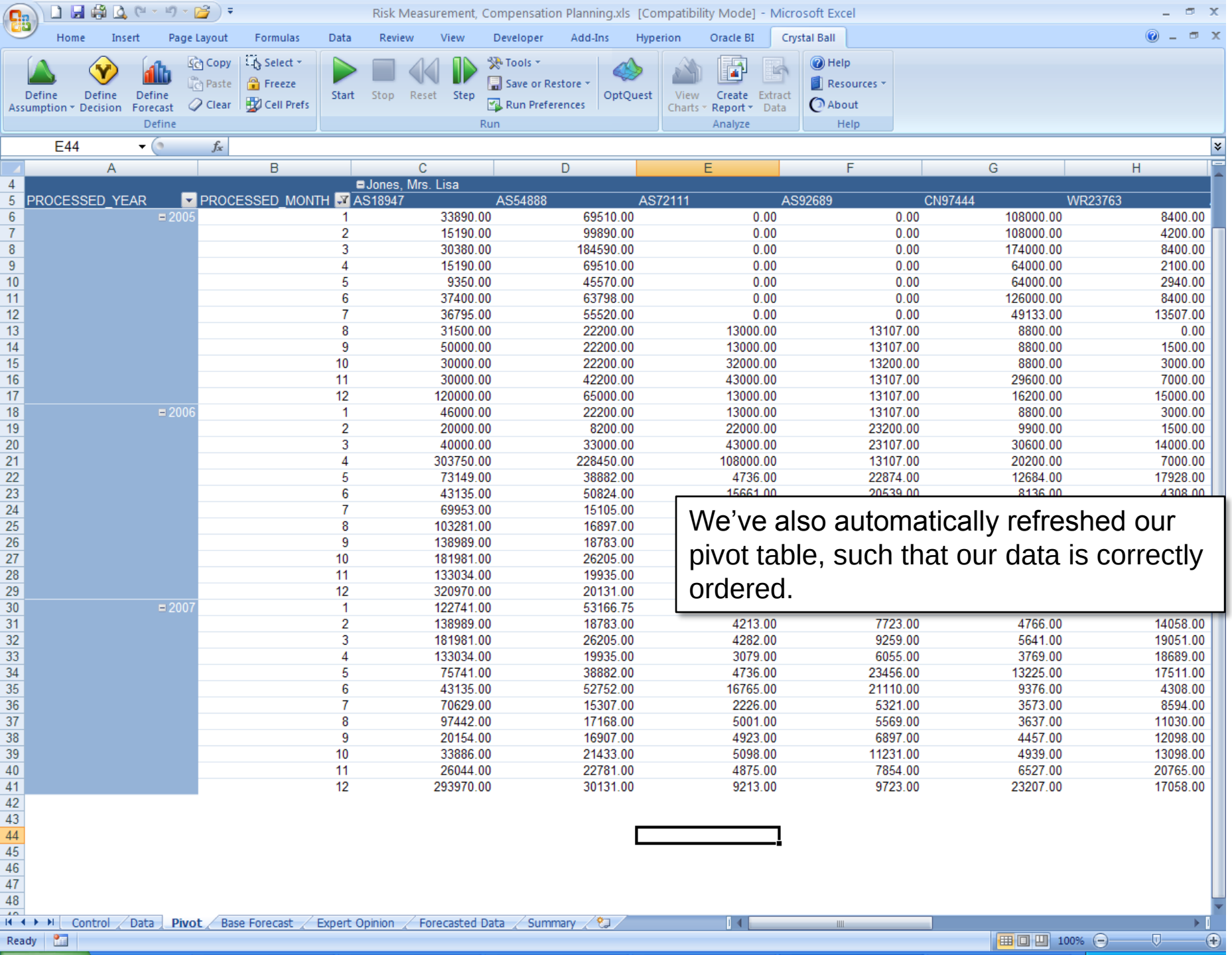
Select
Freeze
Cell Prefs
Define
Start
Stop
Reset
Step
Tools
Save or Restore
Run Preferences
OptQuest
Run
View Charts
Create Report
Extract Data
Analyze
Help
Resources
About
Help
B33
Server la0054 name of the ADS instance to retrieve from
Payee ID Include blank to include everyone, otherwise comma-delimited list of employee IDs that should be included in the extract
Payee ID Exclude blank to not exclude anyone, otherwise comma-delimited list of employee IDs that should not be included in the extract
Plan Include ('Computer Sales Rep','Computer Sales Manager') blank to include all plans, otherwise comma-delimited list of plans to include in the extract
Plan Exclude blank to not exclude any plans otherwise comma-delimited list of plan names that should not be included in the extract
Start Date 01-Jan-2005 optional earliest transaction date to extract
End Date 31-Dec-2007 optional latest transaction date to extract
Projection Year 2009
Examples:
Payee ID Include ('88','285','465')
Payee ID Exclude ('88')
Plan Include ('Computer Sales Rep','Computer Sales Manager')
Plan Exclude ('Computer Sales Rep',)
Start Date 01-Jan-2005
End Date 31-Mar-2007
Historical Records Retrieved 555
API Records Retrieved 204
API Iterations 10
Retrieve Historical Data
Refresh Simulation Table
Close Database
In Crystal Ball, we've set our example model to connect to the plan and retrieve the necessary historical data.
This is the tab where the analyst will select which plan to connect to and make other selections: which payees to include or exclude, plan elements to include/exclude, etc.
Control Data Pivot Base Forecast Expert Opinion Forecasted Data Summary
Ready
100%



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	PAYEE_NAME	PAYEE	RESOURCE	ORG	PLAN_ELEMENT	ATTRIBUTE	INVENTORY	TRANSACTION	CURRENCY	TRANSACTION	PROCESSED_MONTH	PROCESSED	ORIG_INCENTIVE_AMOU	
2	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS54888	149	193704	USD	1	3	2005	968.52	
3	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS72111	628	26000	USD	1	8	2005	130	
4	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	CN97444	143	17600	USD	1	9	2005	88	
5	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS92689	151	26214	USD	1	9	2005	134.17	
6	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	CN97444	143	60200	USD	1	3	2006	60.2	
7	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	AS18947	155	132085	USD	1	5	2006	132.085	
8	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	CN97444	143	15602	USD	1	6	2006	15.602	
9	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS54888	149	81023	USD	1	6	2006	162.046	
10	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	CN97444	143	7233	USD	1	8	2006	7.233	
11	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	CN97444	143	19418	USD	1	12	2006	38.836	
12	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	AS18947	155	168741	USD	1	1	2007	168.741	
13	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS72111	628	26213	USD	1	2	2007	26.213	
14	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS92689	151	19162	USD	1	4	2007	19.162	
15	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS54888	149	64807	USD	1	5	2007	64.807	
16	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS92689	151	44560	USD	1	5	2007	44.56	
17	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS54888	149	30614	USD	1	7	2007	61.228	
18	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS92689	151	9781	USD	1	7	2007	19.562	
19	Ulrich, Jeffery	465	100001065	204	Assembled Computer Manager	CN97444	143	11959	USD	1	11	2007	23.918	
20	Ulrich, Jeffery	465	100001065	204	Standard Computer Manager	AS92689	151	13347	USD	1	12	2007	26.694	
21	Jones, Mrs. Lisa	64	10125	204	Service	WR23763	474	840						
22	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS54888	149	6951						
23	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	AS18947	155	1519						
24	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	CN97444	143	6400						
25	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	CN97444	143	2960						
26	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	CN97444	143	16200	USD	1	12	2005	1458	
27	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS72111	628	13000	USD	1	12	2005	910	
28	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS54888	149	22200	USD	1	1	2006	222	
29	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS92689	151	23107	USD	1	3	2006	231.07	
30	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	AS18947	155	73149	USD	1	5	2006	3875.43	
31	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS72111	628	15661	USD	1	6	2006	1096.27	
32	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS92689	151	20539	USD	1	6	2006	1437.73	
33	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS72111	628	2226	USD	1	7	2006	155.82	
34	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS92689	151	9259	USD	1	10	2006	648.13	
35	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS92689	151	6055	USD	1	11	2006	423.85	
36	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	AS18947	155	320970	USD	1	12	2006	30699.86	
37	Jones, Mrs. Lisa	64	10125	204	Service	WR23763	474	14058	USD	1	12	2006	140.58	
38	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	AS18947	155	122741	USD	1	1	2007	1227.41	
39	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	CN97444	143	14979	USD	1	1	2007	149.79	
40	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS54888	149	26205	USD	1	3	2007	262.05	
41	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	AS18947	155	133034	USD	1	4	2007	7458.2	
42	Jones, Mrs. Lisa	64	10125	204	Service	WR23763	474	18689	USD	1	4	2007	186.89	
43	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS72111	628	3079	USD	1	4	2007	30.79	
44	Jones, Mrs. Lisa	64	10125	204	Assembled Computers	CN97444	143	3573	USD	1	7	2007	250.11	
45	Jones, Mrs. Lisa	64	10125	204	Standard Computers	AS54888	149	15307	USD	1	7	2007	153.07	


Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
Home Insert Page Layout Formulas Data Review View Developer Add-Ins Hyperion Oracle BI Crystal Ball
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E44
Jones, Mrs. Lisa
PROCESSED_YEAR
PROCESSED_MONTH
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AS72111
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3 30380.00 184590.00 0.00 0.00 174000.00 8400.00
4 15190.00 69510.00 0.00 0.00 64000.00 2100.00
5 9350.00 45570.00 0.00 0.00 64000.00 2940.00
6 37400.00 63798.00 0.00 0.00 126000.00 8400.00
7 36795.00 55520.00 0.00 0.00 49133.00 13507.00
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9 50000.00 22200.00 13000.00 13107.00 8800.00 1500.00
10 30000.00 22200.00 32000.00 13200.00 8800.00 3000.00
11 30000.00 42200.00 43000.00 13107.00 29600.00 7000.00
12 120000.00 65000.00 13000.00 13107.00 16200.00 15000.00
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5 73149.00 38882.00 4736.00 22874.00 12684.00 17928.00
6 43135.00 50824.00
7 69953.00 15105.00
8 103281.00 16897.00
9 138989.00 18783.00
10 181981.00 26205.00
11 133034.00 19935.00
12 320970.00 20131.00
2007
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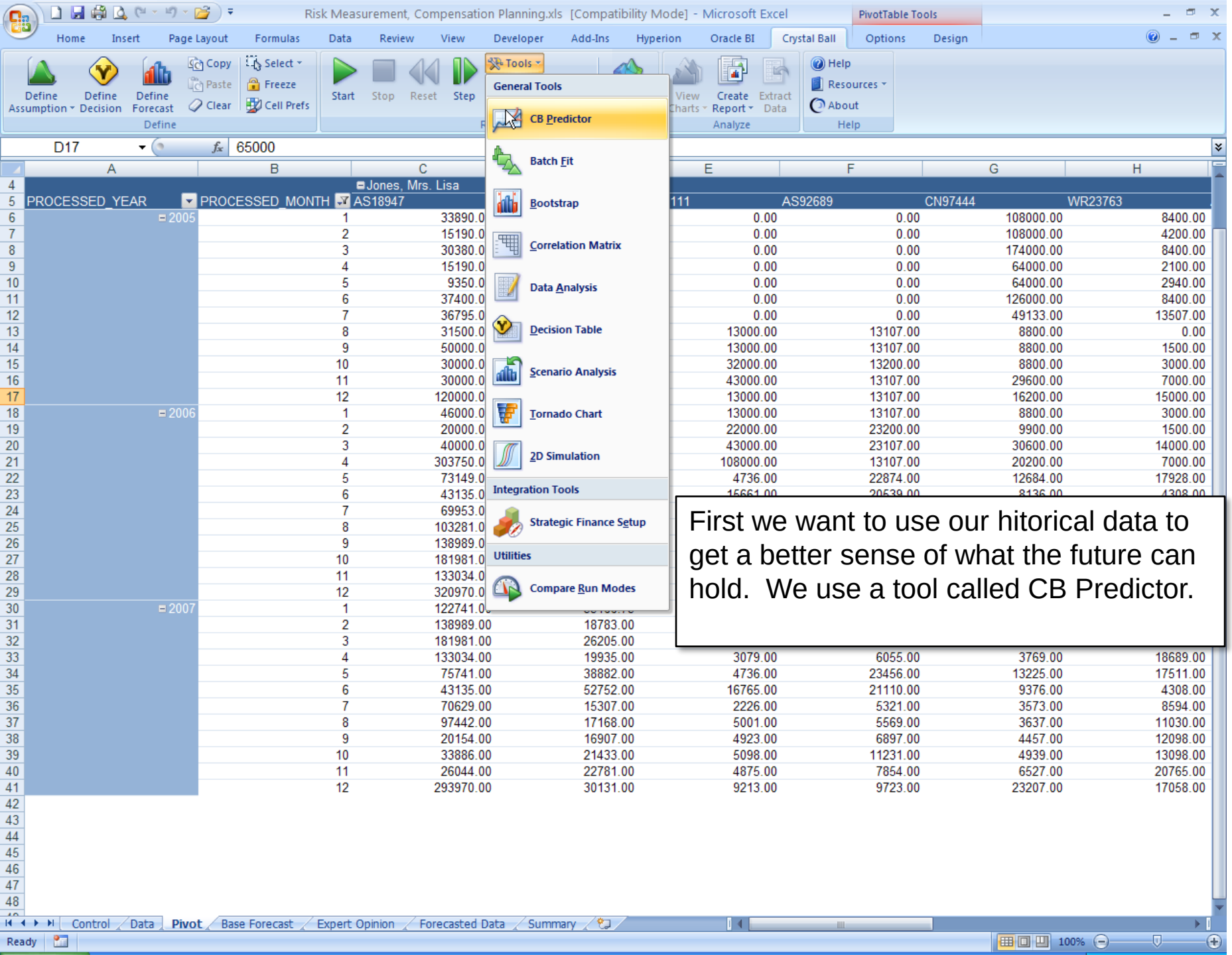
3 181981.00 26205.00 4282.00 9259.00 5641.00 19051.00
4 133034.00 19935.00 3079.00 6055.00 3769.00 18689.00
5 75741.00 38882.00 4736.00 23456.00 13225.00 17511.00
6 43135.00 52752.00 16765.00 21110.00 9376.00 4308.00
7 70629.00 15307.00 2226.00 5321.00 3573.00 8594.00
8 97442.00 17168.00 5001.00 5569.00 3637.00 11030.00
9 20154.00 16907.00 4923.00 6897.00 4457.00 12098.00
10 33886.00 21433.00 5098.00 11231.00 4939.00 13098.00
11 26044.00 22781.00 4875.00 7854.00 6527.00 20765.00
12 293970.00 30131.00 9213.00 9723.00 23207.00 17058.00
We've also automatically refreshed our pivot table, such that our data is correctly ordered.
Control Data Pivot Base Forecast Expert Opinion Forecasted Data Summary
Ready
100%



	A	B	C	D	E	F	G	H
4			Jones, Mrs. Lisa					
5	PROCESSED_YEAR	PROCESSED_MONTH	AS18947		111	AS92689	CN97444	WR23763
6	2005	1	33890.0		0.00	0.00	108000.00	8400.00
7		2	15190.0		0.00	0.00	108000.00	4200.00
8		3	30380.0		0.00	0.00	174000.00	8400.00
9		4	15190.0		0.00	0.00	64000.00	2100.00
10		5	9350.0		0.00	0.00	64000.00	2940.00
11		6	37400.0		0.00	0.00	126000.00	8400.00
12		7	36795.0		0.00	0.00	49133.00	13507.00
13		8	31500.0		13000.00	13107.00	8800.00	0.00
14		9	50000.0		13000.00	13107.00	8800.00	1500.00
15		10	30000.0		32000.00	13200.00	8800.00	3000.00
16		11	30000.0		43000.00	13107.00	29600.00	7000.00
17		12	120000.0		13000.00	13107.00	16200.00	15000.00
18	2006	1	46000.0		13000.00	13107.00	8800.00	3000.00
19		2	20000.0		22000.00	23200.00	9900.00	1500.00
20		3	40000.0		43000.00	23107.00	30600.00	14000.00
21		4	303750.0		108000.00	13107.00	20200.00	7000.00
22		5	73149.0		4736.00	22874.00	12684.00	17928.00
23		6	43135.0		15661.00	20539.00	8136.00	4308.00
24		7	69953.0					
25		8	103281.0					
26		9	138989.0					
27		10	181981.0					
28		11	133034.0					
29		12	320970.0					
30	2007	1	122741.0					
31		2	138989.00	18783.00				
32		3	181981.00	26205.00				
33		4	133034.00	19935.00	3079.00	6055.00	3769.00	18689.00
34		5	75741.00	38882.00	4736.00	23456.00	13225.00	17511.00
35		6	43135.00	52752.00	16765.00	21110.00	9376.00	4308.00
36		7	70629.00	15307.00	2226.00	5321.00	3573.00	8594.00
37		8	97442.00	17168.00	5001.00	5569.00	3637.00	11030.00
38		9	20154.00	16907.00	4923.00	6897.00	4457.00	12098.00
39		10	33886.00	21433.00	5098.00	11231.00	4939.00	13098.00
40		11	26044.00	22781.00	4875.00	7854.00	6527.00	20765.00
41		12	293970.00	30131.00	9213.00	9723.00	23207.00	17058.00
42								
43								
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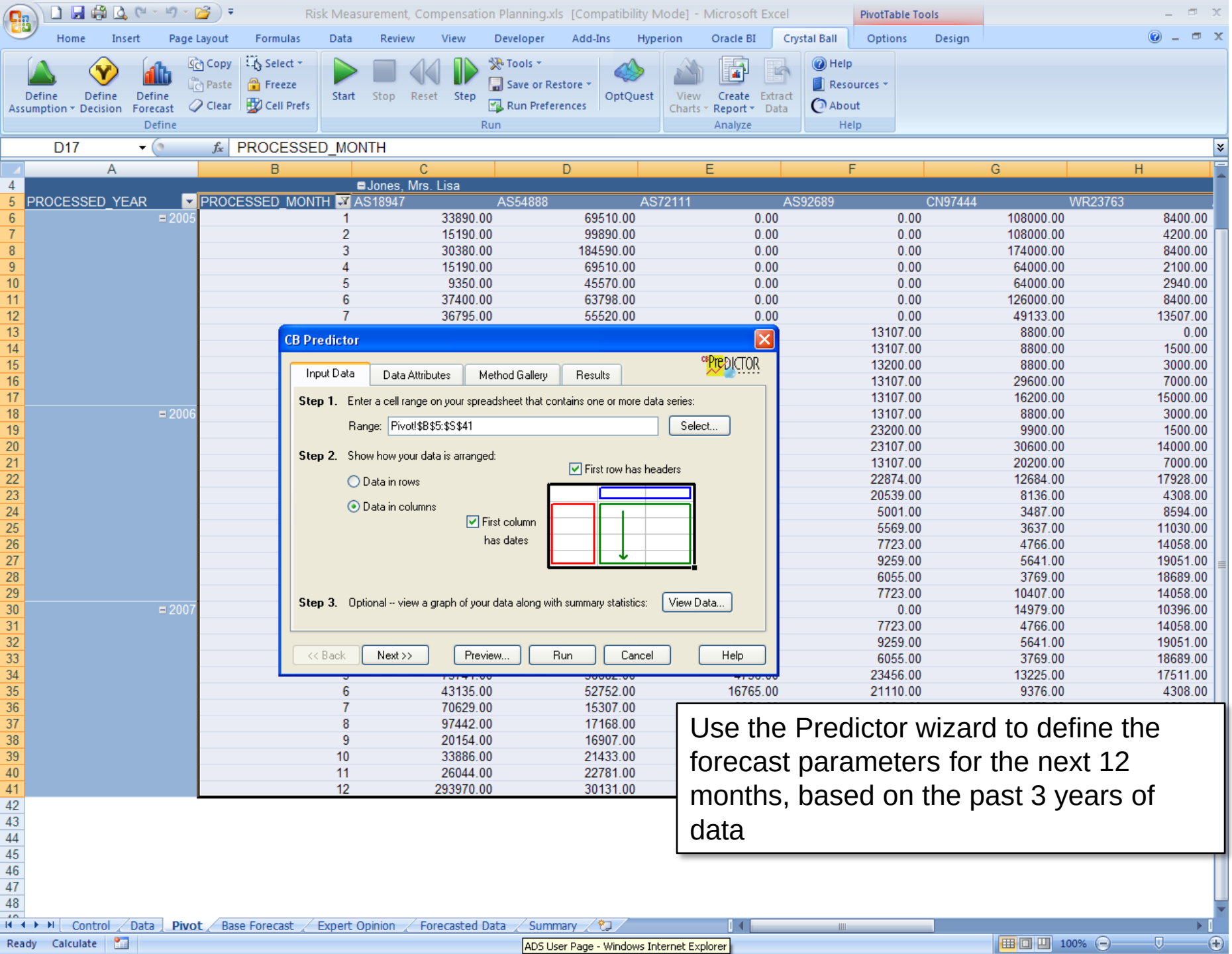
48								


Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
PivotTable Tools
Home Insert Page Layout Formulas Data Review View Developer Add-Ins Hyperion Oracle BI Crystal Ball Options Design
Define Assumption
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Create Report
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Analyze
Help
Resources
About
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D17
PROCESSED_MONTH
Jones, Mrs. Lisa
PROCESSED_YEAR
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AS18947
AS54888
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AS92689
CN97444
WR23763
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9 20154.00 16907.00
10 33886.00 21433.00
11 26044.00 22781.00
12 293970.00 30131.00
CB Predictor
Input Data
Data Attributes
Method Gallery
Results
Step 1. Enter a cell range on your spreadsheet that contains one or more data series:
Range: Pivot!$B$5:$S$41
Select...
Step 2. Show how your data is arranged:
Data in rows
Data in columns
First row has headers
First column has dates
Step 3. Optional -- view a graph of your data along with summary statistics:
View Data...
<< Back
Next >>
Preview...
Run
Cancel
Help
Use the Predictor wizard to define the forecast parameters for the next 12 months, based on the past 3 years of data
Control Data Pivot Base Forecast Expert Opinion Forecasted Data Summary
Ready Calculate
ADS User Page - Windows Internet Explorer
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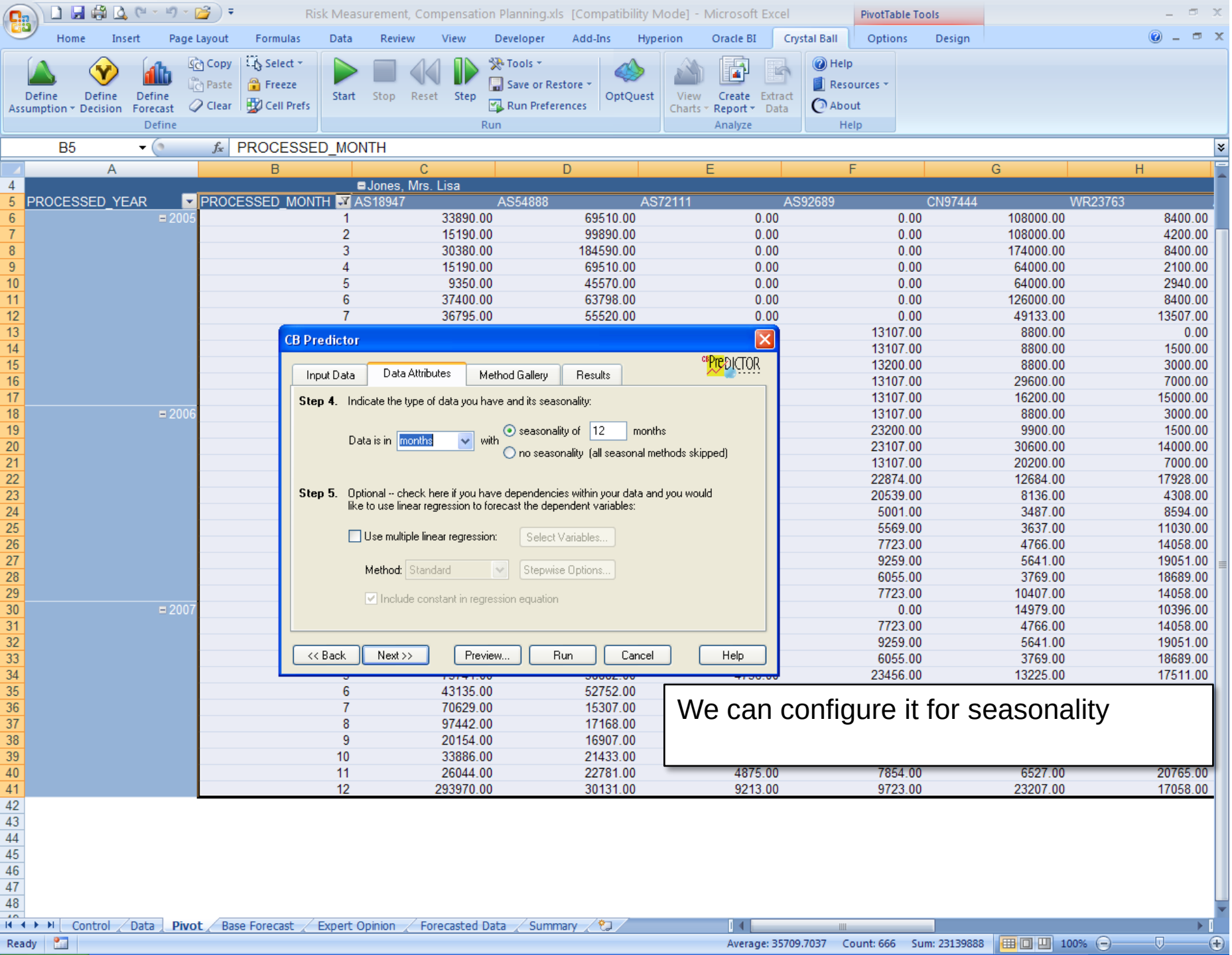
Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
PivotTable Tools
Home Insert Page Layout Formulas Data Review View Developer Add-Ins Hyperion Oracle BI Crystal Ball Options Design
Define Assumption
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Save or Restore
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Run
View Charts
Create Report
Extract Data
Analyze
Help
Resources
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B5
PROCESSED_MONTH
Jones, Mrs. Lisa
PROCESSED_YEAR
PROCESSED_MONTH
AS18947
AS54888
AS72111
AS92689
CN97444
WR23763
2005
2006
2007
CB Predictor
Input Data
Data Attributes
Method Gallery
Results
Step 4. Indicate the type of data you have and its seasonality:
Data is in months with
seasonality of 12 months
no seasonality (all seasonal methods skipped)
Step 5. Optional -- check here if you have dependencies within your data and you would like to use linear regression to forecast the dependent variables:
Use multiple linear regression:
Select Variables...
Method: Standard
Stepwise Options...
Include constant in regression equation
<< Back
Next >>
Preview...
Run
Cancel
Help
We can configure it for seasonality
Control
Data
Pivot
Base Forecast
Expert Opinion
Forecasted Data
Summary
Ready
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Sum: 23139888
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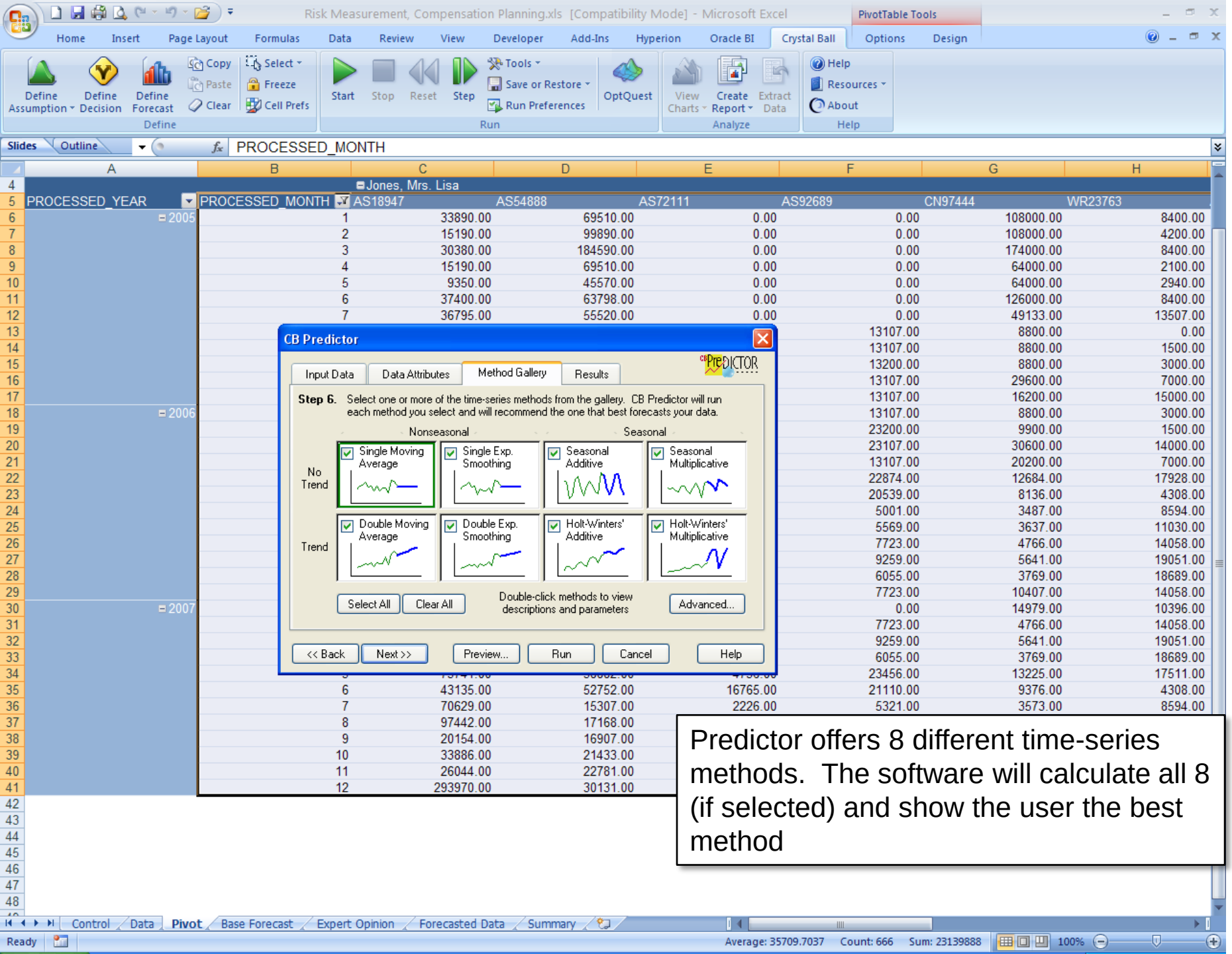
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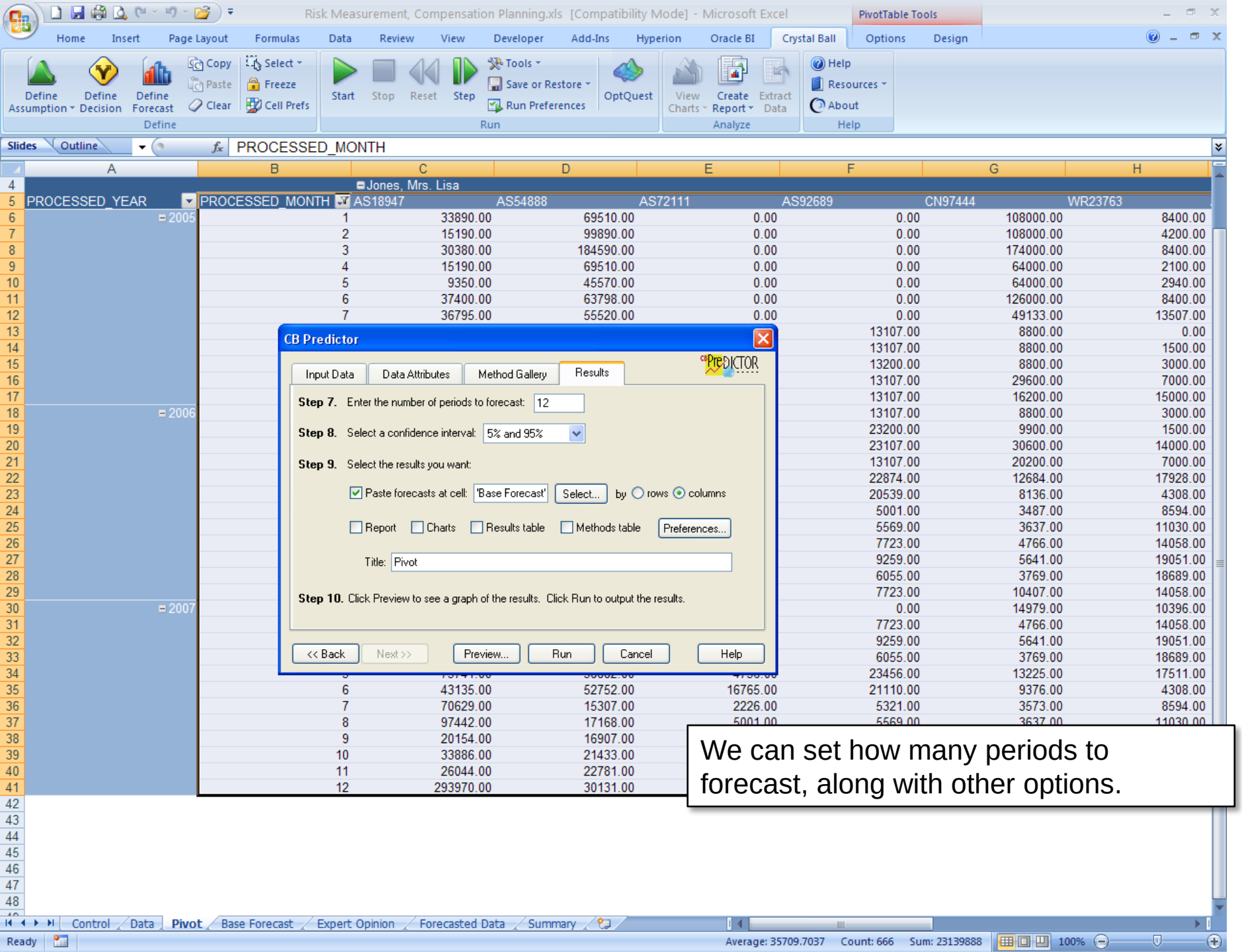
6 37400.00 63798.00 0.00 0.00 126000.00 8400.00
7 36795.00 55520.00 0.00 0.00 49133.00 13507.00
13107.00 8800.00 0.00
13107.00 8800.00 1500.00
13200.00 8800.00 3000.00
13107.00 29600.00 7000.00
13107.00 16200.00 15000.00
13107.00 8800.00 3000.00
23200.00 9900.00 1500.00
23107.00 30600.00 14000.00
13107.00 20200.00 7000.00
22874.00 12684.00 17928.00
20539.00 8136.00 4308.00
5001.00 3487.00 8594.00
5569.00 3637.00 11030.00
7723.00 4766.00 14058.00
9259.00 5641.00 19051.00
6055.00 3769.00 18689.00
7723.00 10407.00 14058.00
0.00 14979.00 10396.00
7723.00 4766.00 14058.00
9259.00 5641.00 19051.00
6055.00 3769.00 18689.00
23456.00 13225.00 17511.00
6 43135.00 52752.00 16765.00 21110.00 9376.00 4308.00
7 70629.00 15307.00 2226.00 5321.00 3573.00 8594.00
8 97442.00 17168.00
9 20154.00 16907.00
10 33886.00 21433.00
11 26044.00 22781.00
12 293970.00 30131.00
CB Predictor
Input Data
Data Attributes
Method Gallery
Results
Step 6. Select one or more of the time-series methods from the gallery. CB Predictor will run each method you select and will recommend the one that best forecasts your data.
Nonseasonal
Seasonal
No Trend
Trend
Single Moving Average
Single Exp. Smoothing
Seasonal Additive
Seasonal Multiplicative
Double Moving Average
Double Exp. Smoothing
Holt-Winters' Additive
Holt-Winters' Multiplicative
Select All
Clear All
Double-click methods to view descriptions and parameters
Advanced...
<< Back
Next >>
Preview...
Run
Cancel
Help
Predictor offers 8 different time-series methods. The software will calculate all 8 (if selected) and show the user the best method
Control
Data
Pivot
Base Forecast
Expert Opinion
Forecasted Data
Summary
Ready
Average: 35709.7037
Count: 666
Sum: 23139888
100%


Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
PivotTable Tools
Home Insert Page Layout Formulas Data Review View Developer Add-Ins Hyperion Oracle BI Crystal Ball Options Design
Define Assumption
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Step
Tools
Save or Restore
Run Preferences
OptQuest
Run
View Charts
Create Report
Extract Data
Analyze
Help
Resources
About
Help
Slides
Outline
PROCESSED_MONTH
Jones, Mrs. Lisa
PROCESSED_YEAR
PROCESSED_MONTH
AS18947
AS54888
AS72111
AS92689
CN97444
WR23763
2005
2006
2007
1 33890.00 69510.00 0.00 0.00 108000.00 8400.00
2 15190.00 99890.00 0.00 0.00 108000.00 4200.00
3 30380.00 184590.00 0.00 0.00 174000.00 8400.00
4 15190.00 69510.00 0.00 0.00 64000.00 2100.00
5 9350.00 45570.00 0.00 0.00 64000.00 2940.00
6 37400.00 63798.00 0.00 0.00 126000.00 8400.00
7 36795.00 55520.00 0.00 0.00 49133.00 13507.00
13107.00 8800.00 0.00
13107.00 8800.00 1500.00
13200.00 8800.00 3000.00
13107.00 29600.00 7000.00
13107.00 16200.00 15000.00
13107.00 8800.00 3000.00
23200.00 9900.00 1500.00
23107.00 30600.00 14000.00
13107.00 20200.00 7000.00
22874.00 12684.00 17928.00
20539.00 8136.00 4308.00
5001.00 3487.00 8594.00
5569.00 3637.00 11030.00
7723.00 4766.00 14058.00
9259.00 5641.00 19051.00
6055.00 3769.00 18689.00
7723.00 10407.00 14058.00
0.00 14979.00 10396.00
7723.00 4766.00 14058.00
9259.00 5641.00 19051.00
6055.00 3769.00 18689.00
23456.00 13225.00 17511.00
6 43135.00 52752.00 16765.00 21110.00 9376.00 4308.00
7 70629.00 15307.00 2226.00 5321.00 3573.00 8594.00
8 97442.00 17168.00 5001.00 5569.00 3637.00 11030.00
9 20154.00 16907.00
10 33886.00 21433.00
11 26044.00 22781.00
12 293970.00 30131.00
CB Predictor
Input Data
Data Attributes
Method Gallery
Results
Step 7. Enter the number of periods to forecast: 12
Step 8. Select a confidence interval: 5% and 95%
Step 9. Select the results you want:
Paste forecasts at cell: 'Base Forecast'
Select...
by rows columns
Report
Charts
Results table
Methods table
Preferences...
Title: Pivot
Step 10. Click Preview to see a graph of the results. Click Run to output the results.
<< Back
Next >>
Preview...
Run
Cancel
Help
We can set how many periods to forecast, along with other options.
Control
Data
Pivot
Base Forecast
Expert Opinion
Forecasted Data
Summary
Ready
Average: 35709.7037
Count: 666
Sum: 23139888
100%

Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel

PivotTable Tools

Home | Insert | Page Layout | Formulas | Data | Review | View | Developer | Add-Ins | Hyperion | Oracle BI | Crystal Ball | Options | Design

Define Assumption | Define Decision | Define Forecast | Copy | Paste | Clear | Select | Freeze | Cell Prefs — Define

Start | Stop | Reset | Step | Tools | Save or Restore | Run Preferences | OptQuest — Run

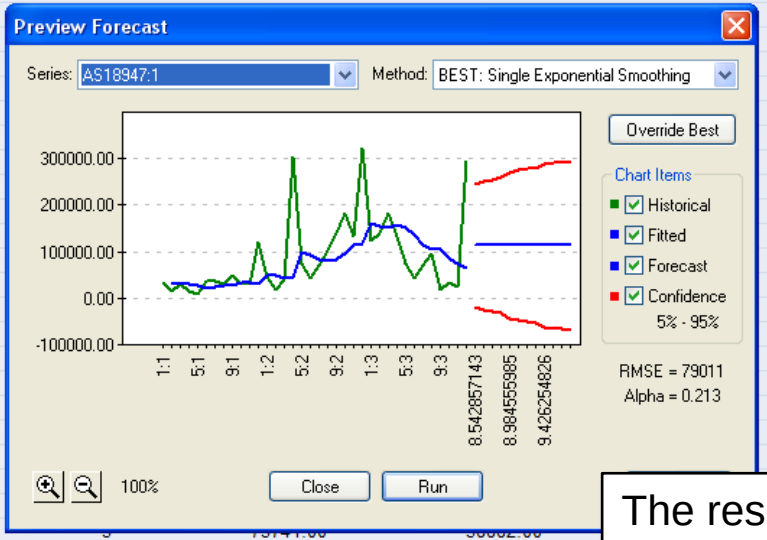
View Charts | Create Report | Extract Data — Analyze

Help | Resources | About — Help

B5 PROCESSED_MONTH

Jones, Mrs. Lisa

PROCESSED_YEAR	PROCESSED_MONTH	AS18947	AS54888	AS72111	AS92689	CN97444	WR23763
2005	1	33890.00	69510.00	0.00	0.00	108000.00	8400.00
	2	15190.00	99890.00	0.00	0.00	108000.00	4200.00
	3	30380.00	184590.00	0.00	0.00	174000.00	8400.00
	4	15190.00	69510.00	0.00	0.00	64000.00	2100.00
	5	9350.00	45570.00	0.00	0.00	64000.00	2940.00
	6	37400.00	63798.00	0.00	0.00	126000.00	8400.00
	7	36795.00	55520.00	0.00	0.00	49133.00	13507.00
						13107.00	8800.00	0.00
						13107.00	8800.00	1500.00
						13200.00	8800.00	3000.00
						13107.00	29600.00	7000.00
						13107.00	16200.00	15000.00
2006						13107.00	8800.00	3000.00
						23200.00	9900.00	1500.00
						23107.00	30600.00	14000.00
						13107.00	20200.00	7000.00
						22874.00	12684.00	17928.00
						20539.00	8136.00	4308.00
						5001.00	3487.00	8594.00
						5569.00	3637.00	11030.00
						7723.00	4766.00	14058.00
						9259.00	5641.00	19051.00
						6055.00	3769.00	18689.00
						7723.00	10407.00	14058.00
2007						0.00	14979.00	10396.00
						7723.00	4766.00	14058.00
	6	43135.00	52752.00					
	7	70629.00	15307.00					
	8	97442.00	17168.00					
	9	20154.00	16907.00					
	10	33886.00	21433.00					
	11	26044.00	22781.00					
	12	293970.00	30131.00					

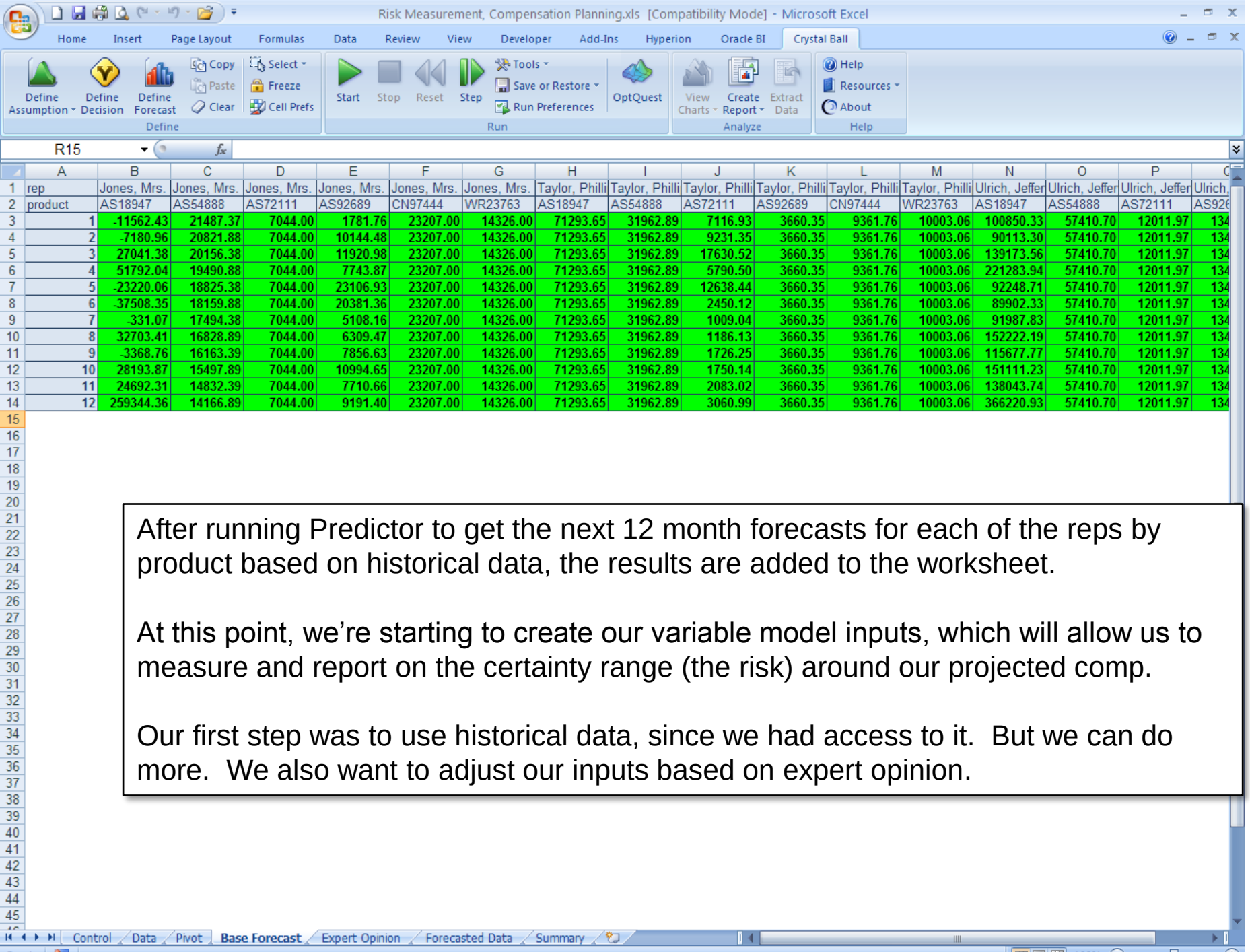


The results of the best method can be previewed before running. The left part of the chart shows historical data with the fitted data and shorter right part of the chart shows the forecasted data, bounded by the confidence interval in red.

Control | Data | Pivot | Base Forecast | Expert Opinion | Forecasted Data | Summary

Ready

Average: 35709.7037 Count: 666 Sum: 23139888 100%


Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
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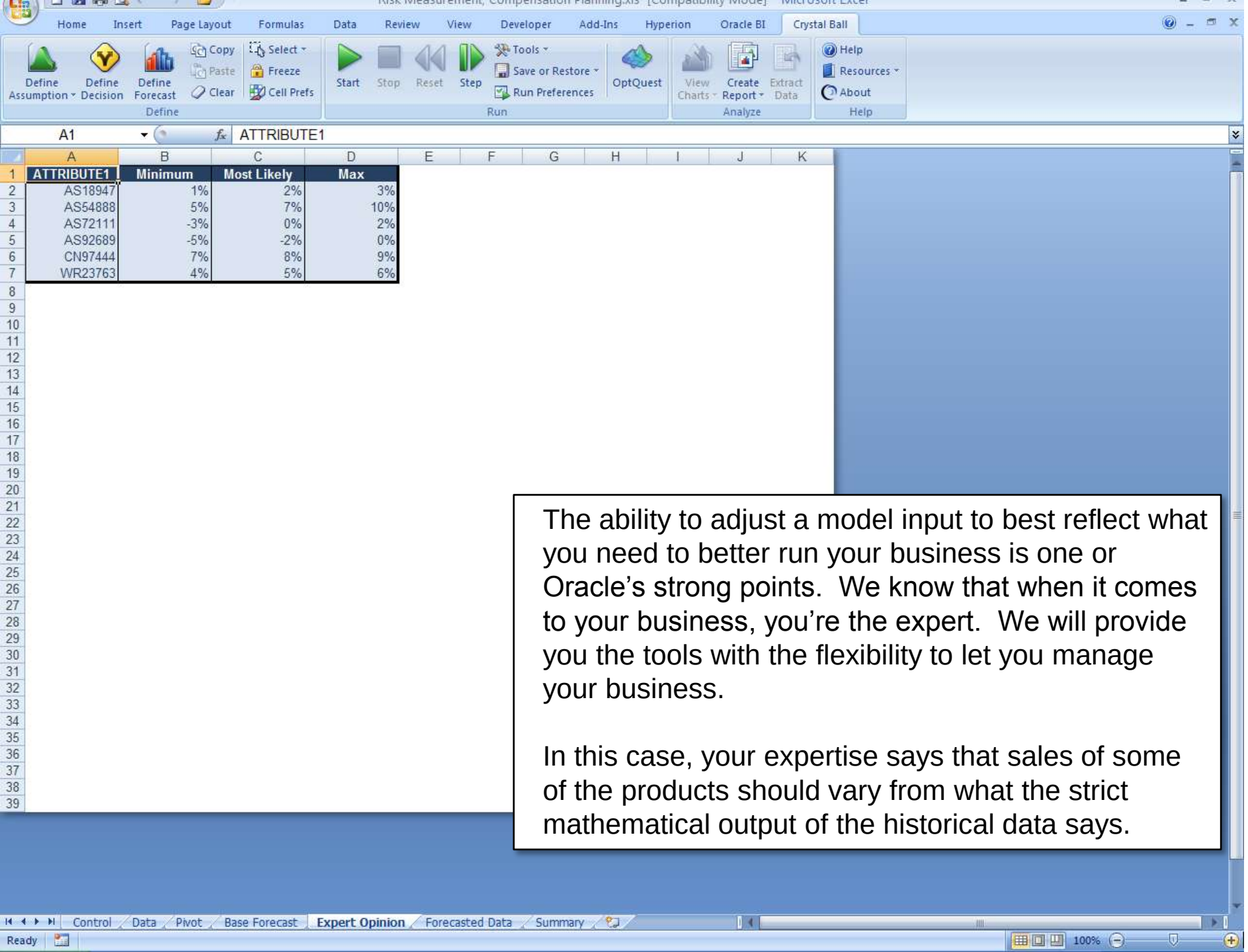
Start
Stop
Reset
Step
Tools
Save or Restore
Run Preferences
OptQuest
Run
View Charts
Create Report
Extract Data
Analyze
Help
Resources
About
Help
R15
rep Jones, Mrs. Jones, Mrs. Jones, Mrs. Jones, Mrs. Jones, Mrs. Jones, Mrs. Taylor, Philli Taylor, Philli Taylor, Philli Taylor, Philli Taylor, Philli Taylor, Philli Ulrich, Jeffer Ulrich, Jeffer Ulrich, Jeffer
product AS18947 AS54888 AS72111 AS92689 CN97444 WR23763 AS18947 AS54888 AS72111 AS92689 CN97444 WR23763 AS18947 AS54888 AS72111
1 -11562.43 21487.37 7044.00 1781.76 23207.00 14326.00 71293.65 31962.89 7116.93 3660.35 9361.76 10003.06 100850.33 57410.70 12011.97
2 -7180.96 20821.88 7044.00 10144.48 23207.00 14326.00 71293.65 31962.89 9231.35 3660.35 9361.76 10003.06 90113.30 57410.70 12011.97
3 27041.38 20156.38 7044.00 11920.98 23207.00 14326.00 71293.65 31962.89 17630.52 3660.35 9361.76 10003.06 139173.56 57410.70 12011.97
4 51792.04 19490.88 7044.00 7743.87 23207.00 14326.00 71293.65 31962.89 5790.50 3660.35 9361.76 10003.06 221283.94 57410.70 12011.97
5 -23220.06 18825.38 7044.00 23106.93 23207.00 14326.00 71293.65 31962.89 12638.44 3660.35 9361.76 10003.06 92248.71 57410.70 12011.97
6 -37508.35 18159.88 7044.00 20381.36 23207.00 14326.00 71293.65 31962.89 2450.12 3660.35 9361.76 10003.06 89902.33 57410.70 12011.97
7 -331.07 17494.38 7044.00 5108.16 23207.00 14326.00 71293.65 31962.89 1009.04 3660.35 9361.76 10003.06 91987.83 57410.70 12011.97
8 32703.41 16828.89 7044.00 6309.47 23207.00 14326.00 71293.65 31962.89 1186.13 3660.35 9361.76 10003.06 152222.19 57410.70 12011.97
9 -3368.76 16163.39 7044.00 7856.63 23207.00 14326.00 71293.65 31962.89 1726.25 3660.35 9361.76 10003.06 115677.77 57410.70 12011.97
10 28193.87 15497.89 7044.00 10994.65 23207.00 14326.00 71293.65 31962.89 1750.14 3660.35 9361.76 10003.06 151111.23 57410.70 12011.97
11 24692.31 14832.39 7044.00 7710.66 23207.00 14326.00 71293.65 31962.89 2083.02 3660.35 9361.76 10003.06 138043.74 57410.70 12011.97
12 259344.36 14166.89 7044.00 9191.40 23207.00 14326.00 71293.65 31962.89 3060.99 3660.35 9361.76 10003.06 366220.93 57410.70 12011.97
After running Predictor to get the next 12 month forecasts for each of the reps by product based on historical data, the results are added to the worksheet.
At this point, we're starting to create our variable model inputs, which will allow us to measure and report on the certainty range (the risk) around our projected comp.
Our first step was to use historical data, since we had access to it. But we can do more. We also want to adjust our inputs based on expert opinion.
Control Data Pivot Base Forecast Expert Opinion Forecasted Data Summary
Ready
100%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Home
Insert
Page Layout
Formulas
Data
Review
View
Developer
Add-Ins
Hyperion
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Define Assumption
Define Decision
Define Forecast
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Start
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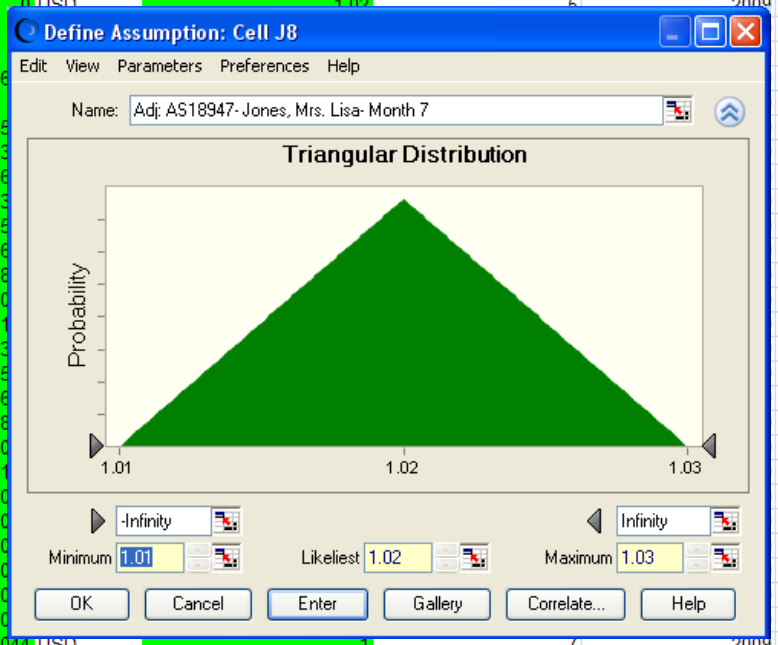
View Charts
Create Report
Extract Data
Analyze
Help
Resources
About
Help
A1
ATTRIBUTE1
ATTRIBUTE1 Minimum Most Likely Max
AS18947 1% 2% 3%
AS54888 5% 7% 10%
AS72111 -3% 0% 2%
AS92689 -5% -2% 0%
CN97444 7% 8% 9%
WR23763 4% 5% 6%
The ability to adjust a model input to best reflect what you need to better run your business is one or Oracle's strong points. We know that when it comes to your business, you're the expert. We will provide you the tools with the flexibility to let you manage your business.
In this case, your expertise says that sales of some of the products should vary from what the strict mathematical output of the historical data says.
Control
Data
Pivot
Base Forecast
Expert Opinion
Forecasted Data
Summary
Ready
100%

Once we've performed our analysis on historical data to project transactions for the next 12 months, and added in our expert opinion, we're ready to run our risk analysis.

What we've now done is taken our usual model inputs – transaction amount and transaction factor, and transformed them from static, finite numbers into ranges of numbers.

Let's remember what our original question was:

"How certain are you that expenses won't exceed your projected compensation number?"



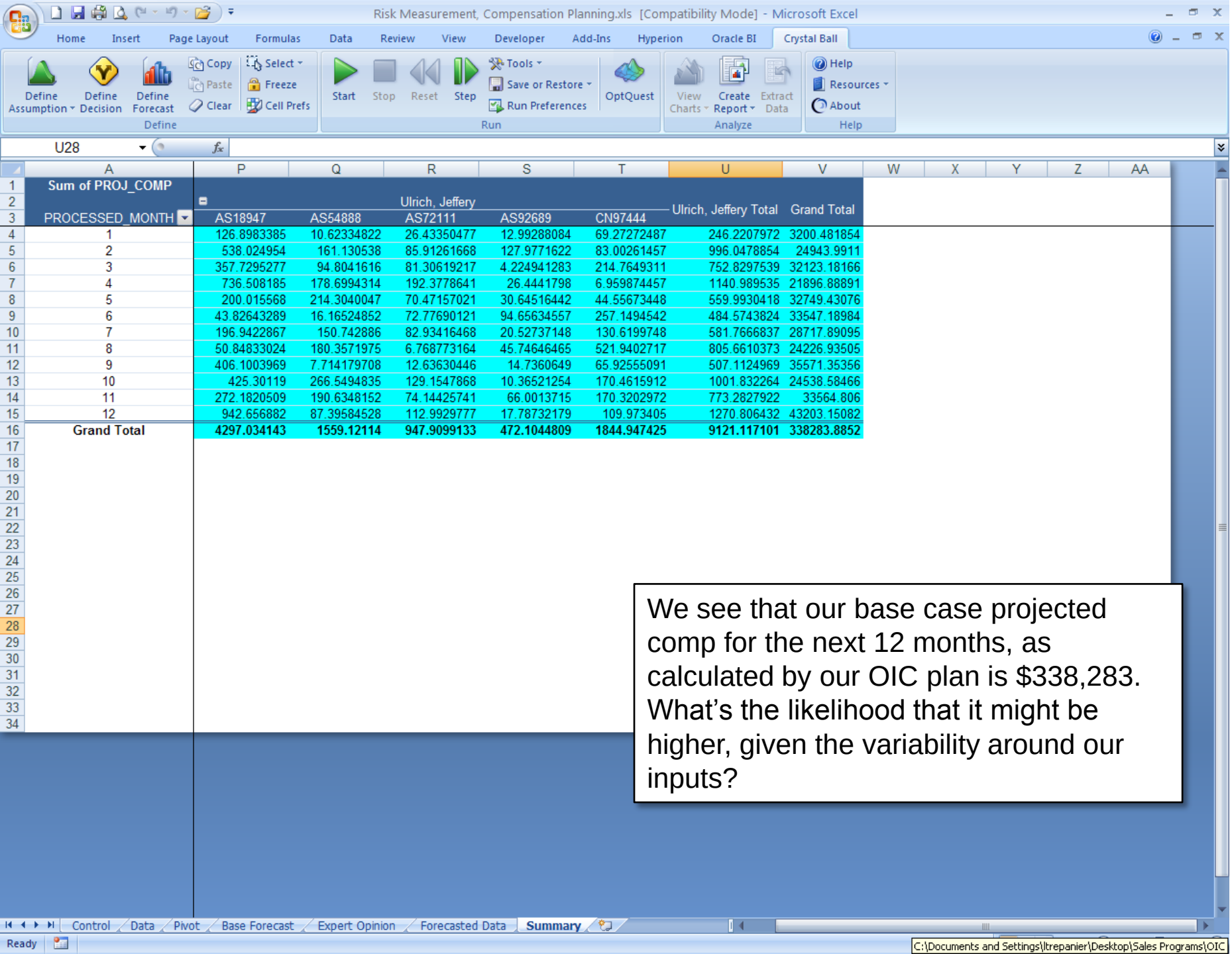
Risk Measurement with Monte Carlo Simulation

Typically, with many applications, we would now look at a handful of scenarios – what if we sold more in January, what if Product AS72111 gains less traction that first thought. This gives us a limited range of possibilities, but does not give us insight into everything that could happen, or any probabilities. And it's only those probabilities that can answer our question. We need to do a different kind of simulation. What's called a Monte Carlo simulation.

A Monte Carlo simulation is a series of automated what if trials. Each trial is a different scenario. But instead of manually choosing the variables and again manually changing them, we predefine complete ranges of inputs and let the software quickly and automatically calculate all the corresponding outcomes.

Predictor has already defined each month's forecast as a variable range. A distribution with an expected value and a certain standard deviation. This is one of the key points that differentiates this tool from all other time-series forecasting tools: the automatic definition of variable inputs (or assumptions) ready to be used in a simulation.

Running a what if analysis (Monte Carlo simulation) results in a forecast chart that shows the full range of possible outcomes and their associated probabilities. This will allow us to answer our question.


Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
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Stop
Reset
Step
Tools
Save or Restore
Run Preferences
OptQuest
Run
View Charts
Create Report
Extract Data
Analyze
Help
Resources
About
Help
U28
Sum of PROJ_COMP
Ulrich, Jeffery
PROCESSED_MONTH
AS18947
AS54888
AS72111
AS92689
CN97444
Ulrich, Jeffery Total
Grand Total
1 126.8983385 10.62334822 26.43350477 12.99288084 69.27272487 246.2207972 3200.481854
2 538.024954 161.130538 85.91261668 127.9771622 83.00261457 996.0478854 24943.9911
3 357.7295277 94.8041616 81.30619217 4.224941283 214.7649311 752.8297539 32123.18166
4 736.508185 178.6994314 192.3778641 26.4441798 6.959874457 1140.989535 21896.88891
5 200.015568 214.3040047 70.47157021 30.64516442 44.55673448 559.9930418 32749.43076
6 43.82643289 16.16524852 72.77690121 94.65634557 257.1494542 484.5743824 33547.18984
7 196.9422867 150.742886 82.93416468 20.52737148 130.6199748 581.7666837 28717.89095
8 50.84833024 180.3571975 6.768773164 45.74646465 521.9402717 805.6610373 24226.93505
9 406.1003969 7.714179708 12.63630446 14.7360649 65.92555091 507.1124969 35571.35356
10 425.30119 266.5494835 129.1547868 10.36521254 170.4615912 1001.832264 24538.58466
11 272.1820509 190.6348152 74.14425741 66.0013715 170.3202972 773.2827922 33564.806
12 942.656882 87.39584528 112.9929777 17.78732179 109.973405 1270.806432 43203.15082
Grand Total 4297.034143 1559.12114 947.9099133 472.1044809 1844.947425 9121.117101 338283.8852
We see that our base case projected comp for the next 12 months, as calculated by our OIC plan is $338,283. What's the likelihood that it might be higher, given the variability around our inputs?
Control Data Pivot Base Forecast Expert Opinion Forecasted Data Summary
Ready
C:\Documents and Settings\ltrepanier\Desktop\Sales Programs\OIC

Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Developer | Add-Ins | Hyperion | Oracle BI | Crystal Ball

Define Assumption | Define Decision | Define Forecast | Copy | Paste | Clear | Select | Freeze | Cell Prefs — Define

Start | Stop | Reset | Step | Tools | Save or Restore | OptQuest

Save or Restore menu:
- Save Results...
- Restore Results...

View Charts | Create Report | Extract Data — Analyze

Help | Resources | About — Help

U28

Sum of PROJ_COMP		Ulrich, Jeffery					
PROCESSED_MONTH	AS18947	AS54888	AS72111	AS92689	CN97444	Ulrich, Jeffery Total	Grand Total
1	126.8983385	10.62334822	26.43350477	12.99288084	69.27272487	246.2207972	3200.481854
2	538.024954	161.130538	85.91261668	127.9771622	83.00261457	996.0478854	24943.9911
3	357.7295277	94.8041616	81.30619217	4.224941283	214.7649311	752.8297539	32123.18166
4	736.508185	178.6994314	192.3778641	26.4441798	6.959874457	1140.989535	21896.88891
5	200.015568	214.3040047	70.47157021	30.64516442	44.55673448	559.9930418	32749.43076
6						257.1494542	484.5743824	33547.18984
7						130.6199748	581.7666837	28717.89095
8						521.9402717	805.6610373	24226.93505
9						65.92555091	507.1124969	35571.35356
10						170.4615912	1001.832264	24538.58466
11						170.3202972	773.2827922	33564.806
12						109.973405	1270.806432	43203.15082
Grand Total						1844.947425	9121.117101	338283.8852

With 5 trials run, we see that there is indeed quite a range of possible outcomes and so expenses could be much higher or lower than we thought.

Let's finish running all 500 trials.

Control | Data | Pivot | Base Forecast | Expert Opinion | Forecasted Data | Summary

Ready

100%

Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel

Home | Insert | Page Layout | Formulas | Data | Review | View | Developer | Add-Ins | Hyperion | Oracle BI | Crystal Ball

Define Assumption | Define Decision | Define Forecast | Copy | Paste | Clear | Select | Freeze | Cell Prefs — Define

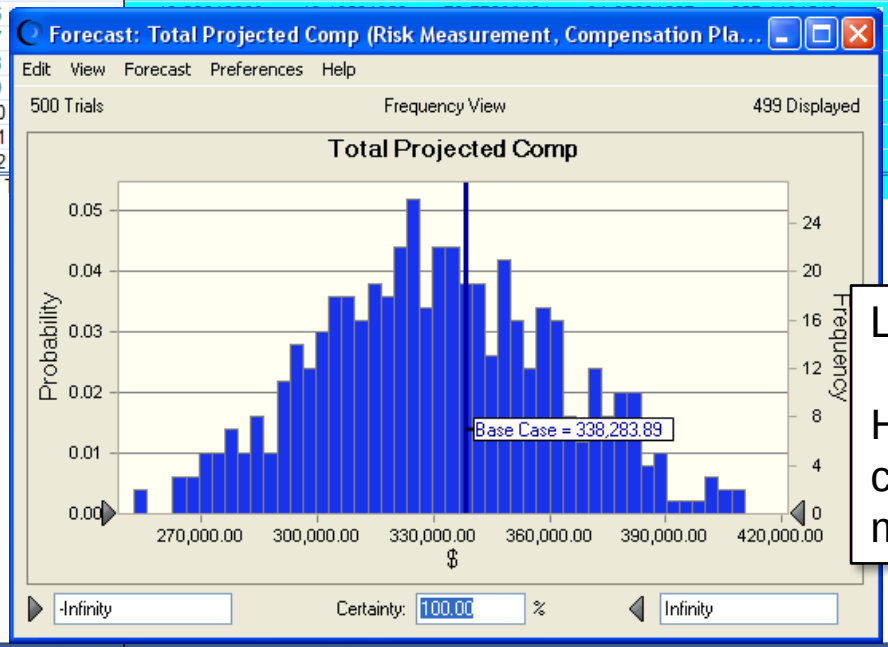
Start | Stop | Reset | Step | Tools | Save or Restore | Run Preferences | OptQuest — Run

View Charts | Create Report | Extract Data — Analyze

Help | Resources | About — Help

U28

Sum of PROJ_COMP			Ulrich, Jeffery				
PROCESSED_MONTH	AS18947	AS54888	AS72111	AS92689	CN97444	Ulrich, Jeffery Total	Grand Total
1	126.8983385	10.62334822	26.43350477	12.99288084	69.27272487	246.2207972	3200.481854
2	538.024954	161.130538	85.91261668	127.9771622	83.00261457	996.0478854	24943.9911
3	357.7295277	94.8041616	81.30619217	4.224941283	214.7649311	752.8297539	32123.18166
4	736.508185	178.6994314	192.3778641	26.4441798	6.959874457	1140.989535	21896.88891
5	200.015568	214.3040047	70.47157021	30.64516442	44.55673448	559.9930418	32749.43076
6						484.5743824	33547.18984
7						581.7666837	28717.89095
8						805.6610373	24226.93505
9						507.1124969	35571.35356
10						1001.832264	24538.58466
11						773.2827922	33564.806
12						1270.806432	43203.15082
Grand						9121.117101	338283.8852



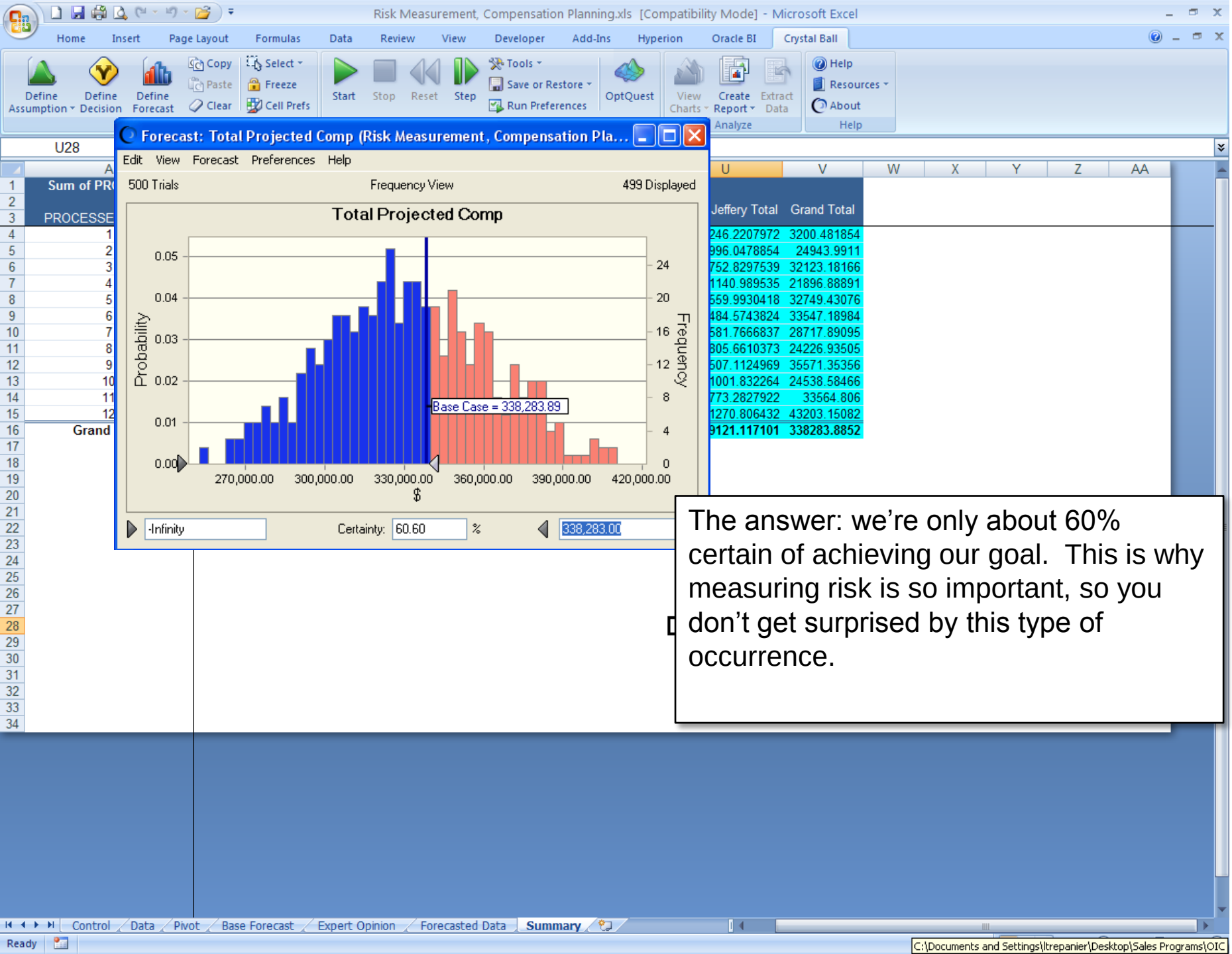
Let's answer our question:

How likely are we to exceed our base case projected comp for the next 12 months?

Control | Data | Pivot | Base Forecast | Expert Opinion | Forecasted Data | Summary

Ready

C:\Documents and Settings\ltrepanier\Desktop\Sales Programs\OIC


Risk Measurement, Compensation Planning.xls [Compatibility Mode] - Microsoft Excel
Forecast: Total Projected Comp (Risk Measurement, Compensation Pla...
Edit View Forecast Preferences Help
500 Trials
Frequency View
499 Displayed
Total Projected Comp
Probability
Frequency
Base Case = 338,283.89
270,000.00
300,000.00
330,000.00
360,000.00
390,000.00
420,000.00
$
-Infinity
Certainty: 60.60 %
338,283.00
Jeffery Total
Grand Total
246.2207972 3200.481854
996.0478854 24943.9911
752.8297539 32123.18166
1140.989535 21896.88891
659.9930418 32749.43076
484.5743824 33547.18984
581.7666837 28717.89095
805.6610373 24226.93505
607.1124969 35571.35356
1001.832264 24538.58466
773.2827922 33564.806
1270.806432 43203.15082
9121.117101 338283.8852
The answer: we're only about 60% certain of achieving our goal. This is why measuring risk is so important, so you don't get surprised by this type of occurrence.
Control Data Pivot Base Forecast Expert Opinion Forecasted Data Summary
Ready
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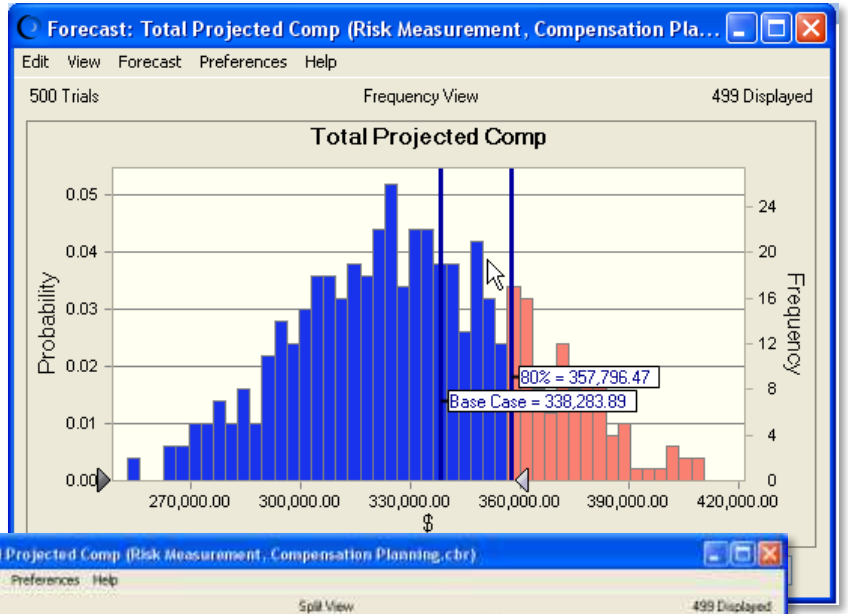

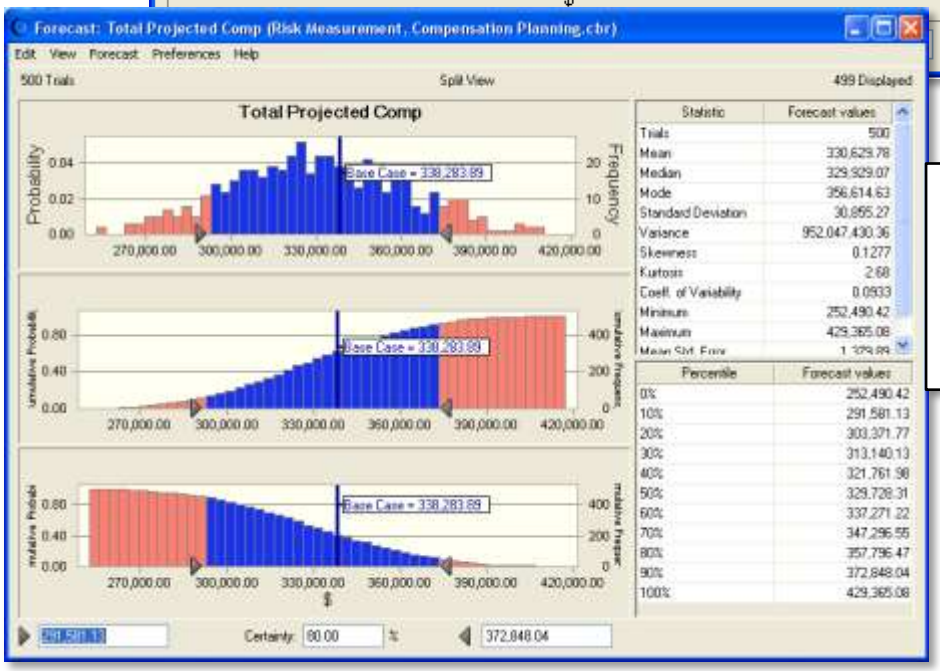

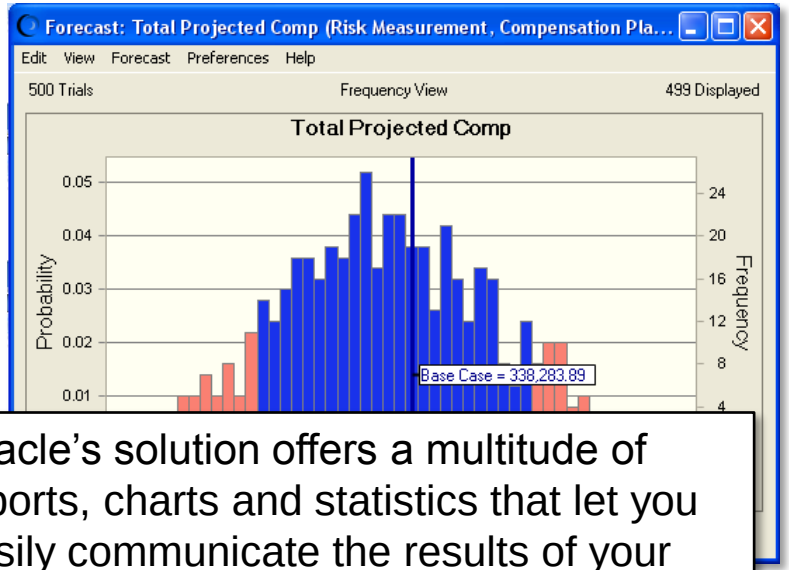

Oracle's solution offers a multitude of reports, charts and statistics that let you easily communicate the results of your risk analysis

Accurate Expense Forecasting

So now you could choose a number with a higher certainty, like 80% certain of staying under that cost. Or, you could start by proposing a range – say that projected comp is likely to be between $291K and $338K, with 80% confidence.

Oracle's solution lets you measure the certainty ranges around your calculated payouts. These certainty ranges – i.e. the risk in paying out more than you expected – let you create better models, accounting for variability. First understanding and then mitigating the risk lets you make more accurate business decisions.

From a tactical perspective, Oracle's solution lets you use historical data to better predict the future, inject expert opinion to create a better model and then accurately measure the risk or certainty range around your projected payouts.

At a higher level, the business consequences of solving these issues mean that you are more accurately forecasting expenses, controlling variability in your expenses and reduce uncertainty to better manage profitability.

Ultimately, at the strategic level, these benefits feed into your organization's key business requirements of maximizing shareholder value and optimizing margins.

FOR MORE INFORMATION...

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