

- Version: 2.1.0
- Company: Jabsoft (<u>http://www.jabsoft.com</u>)
- Sales and Offers: Model Advisor (http://www.modeladvisor.com)

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#### **Overview**

#### What is What-if Analysis Manager?

What-if Analysis Manager is an add-in for Microsoft Excel with which you can analyse the data in your spreadsheets, in an automatic, fast and intuitive manner.

### What can I do with What-if Analysis Manager?

You can perform the following analyses:

- Centralised management of input and output variables in your spreadsheets.
- What-if analysis (tornado and spider analysis and sensitivity tables).
- Analysis to find multiple target values.
- Break-even analysis.
- Other useful tools.

#### Who can use What-if Analysis Manager?

Any type of user that utilises Microsoft Excel for his or her projects. It can be used by financial analysts, engineers, biologists, mathematicians, economists, teachers, and students in general, scientists, people working in marketing, sales, purchases, accounting, etc.

#### I have older versions, what should I do to use this new version?

Based on feedback from our users, we have made important changes compared with former versions. As a result, you will have to re-create with this version the models you created with former versions. We thank you for understanding, as this will happen this only time and will not happen again in the future.

#### What changes are included in this new version?

It includes the following changes:

- Input/Output management has been centralised.
- All interfaces (dialogs and buttons) have been improved for a more intuitive use; however, your suggestions for further improvement will always be welcomed.
- Cells watcher, is now a form better adpated to work with What-if Analysis Manager, and has been improved.

### How do I start using What-if Analysis Manager?

First of all, you have to add inputs and outputs with the Manage Inputs and Manage Outputs tools. Then you can use any of the other tools.

### **Basic Concepts**

#### **Model in Microsoft Excel**

A model is a construct in Microsoft Excel of an abstraction of reality, case study, or objective analysis. Each model should be developed in only one Excel book, for a more centralized use of data. You can develop from very basic models to very complex ones that contain numerous sheets. For example, the following structure is a basic model:

Gross profit = Units sold \* (Sales price - Sales cost)

Output Input Input Input

Where each data occupies one cell of Microsoft Excel.

Where each data occupies one cell of Microsoft Excel.

#### Input

Independent variable whose value is not a function of another variable. In the example above, Units Sold, Sales Price and Sales Cost are the inputs. Each cell in Excel represents an input, it must not have precedents but it must have dependents.

#### **Output**

Dependent variable whose value is a function of other variable(s) (inputs) In the above example, there is only one output, Gross Profit, which is derived from the inputs specified. Each Excel cell containing an output should have precedents. Intermediate formulas could be outputs.

#### What-If

This process consists in giving values to inputs and see how outputs are affected

#### **Goal Seeker**

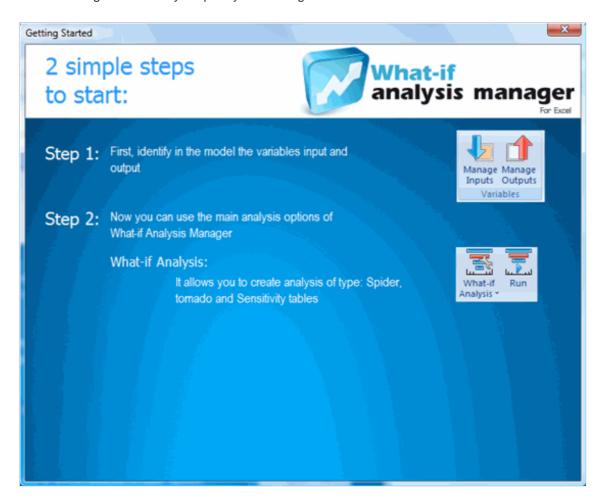
With this technique you can find the values inputs should take to get the desired output values.



### **Getting Started**



This access gives us a way to quickly start using the tool.

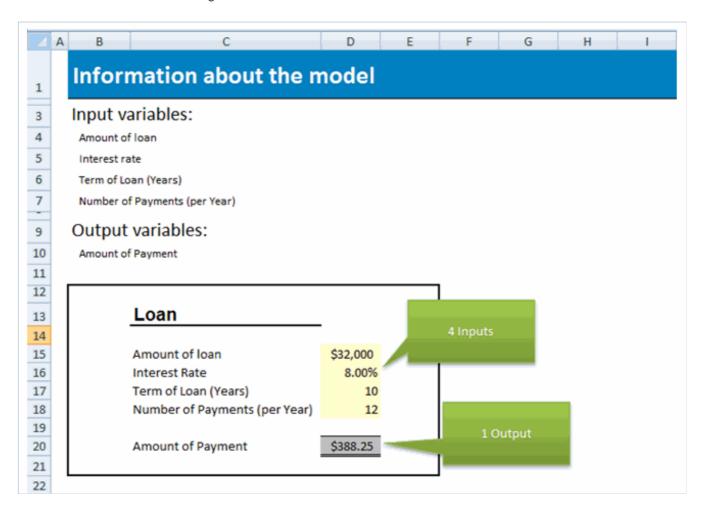




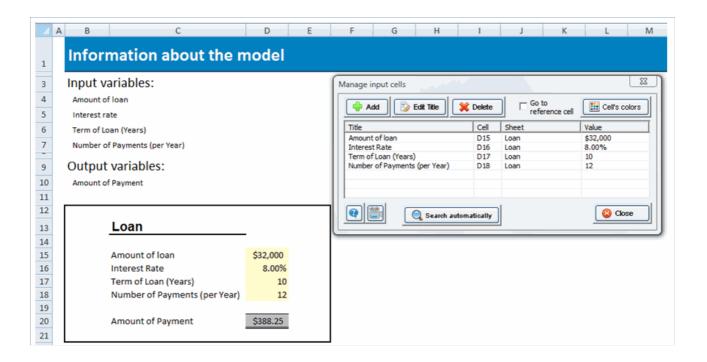
### **Manage Inputs**



Use this function to add and remove input variables to and from your models. We will elaborate on the following basic model.



Go to the Variables section and select Manage Inputs, and the dialog below pops up.



Add: Use this button to add a new Input variables.

**Edit:** Use this button to edit the title of each variables (this is optional since the tool captures automatic titles). The title must be making reference to a cell and not write a text manually.

Delete: Serves to eliminate an Input variable.

**Go to reference cell:** It serves to navigate by each variable. First activate the cell, then click on each element of the list of variables.

Cell's colors: It automatically gives color to the chosen input cells. It has a color by default.

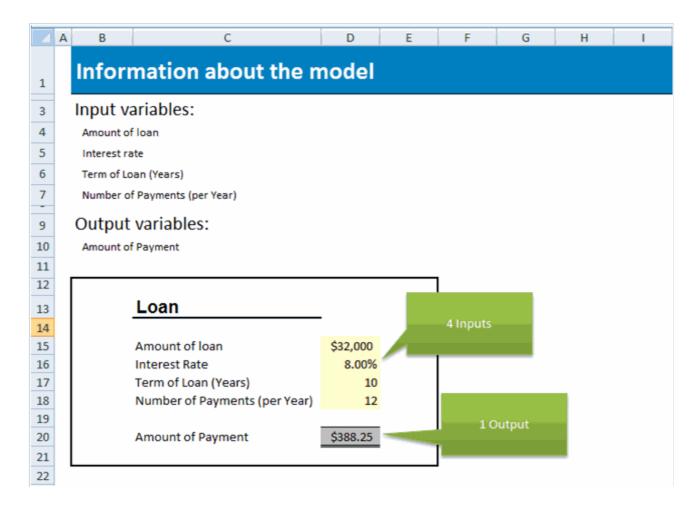
**Search automatically:** Automatically looks for inputs in specific sheets of the book. This offers a quicker way to begin using this tool.



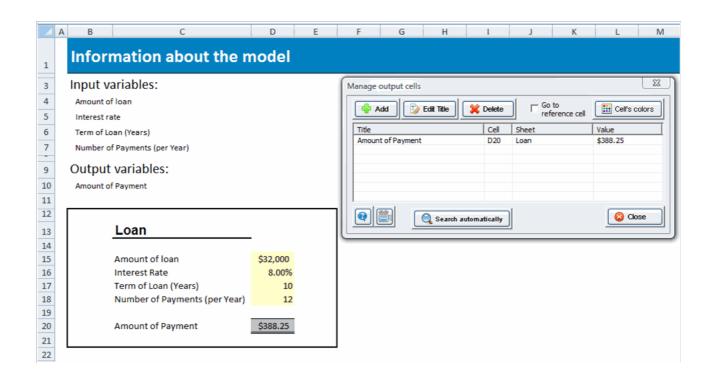
### **Manage Outputs**



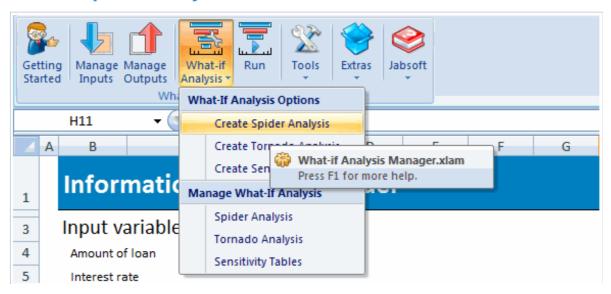
Use this function to add and remove output variables to and from your models. We will elaborate on the following basic model.



Go to the Variables section and select Manage Outputs, and the dialog below pops up.



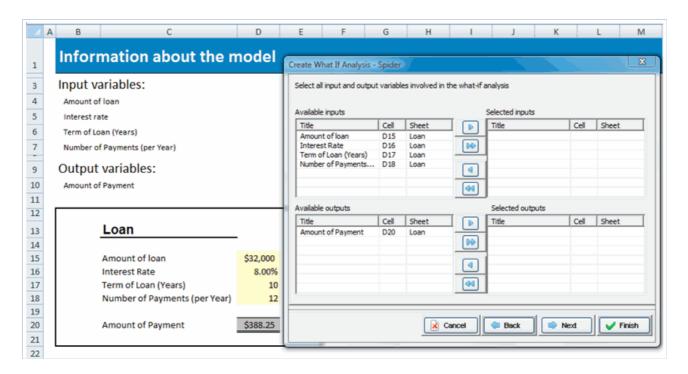
### **Create Spider Analysis**

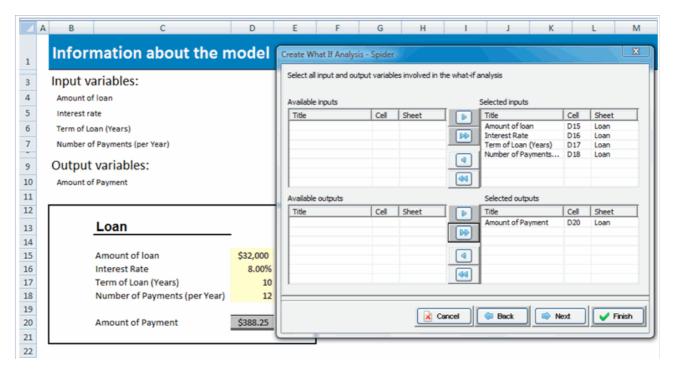


You can use this function to apply the same percent variation to all selected inputs from a base percentage value, an increase and top value.

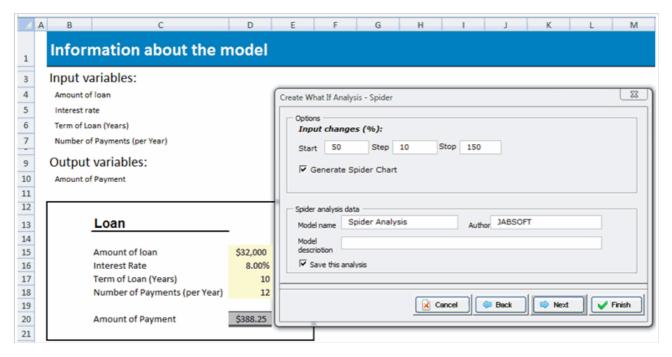
It shows the impact of these percent changes on the selected output. In addition, it shows a spider chart, where you can see how the output variable changes with changes in the input variable and know if they change in the same or opposite direction.

You should first choose the input and output variables. You can select as many as 20 inputs and 1 output for each run.

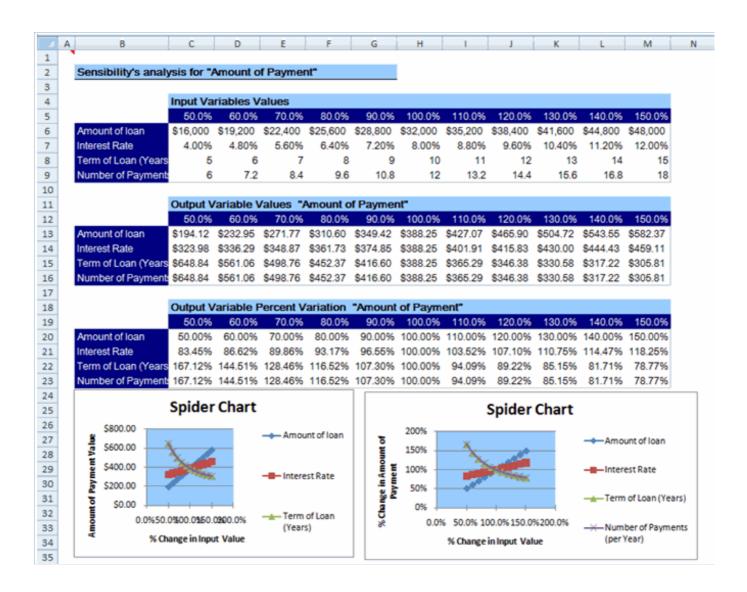




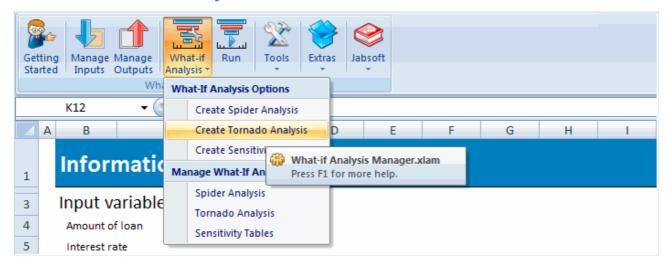
Then you should enter the initial, change, and final percent values for all input variables. Alternatively, you can save this spider analysis and rerun it from Run What-If Analysis . You can edit a saved model with Manage Spider Analysis .



The result is shown below.



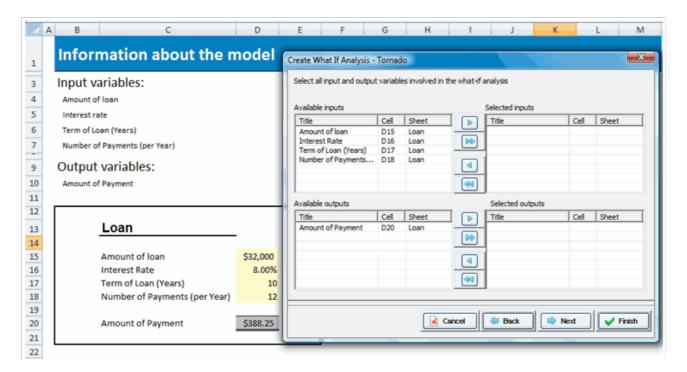
### **Create Tornado Analysis**

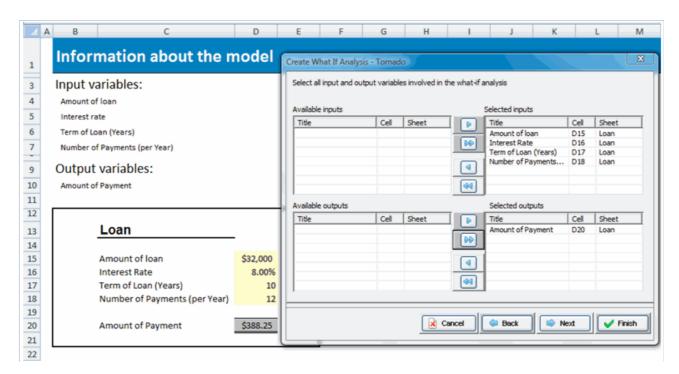


With it, you can apply to input variable values a percent variation to the left and another of the same size to the right. This allows you to immediately spot which inputs the resulting output variables are most sensitive to; in addition, you can see a chart that shows the input variables ordered from the most to the least impact on the output.

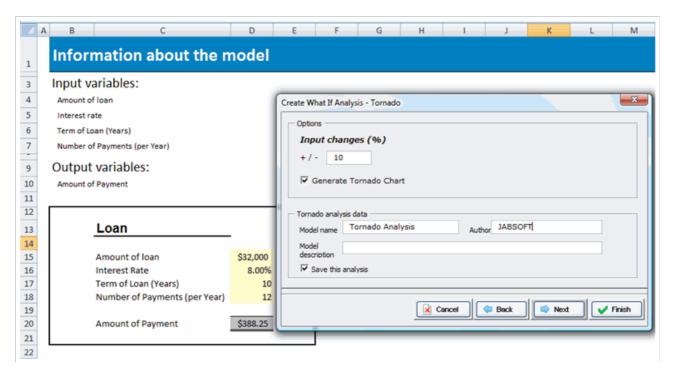
You will find this tool helpful when you don't know which variables should be handled more carefully on account of the resulting variations in the model, as a small change in them may have large impact on the output.

You should first select the input variables and the output variable, as shown in the screenshots below. You can work with as many as 20 inputs and 1 output each time you run the tool.

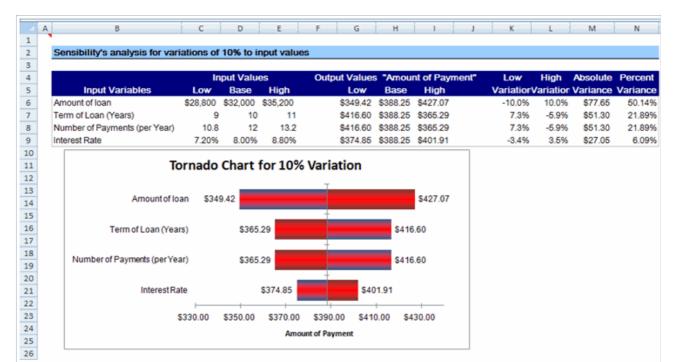




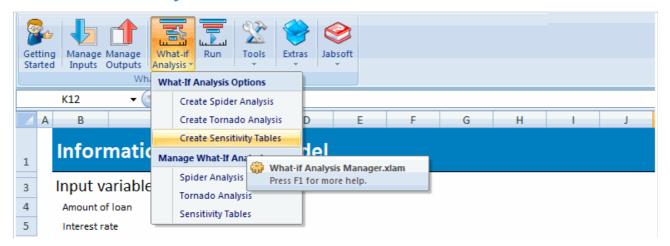
When you click Next, a dialog will pop up as that shown below. Here you can modify the default percent change value for all inputs. In addition, you can save the tornado analysis and rerun it with Run What-If Analysis . You can edit a saved model with Manage Tornado Analysis .



You can see the result in the following image.

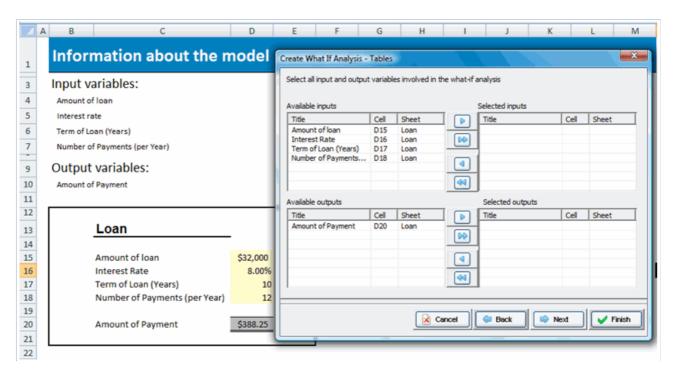


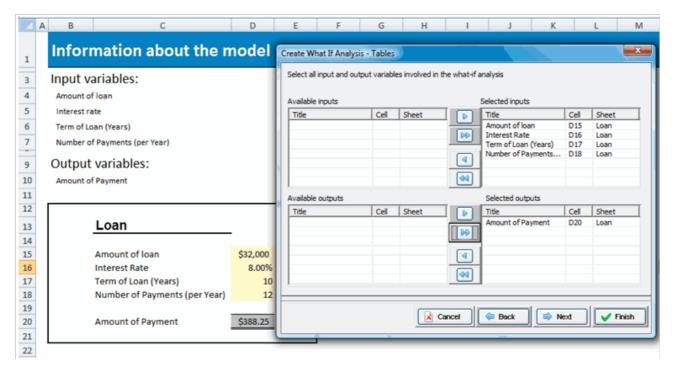
### **Create Sensitivity Tables**



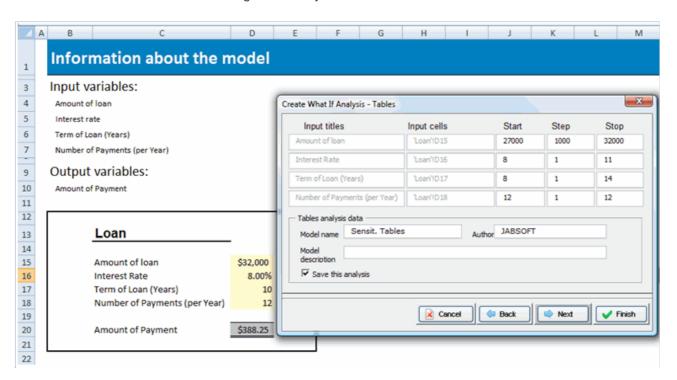
With this tool, you can change inputs at a constant change rate; change rate may different for each input. Then you combine all these changes in all inputs and show the result in the output. This is most convenient when you seek a combination of input values causing a desired impact on the output variable.

First, you have to choose the inputs and outputs as in the following images, as many as 10 inputs and 10 outputs.





Now click Next. A dialog will pop up where you can enter the change rate values for each input variable. Alternatively, you can save this data analysis to run it directly later with Run What-If Analysis. You can edit a saved model with Manage Sensitivity Tables.



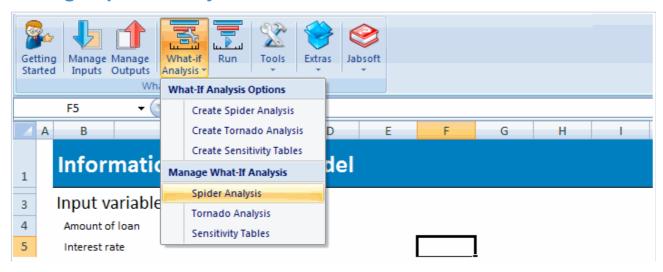
You can see the result in the following image.

As you can see, changes in the outputs are shown after input changes are made; with this information, you can find the set of values most adequate for your decision making.

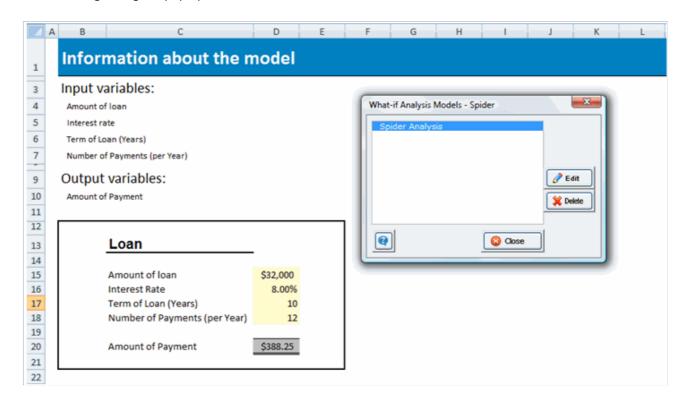
A s	A B	С	D	E	F
1	•				
2	Sensibility's	analysis			
3					
4	Amount of loan	Interest Rate	Term of Loan (Years)	Number of Payments (per Year)	mount of Paymen
5	\$27,000	8.00%	8	12	\$381.69
5	\$27,000	8.00%	9	12	\$351.51
7	\$27,000	8.00%	10	12	\$327.58
3	\$27,000	8.00%	11	12	\$308.22
•	\$27,000	8.00%	12	12	\$292.26
0	\$27,000	8.00%	13	12	\$278.93
1	\$27,000	8.00%	14	12	\$267.66
2	\$27,000	9.00%	8	12	\$395.56
3	\$27,000	9.00%	9	12	\$365.66
4	\$27,000	9.00%	10	12	\$342.0
5	\$27,000	9.00%	11	12	\$322.94
6	\$27,000	9.00%	12	12	\$307.2
7	\$27,000	9.00%	13	12	\$294.2
8	\$27,000	9.00%	14	12	\$283.2
9	\$27,000	10.00%	8	12	\$409.7
0	\$27,000	10.00%	9	12	\$380.12
1	\$27,000	10.00%	10	12	\$356.8
2	\$27,000	10.00%	11	12	\$338.0
3	\$27,000	10.00%	12	12	\$322.6
4	\$27,000	10.00%	13	12	\$309.9
5	\$27,000	10.00%	14	12	\$299.2
6	\$27,000	11.00%	8	12	\$424.10
7	\$27,000	11.00%	9	12	\$394.90
8	\$27,000	11.00%	10	12	\$371.90
9	\$27,000	11.00%	11	12	\$353.49
0	\$27,000	11.00%	12	12	\$338.4
1	\$27,000	11.00%	13	12	\$326.00
2	\$27,000	11.00%	14	12	\$315.64
3	\$28,000	8.00%	8	12	\$395.83
4	\$28,000	8.00%	9	12	\$364.50
5	\$28,000	8.00%	10	12	\$339.72



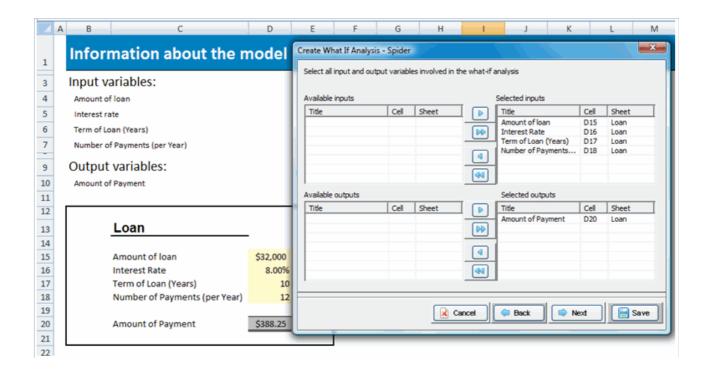
# **Manage Spider Analysis**



You can edit any spider data analysis you have saved. The following dialog will pop up:

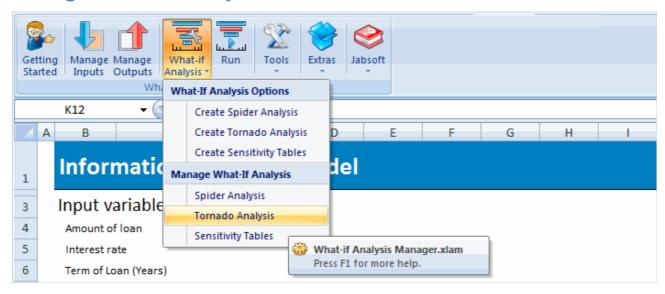


Select an item of the list and the dialogs will appear as those when you created the spider analysis, just follow the wizard.



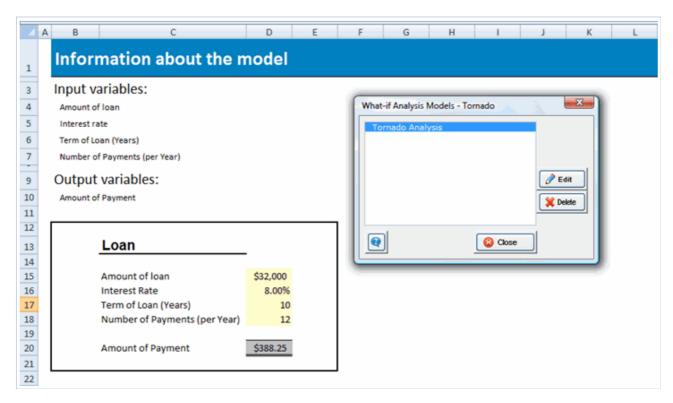


# **Manage Tornado Analysis**

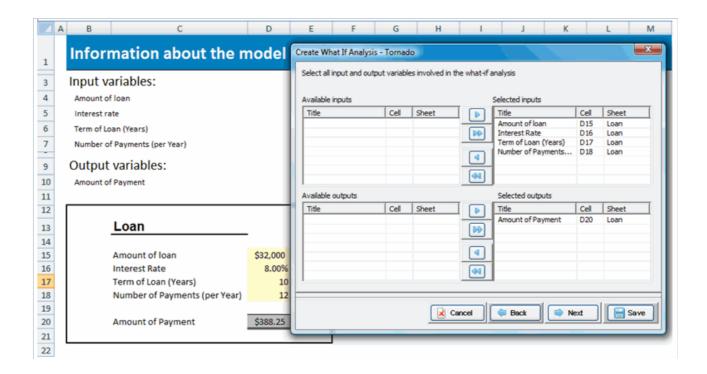


You can edit any tornado data analysis you have saved.

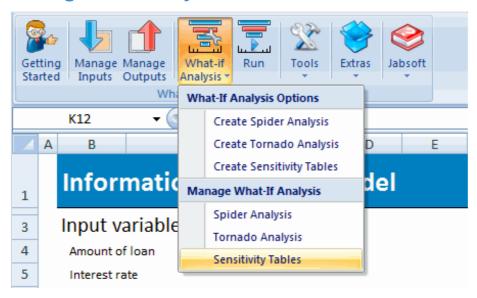
The following dialog will pop up.



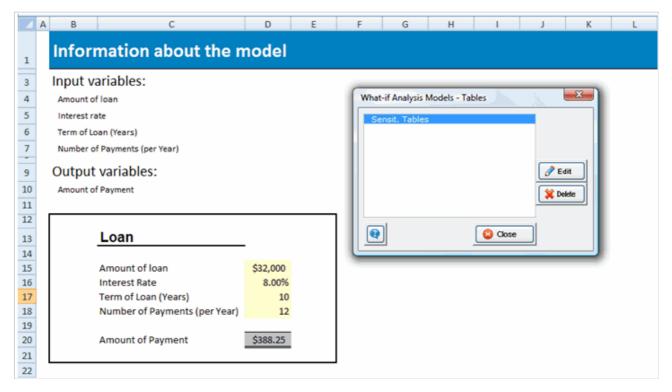
Select an item from the list and the same dialogs will appear as those when you created the tornado analysis, just follow the wizard.



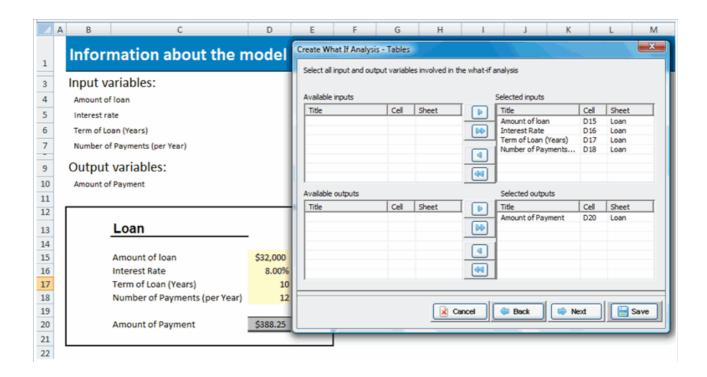
### **Manage Sensitivity Tables**



You can edit any sensitivity tables data analysis you have saves. The following dialog will pop up:

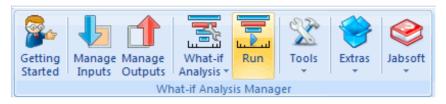


Select an item from the list and the same dialogs will appear as those when you created the sensitivity tables analysis, just follow the wizard.

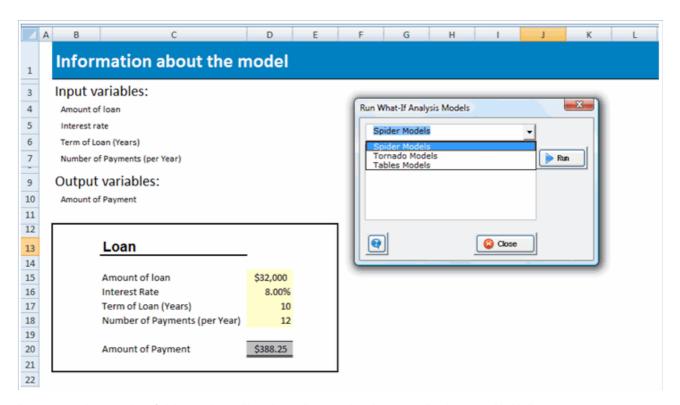




### **Run What-if Analysis**



From this dialog, you can run directly any What-If data analysis you have saved; just select the type of data analysis and all items of that type will be listed for you to select and run.



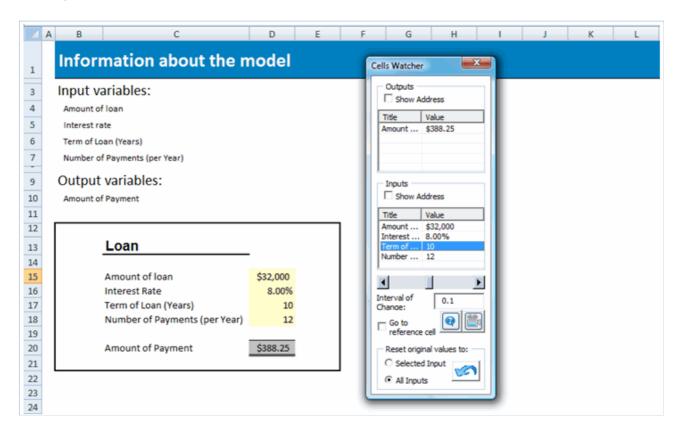
Important: the results of this section will replace the results sheet you had created initially. Be careful with this, because you will lose any values contained in the sheet created originally.

### **Cells Watcher**



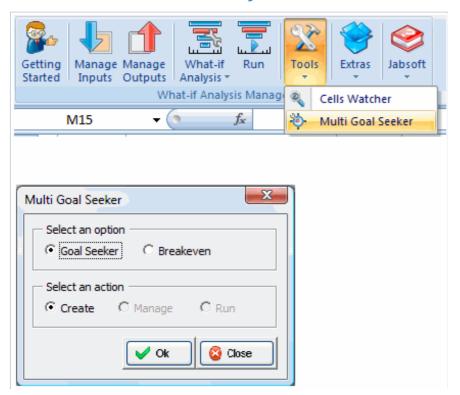
With this tool you can change inputs directly in your model in Excel and and see the changes in real time Then you can undo all changes and reset the original values; this will be possible as long as you do not close the cless watcher dialog.

This is a very useful tool when you want to change the inputs in large models, where a centralized analysis of inputs and outputs cannot be done.



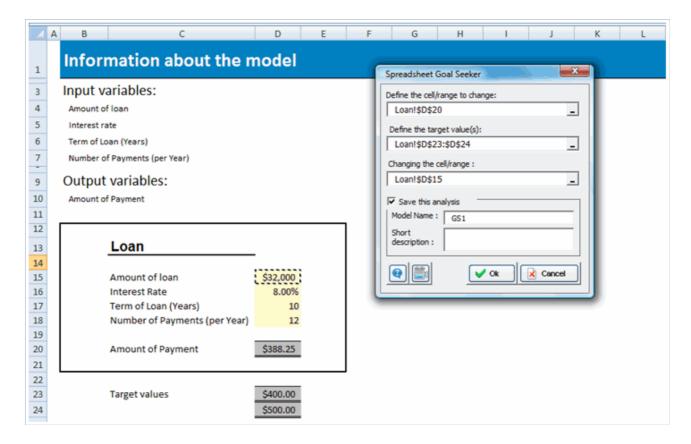


# **Create Goal Seeker Analysis**



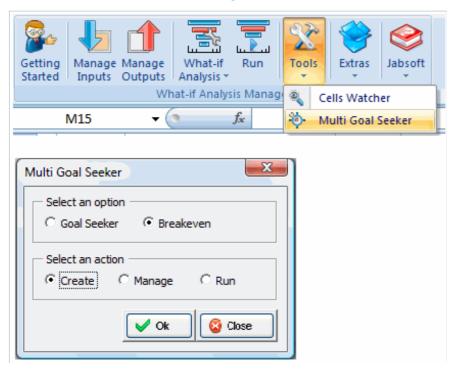
With this function you can find the input values required to get certain target output values.

As shown in the following screenshot, you need to have the target values in rows with the same number of columns as the inputs.

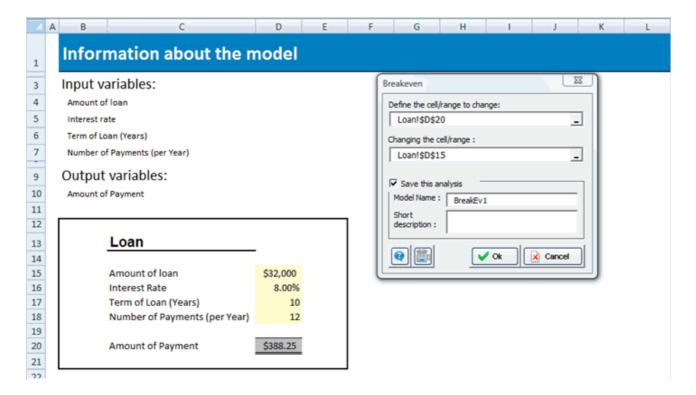


Alternatively, you can save this data analysis and rerun it from Run Multi Goal Seeker Analysis .

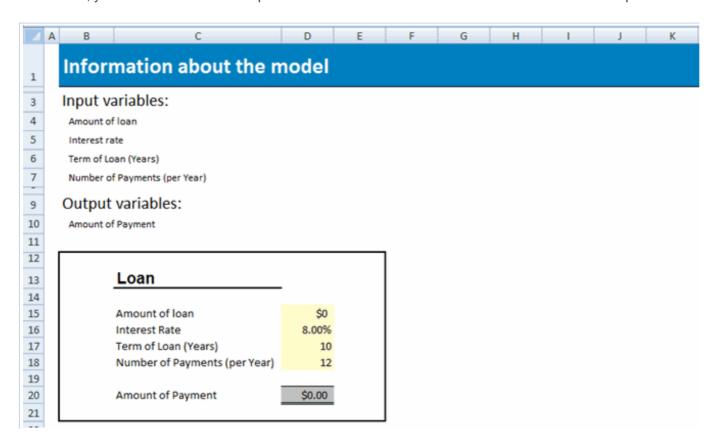
# **Create Breakeven Analysis**



Use this function to find the breakeven point, where outputs reach "zero". Evidently, this depends on the input involved.

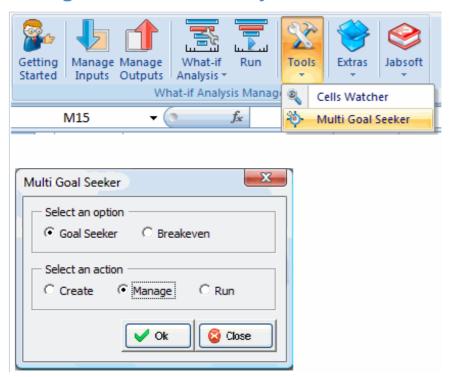


The following image shows the results obtained after applying the tool. In this case, you can see what the Price per Unit should be for the Gross Profit to reach the breakeven point.

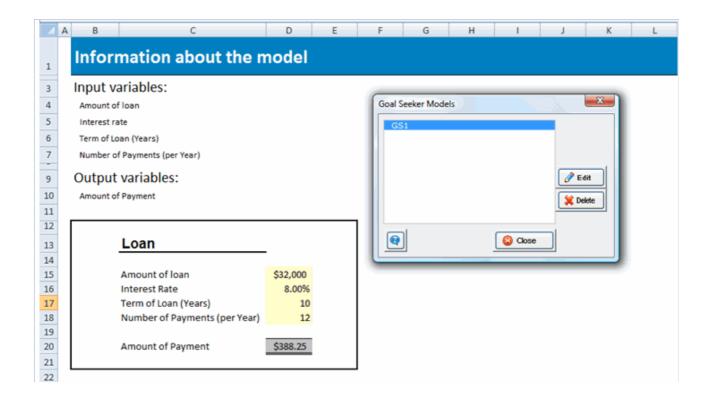


Alternatively, you can save this data analysis and rerun it from Run Multi Goal Seeker Analysis .

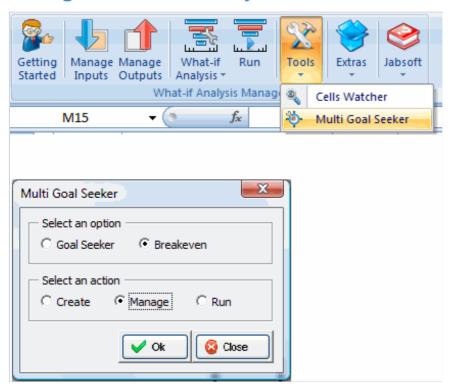
# **Manage Goal Seeker Analysis**



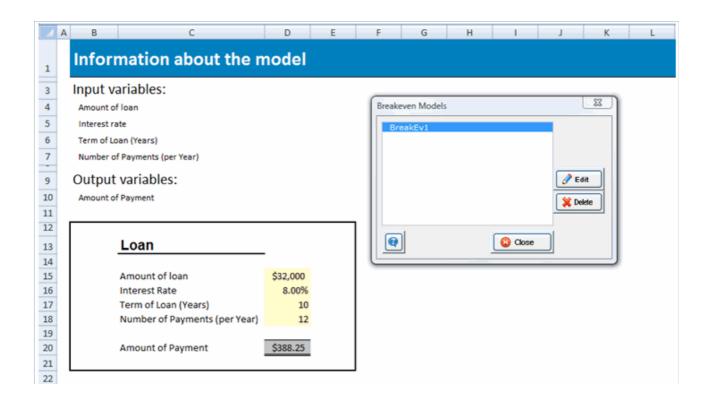
With this tool you can edit any saved data analysis created with Create Goal Seeker Analysis . The following dialog will pop up; select the data analysis to edit from the list.



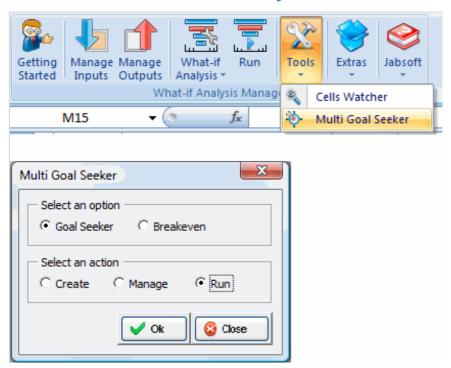
## **Manage Breakeven Analysis**



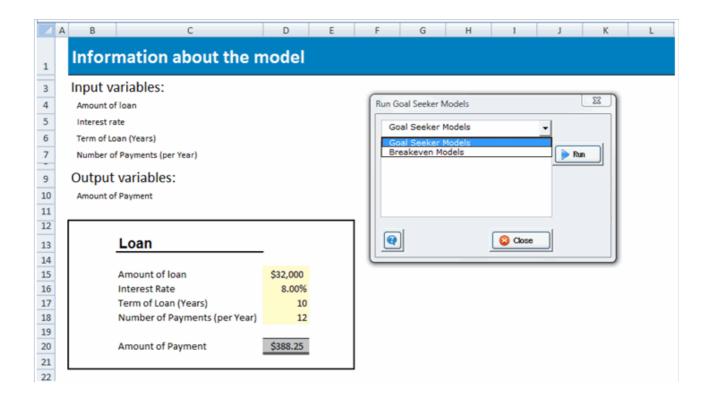
With this tool you can edit any saved data analysis created with Create Breakeven Analysis . The following dialog will pop up; select the data analysis to edit from the list.



## **Run Multi Goal Seeker Analysis**



Any data analysis created and saved with Create Goal Seeker Analysis and Create Breakeven Analysis may be run directly from this dialog. Select the type of data analysis and all items of that type will be listed so you can run any of them.

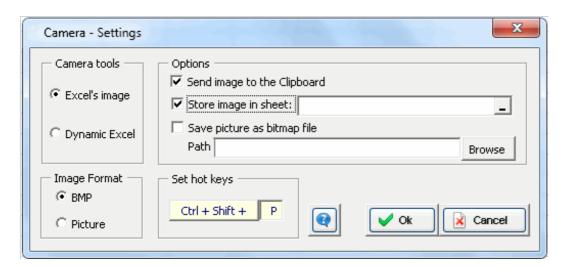


## Camera - Settings

#### **Accessing in Excel 2007**

From the Multi Scenarios ribbon select Extras/ Camera settings.

This settings dialog will appear:



There are two option buttons in the **Camera Tools** frame: **Excel's image** and **Dynamic**. Choose any. Then, in the **Options** frame select:

**Send image to the Clipboard** to send an image to the Clipboard **Store image in sheet** to paste an image in the cell of your choice **Save picture in file** to save an image in a file, to select the folder the image will be saved in. Click **Browse** to open a dialog showing folders and name your file.

Under Image Format, select the image format: BMP or Picture.

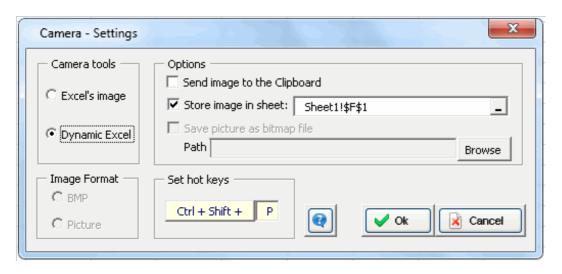
Then click **Apply** to save the settings. You may also set a keyboard shortcut with **Set hot keys**. Set the combination of keystrokes by entering a letter in the text box (**P** is the default) and then click **Close**. Once the settings are completed and saved, you can use this tool by clicking the Camera icon and selecting a range.

#### **Example**

For example, if you have an Excel spreadsheet range with this data:

	Α	В	С	D	Е	F				
1										
2										
3			Product A	Product B				Product A	Product B	
4		2000	200	300			2000	200	300	
5		2001	150	200			2001	150	200	
6		2002	100	150			2002	100	150	
7		2003	50	75			2003	50	75	
8		Total	500	725			Total	500	725	
9										

Choose these settings: **Dynamic Excel**, **Store image in sheet** and **H88** as the target cell Save the settings and close the dialog.



Select a range as shown in the example and click the Camera icon The range is copied as a dynamic image in the target cell selected, F2 in this example. Any changes in the source range will be reflected in the target image.



### **Toggle Settings**



We often lose valuable time doing repetitive tasks -if, for example, we want to hide the headings in several sheets of the Workbook, we will have to do it one at a time.

This powerful tool has been crated to do away with such loss of time.

Adventajes include:

#### Same upper -left cell in all

Let's say you are working in a workbook with 50 sheets and you wish to view the value in the R200 cell of each. It would be a dreary task having to navigate through all worksheets and locate that specific cell in them all, wouldn't it?

With this tool, this would be as simple as:

- 1. Locate yourself in any worksheet and select the cell to be checked.
- 2. Press the Same upper -left cells in all button.

That's it. You will view that cell in all worksheets; the selected cell will be viewed the left upper corner. As simple as 1-2!

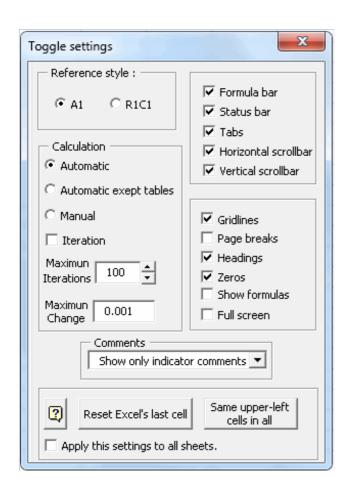
#### Reset Excel's last cells

This utility allows you to save only the part of each worksheet in use, meaning the section containing actual data or formatting.

It may happen that the last cell of a worksheet is beyond the range of your actual used data. This issue may cause you to have a larger file size than necessary, you may experience other unusual behavior.

Clear the excess rows and columns with Reset Excel's last cell and solve these issues.

And many configuration options more. Use this tool as best suits your convenience it's super-intuitive.





### To do list



**To do list** is a simple but useful tool, which allows you to manage any pending tasks related to a given workbook that may be key to your projects, in an ordered manner.

To do list allows you to add a task, edit it and control its progress.

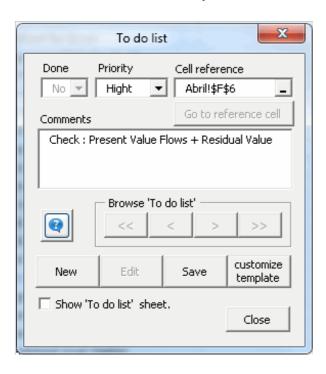
It's very easy to use:

- 1. Click the To do list button in the Model Navigator toolbar. A dialog will be displayed.
- 2. Enter the corresponding information and save the model.

Once a long list of tasks has been built, you may navigate through them.

In addition, you may customize the template to suit your needs.

This To do list is saved in a very hidden worksheet of your workbook.



## **Version manager**



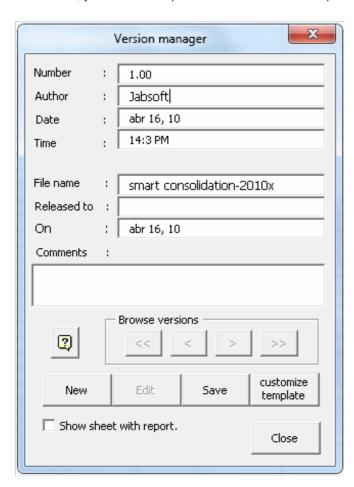
With this tool you will be able to check the progress of your projects.

The accomplishment of a project usually means to work with the same workbook(s) for several days.

It would be ideal to add (hidden) commentaries of significant occurrences, drawbacks, and/or pending tasks as your project makes progress.

This tool do this –and more. You may save and edit in a very hidden sheet the information corresponding to the progress of your projects. An you may review all that saved information.

In addition, you have the option to customize the template to suit your needs.





### My favorites



Do you need to manage many folders, workbooks and worksheets in one place? Use this powerful tool to select and manage them all.

#### **Observation:**

If you use **Windows Vista**, it will be necessary to activate some permissions.

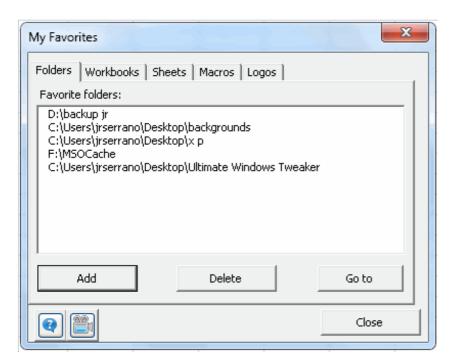
This video will teach you how to configure some permission to make this tool work out correctly.

http://www.jabsoft.com/spreadsheet\_presenter/sp\_videos/security\_demo\_sp/security\_demo.htm

#### **Folders**

This utility will allow create a list with our directories most visited, to access quick and easily. It works so:

- 1.- Press the 'Add' button to add a directory to the favorite directories list.
- 2.- Press the 'Delete' button to erase a directory of the favorite directories list.
- 3.- Press the 'Go to' button to open the selected directory with the Window's Explorer.

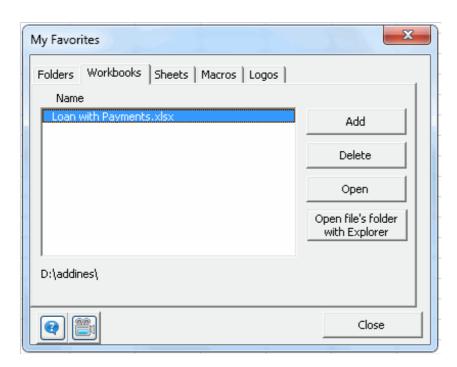


#### Workbooks

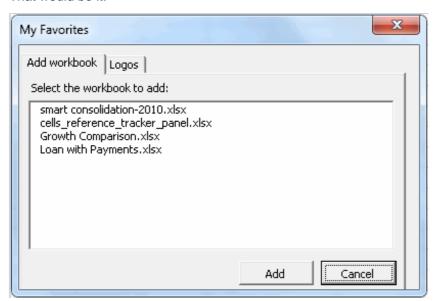
This tool allows you to store a list of most frequently used workbooks. It's a kind of direct access. Think of the following situation:

You have to check, say, three workbooks (or more, for that matter) on a daily basis. This means you have to first go to the folders containing them to access each. With My Favorites you no longer will have to do that. Just do as follows:

- 1. With all opened relevant books, click My Favorites > Workbooks.
- 2. Click the Add button.



3. Select the workbooks you want to include in your list of favorites. Click **Add**. That would be it.



The next time you want to open that workbook, just click the **My Favorites** button and you we will be able to access your most frequently used workbooks from this dialog.

In addition, you can delete any workbook from the list and open the folder the selected workbook is in.

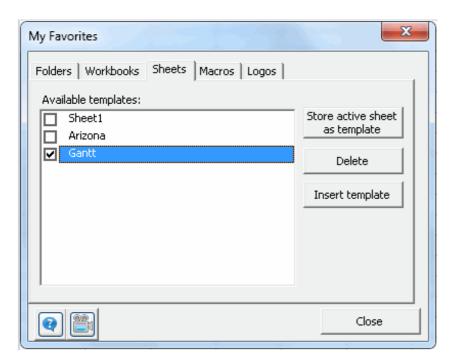
#### **Sheets**

If you constantly use certain templates and need to open several books to copy the templates onto several workbooks, this is the tool you need.

**Favorite templates** saves the templates you wish in one single place and allows you to easily access them. Options include:

Store active sheet as template: First select the desired template by checking the corresponding checkbox,

- then click this button.
- Delete: Clears the selected template from your list of favorites.
- Insert template: To copy a template (already stored) onto the active workbook



### Macros

In certain occassions we see ourselves in the necessity to have a macro to realize same repeated and automatic tasks.

Sometimes we use the "grabadora de macros" to generate them and then we modify to our convenience.

Finally we finish to lose those macros or we just dont know in what book we saved it the last time.

The Favorite Macros tool was made to keep and to arrange our most used macros when we want.

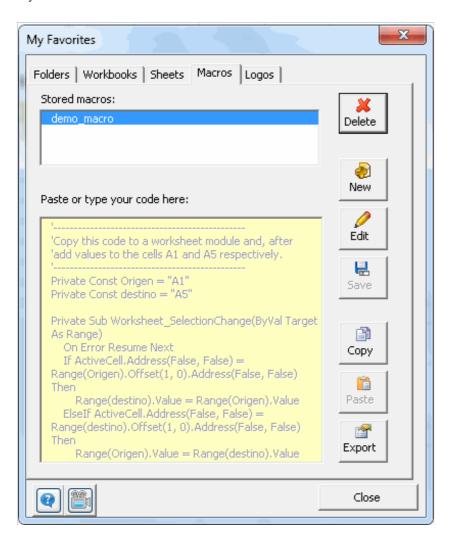
We keep it in the "bloc de notas" in an organized way to facilitate the use.

This tool has a complete panel control to edit, to copy and to export macros.

- Click on Edit Button... To edit an existing macro.
- Click on New Button... To add a macro to a macro list.
- Click on Save Button... to save a new macro or save the changes of a modified macro.
- Click on Delete button... to eliminate a macro from the list.
- Click on Copy button to copy a macro to memory (then you can paste in any place).

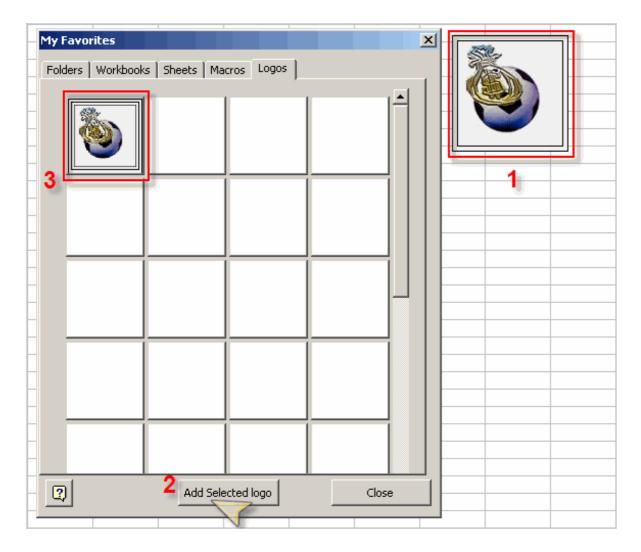
Click on the Export Button... to save the selected macro in a "bloc de notas"

Suppose that you have saved many macros with this tool and then you want to use the macros in another PC, Simply use the path you used to install Excel Model Builder and then copy "My Macros" file in the other PC. My Macros file is where the macros is saved.



### Logos

- 1.- Select an image of your worksheet.
- 2.- Press the Add button.
- 3.- The image will be saved in My Favorite Logos.



To delete an image:

- 1.- Do right click on the image.
- 2.- Click the **Delete** option of the popup menu.



Note: You can insert max. 64 images.

## **Sheets manager**

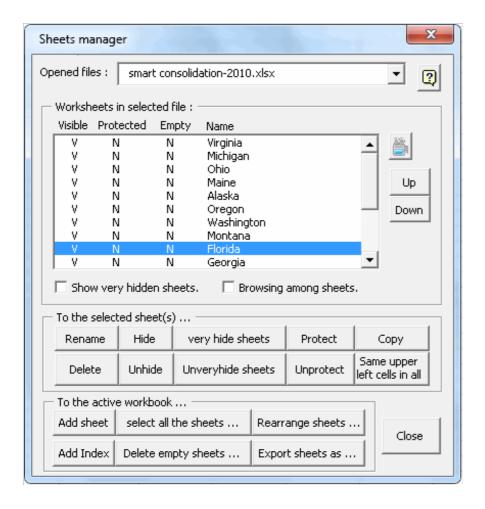


Your workbooks have so many sheets you find it hard to manage them?

Use **Sheet Manager** –a comprehensive tool that will make any worksheet management task easier to you. **Sheets manager** show a relation of all the sheets of your workbook, including hidden and the very hidden sheets, too describes the other properties to each one of them. Thus you can quickly note which are protected with password or which are hidden.

**Sheets manager** helps you, of simple way, with the following actions:

- Export the selected sheets...
- Hide sheets.
- Unhide sheets
- To make the sheets very hidden
- To show to the very hidden sheets
- To protect sheets
- Unprotect sheets
- Rearrange sheets
- Delete all the empty sheets
- Generate a Index of all the existing sheets.
- Navigation between the sheets
- Add sheets
- Rename sheets
- Delete sheets.



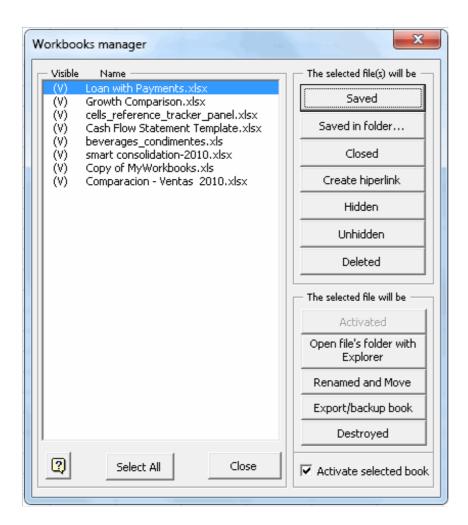
### Workbooks manager



Managing your open workbooks is made easy with the Workbook manager tool.

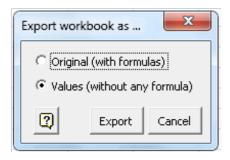
With this tool you can:

- List all open workbooks, even the hidden ones.
- Save workbooks.
- Save workbooks in other folders.
- Close workbooks.
- Create a hyperlink to another workbook.
- Hide workbooks.
- Show (unhide) workbooks.
- Delete workbooks.
- Activate workbooks.
- Open the folder a workbook is in.
- Rename workbooks and move them to another folder.
- Export workbooks as backups.
- Destroy workbooks (without the possibility to restore assets and damage control may be required)
- Navigate through workbooks.



### Export / backup workbook

With this tool you can backup your workbooks either by making an exact copy of the original or by converting all formulas in your workbook into values.





# Requirements

- MS Windows XP or more
- MS Excel 2007 or more

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### **Uninstallation**

Before uninstalling the product, do:

- Open Microsoft Excel
- Uncheck What-If Analysis Manager in Tools > Add-ins.. option
- Close Excel

#### **Automatic**

Start - Programs - What-If Analysis Manager > Uninstall What-If Analysis Manager.

Or

#### Manual

- Open the Windows Explorer.
- Go to the folder, the path should be: C:\Program Files\JABSOFT\What-If Analysis Manager and delete it.

That is all.



### Do you need more help?

If you need help address to our HelpDesk (<a href="http://www.jabsoft.net/helpdesk">http://www.jabsoft.net/helpdesk</a>)

If you have comments or suggestions about Multi Scenarios manager for Excel add-in, please contact us at:

support@jabsoft.com

#### Our postal address is:

JABS Av. San Martín 351 OF. 401 - Miraflores Lima 18 Perú

- Developer website: Jabsoft (<u>http://www.jabsoft.com</u>)
- Sales website: Model Advisor (http://www.modeladvisor.com)

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