

# What-if analysis

## FINANCIAL MODELING IN EXCEL



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# What is what-if?

- **What-if analysis** evaluates different scenarios to see what might happen
  - Also called **scenario analysis**
- Asks the questions "what if..."
  - ...I raise the price?
  - ...I offer a discount?
- Make more informed business decisions



# What-if analysis in financial models

The screenshot shows a Microsoft Excel spreadsheet titled "2.0\_acquisitions\_model". The ribbon menu is visible at the top, showing tabs like File, Home, Insert, Page Layout, Formulas, Data, Review, View, Developer, and Help. The Home tab is selected.

The spreadsheet contains a table with data for "Year Financials" across 11 years (Year 0 to Year 10). The columns are labeled B through N. Row 16 is the header for the financials, and row 17 is the label for the years. Row 18 contains the starting values for each year. Row 19 is the "StartingRent" row, where the value for Year 2 has been changed to 2,300, which is highlighted in blue. Row 20 contains the ending values for each year, and row 21 contains the percentage growth for each year. The values in rows 18 and 19 are underlined, suggesting they are formulas or inputs being modified.

	B	C	D	E	F	G	H	I	J	K	L	M	N
13													
14													
15													
16	Year Financials		Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
17					2,208,000	2,318,400	2,434,320	2,556,036	2,683,838	2,818,030	2,958,931	3,106,878	3,262,222
18	1,493,760		-	-	2,300	2,415	2,536	2,663	2,796	2,935	3,082	3,236	3,398
19	(410,784)		-	-	(352,000)	(115,920)	(121,716)	(127,802)	(134,192)	(140,901)	(147,947)	(155,344)	(163,111)
20					60	76	76	76	76	76	76	76	76
21					0.00%	75.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%	95.00%
22	(179,251)		-	-	99,360	88,099	92,504	97,129	101,986	107,085	112,439	118,061	123,964
23			-	12.00%	6.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
24	903,725		-	-	1,755,360	2,290,579	2,405,108	2,525,364	2,651,632	2,784,213	2,923,424	3,069,595	3,223,075
25	(58,742)		-	-	82,800	110,124	115,630	121,412	127,482	133,856	140,549	147,577	154,956
26					5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
27													
28													
29													
30													
31													

# Types of what-if analysis

## Scenario Analysis

- Analyzes one or more variable changes
- Specific scenarios

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## Scenario Analysis

- Analyzes one or more variable changes
- Specific scenarios

## Sensitivity Analysis

- Analyzes a range of inputs
- More open ended

# Sensitivity table

Price Sensitivity  
Demand

	1,000	2,000	3,000	4,000	5,000
Supply	\$ 5.00	\$ 10.00	\$ 15.00	\$ 20.00	\$ 25.00
1,000	\$ 2.50	\$ 5.00	\$ 7.50	\$ 10.00	\$ 12.50
2,000	\$ 1.67	\$ 3.33	\$ 5.00	\$ 6.67	\$ 8.33
3,000	\$ 1.25	\$ 2.50	\$ 3.75	\$ 5.00	\$ 6.25
4,000	\$ 1.00	\$ 2.00	\$ 3.00	\$ 4.00	\$ 5.00
5,000					

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# **Let's practice!**

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