Lesson no. 16: What If Analysis-Scenario Manager

What-If Analysis

What-If Analysis in Excel allows you to try out different values (scenarios) for formulas. The following example helps you master what-if analysis quickly and easily.

Assume you own a book store and have 100 books in storage. You sell a certain % for the highest price of $50 and a certain % for the lower price of $20.

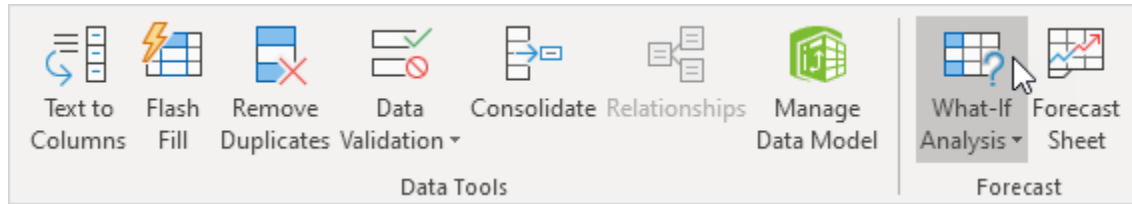| C8				f_x	=B4*(1-C4)		
	A	B	C			D	E
1	**Book Store**						
2							
3		total number of books	% sold for the highest price				
4		100	60%				
5							
6			number of books			unit profit	
7		highest price	60			$50	
8		lower price	40			$20	
9							
10			total profit			$3,800	
11							

If you sell 60% for the highest price, cell D10 calculates a total profit of 60 * $50 + 40 * $20 = $3800.
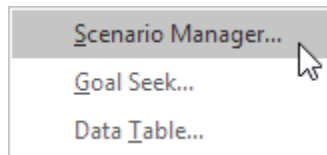
Create Different Scenarios

But what if you sell 70% for the highest price? And what if you sell 80% for the highest price? Or 90%, or even 100%? Each different percentage is a different scenario. You can use the Scenario Manager to create these scenarios.

Note: You can simply type in a different percentage into cell C4 to see the corresponding result of a scenario in cell D10. However, what-if analysis enables you to easily compare the results of different scenarios. Read on.

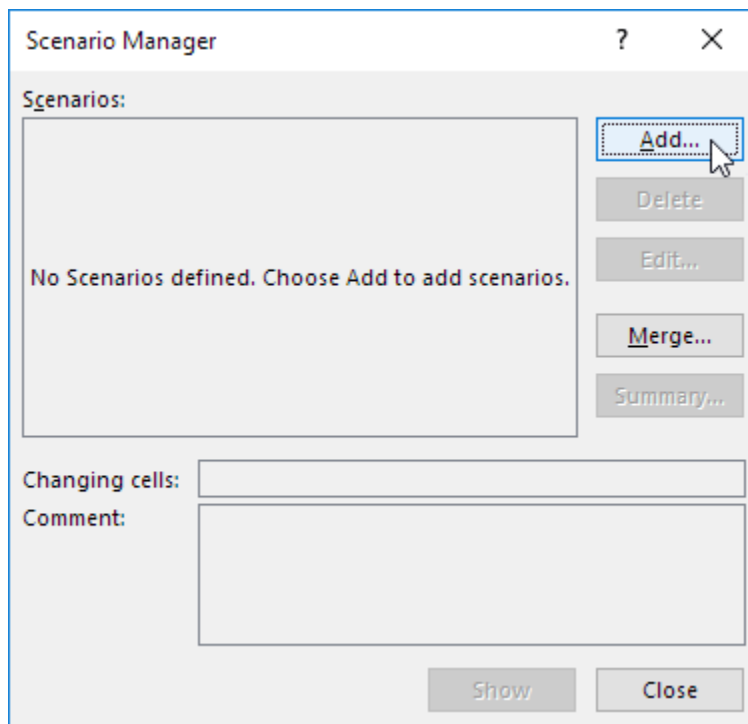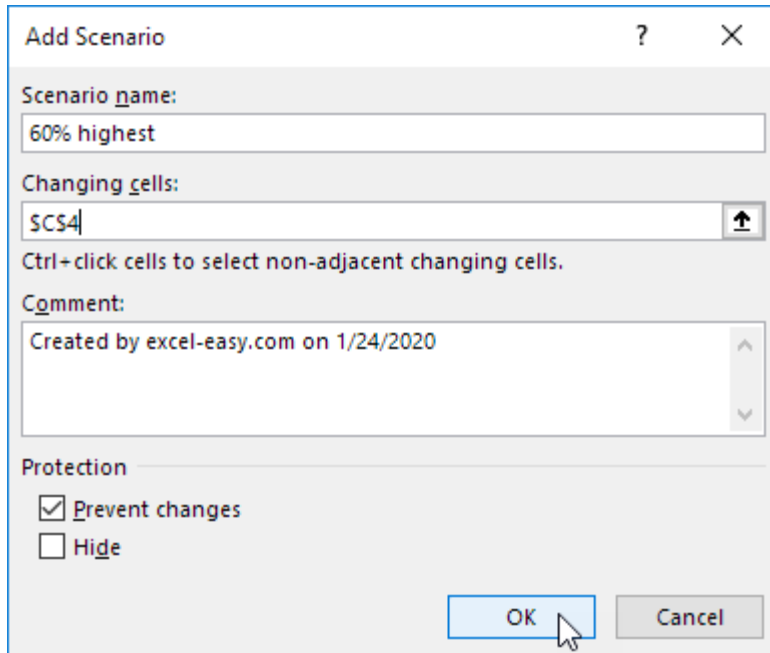1. On the Data tab, in the Forecast group, click What-If Analysis.

Text to Columns	Flash Fill	Remove Duplicates	Data Validation ▾	Consolidate	Relationships	Manage Data Model	What-If Analysis ▾	Forecast Sheet
		Data Tools					Forecast	

2. Click Scenario Manager.

Scenario Manager...
Goal Seek...
Data Table...

The Scenario Manager dialog box appears.

3. Add a scenario by clicking on Add.

Scenario Manager   ?   ✕

Scenarios:

No Scenarios defined. Choose Add to add scenarios.

Add...
Delete
Edit...
Merge...
Summary...

Changing cells:
Comment:

Show   Close

4. Type a name (60% highest), select cell C4 (% sold for the highest price) for the Changing cells and click on OK.

5. Enter the corresponding value 0.6 and click on OK again.

6. Next, add 4 other scenarios (70%, 80%, 90% and 100%).

Finally, your Scenario Manager should be consistent with the picture below:
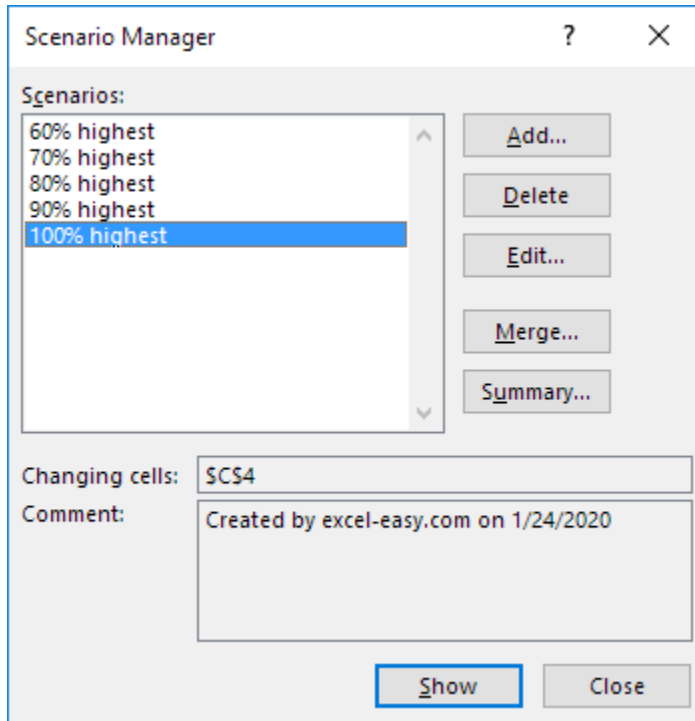
Note: to see the result of a scenario, select the scenario and click on the Show button. Excel will change the value of cell C4 accordingly for you to see the corresponding result on the sheet.

Scenario Summary

To easily compare the results of these scenarios, execute the following steps.

1. Click the Summary button in the Scenario Manager.

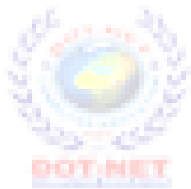2. Next, select cell D10 (total profit) for the result cell and click on OK.
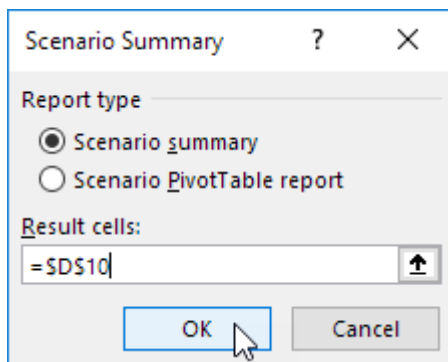
Result:

Scenario Summary

	Current Values:	60% highest	70% highest	80% highest	90% highest	100% highest
Changing Cells:						
C4	60%	60%	70%	80%	90%	100%
Result Cells:						
D10	$3,800	$3,800	$4,100	$4,400	$4,700	$5,000

Notes: Current Values column represents values of changing cells at time Scenario Summary Report was created. Changing cells for each scenario are highlighted in gray.

Conclusion: if you sell 70% for the highest price, you obtain a total profit of $4100, if you sell 80% for the highest price, you obtain a total profit of $4400, etc. That's how easy what-if analysis in Excel can be.