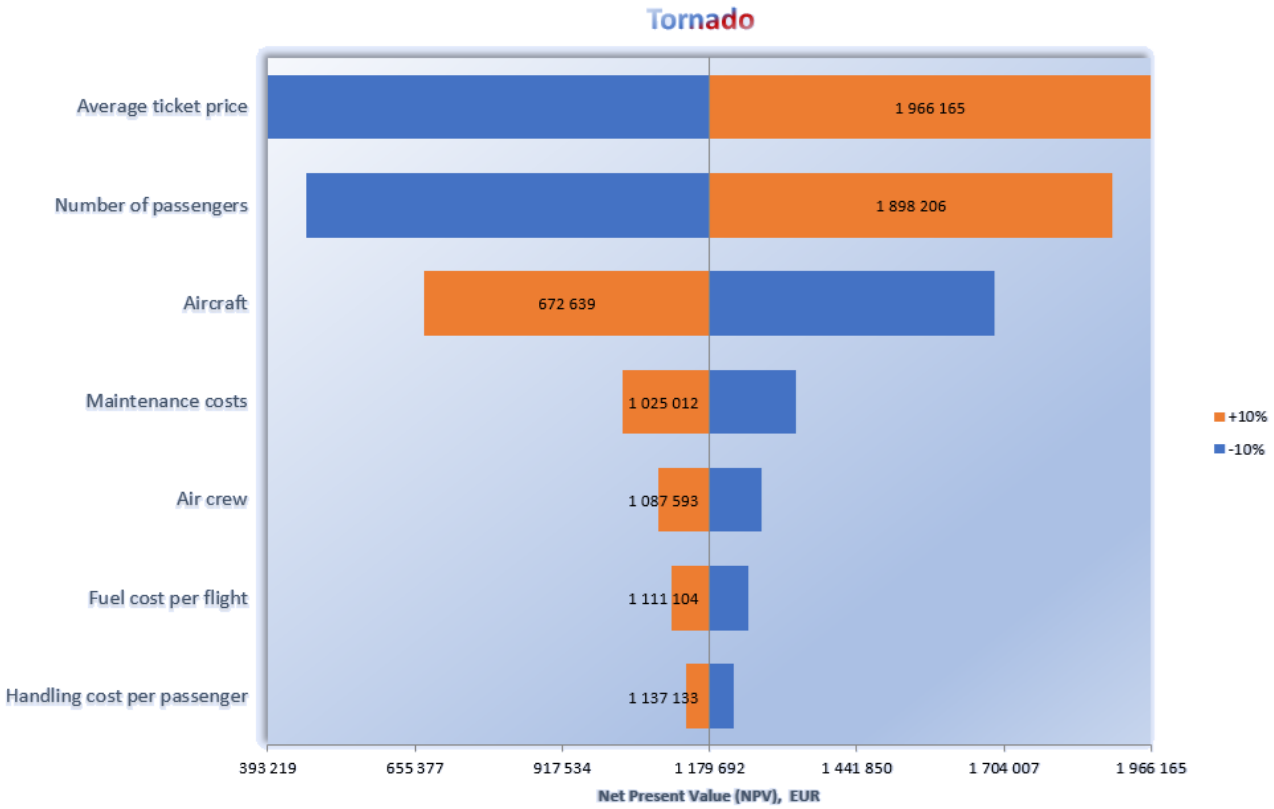
invest FOR EXCEL

Version 4.2



User Manual

DataPartner

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1 Introduction

Invest for Excel® was originally designed for investment appraisals (capital budgeting, investment feasibility studies, investment calculations) but has evolved to be a generally applicable financial modelling software. Invest for Excel® now also supports areas of usage like:

- Valuation, mergers and acquisitions
- Business planning, budgeting, forecasting, long-term strategic planning
- Profitability analysis of projects, business, products, customers, restructuring…
- Project financing, liquidity planning, corporate finance
- Impairment testing/ recoverability test, calculating value in use
- Consolidation of group including eliminations of internal transactions
- Lifecycle costing
- Post implementation reviews / post audit calculations
- Cost comparisons

Investment problems are usually solved technically with the aid of investment calculations. The purpose of the calculations is to give the investment-decision makers basic numeric, estimable data to support investment decision-making. Furthermore, all other relevant data, including that which is difficult to estimate, will be taken into account before a decision for or against the investment is made.

The same approach can be used in calculating real investments and finance investments alike. As a result, *Invest for Excel* is equally applicable when planning an investment in equipment or bonds. The criteria to base decisions on, for example the required return on the investment, may differ.

The investment process can be divided into the following stages:

1) Finding an investment object
2) Determining the factors that make each investment alternative advantageous.
3) Making investment calculations, and comparing alternatives.
4) Planning how to finance the investment.
5) Deciding on the investment, taking into account the optional factors, as well.
6) Monitoring the investment.

1.1 System requirements

The workstation shall have at least 1 GB RAM. The program files take about 150 MB of hard disk space. Having been compiled with Visual Basic for Applications, and being based on Microsoft Excel, Invest for Excel cannot function without Excel.

Invest for Excel 4.1 is supported for:

Microsoft Excel versions 2010, 2013, 2016, 2019, 2021 and 365 desktop

running in Windows 8.1, Windows 10 and Windows 11 (32-bit and 64-bit).

1.2 Installation

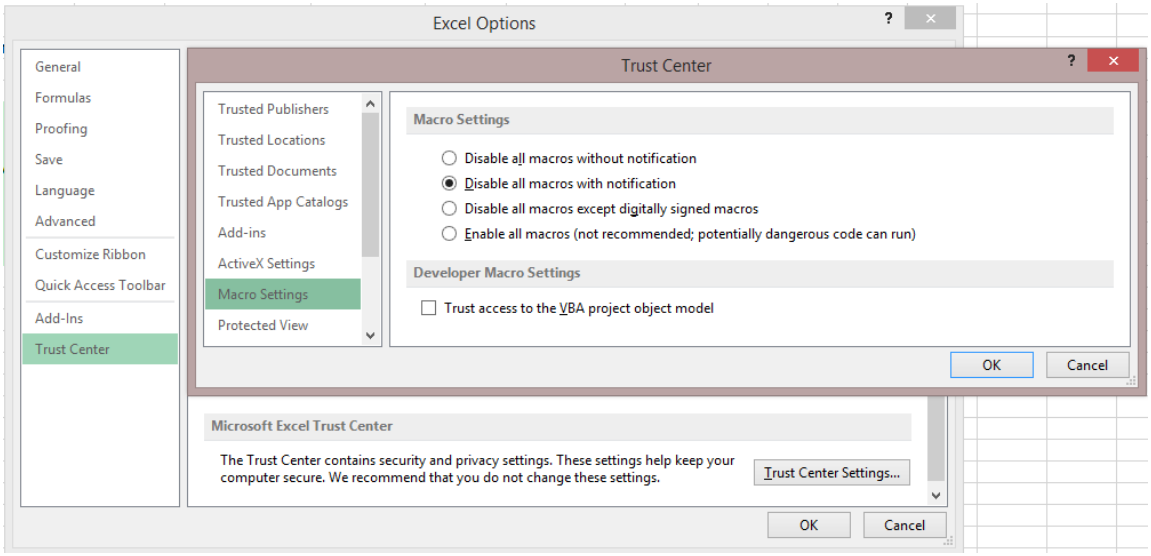
Installing on a workstation or a file server

1) Run Invest_*.exe or Setup.exe

2) Follow the instructions of the installation program.

The installation program will create a program group named DataPartner, and add the start-up icons for the program and the manuals.

Note! Invest for Excel uses macros. Allow the use of our macros when you use the program.
In Excel, the Macro Settings should be “Disable all macros with notification” or “Disable all macros except digitally signed macros”:



In Excel menu select “File” – “Options” – “Trust Center” – “Trust Center Settings” – “Macro Settings” – “Disable all macros with notification” or “Disable all macros except digitally signed macros”.

1.3 Online activation

An Invest for Excel license can be activated online. If your computer is not connected to internet you can also create an activation file, which you can send by email to Datapartner from a device with internet connection (see “Activate offline” chapter below).

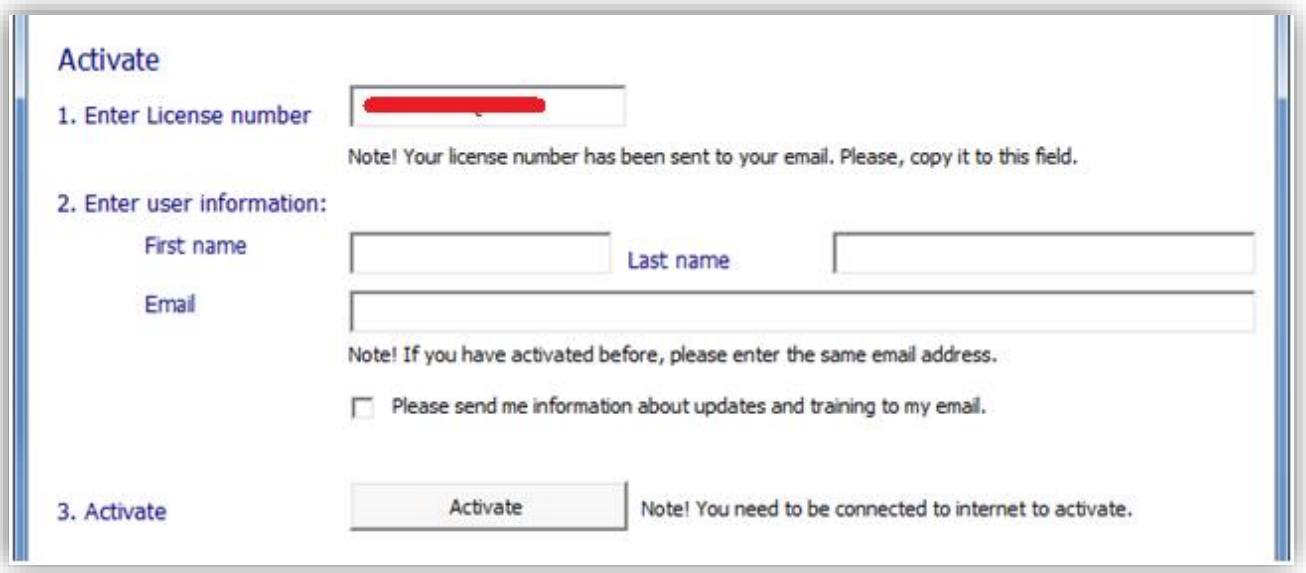
Note that if you have an old license installed on your computer and you are installing a new version of Invest for Excel, then no activation is usually needed.

If you are moving the license to a new computer, you should deactivate the license on your old computer (see “Deactivate” chapter below) and then activate on your new computer.

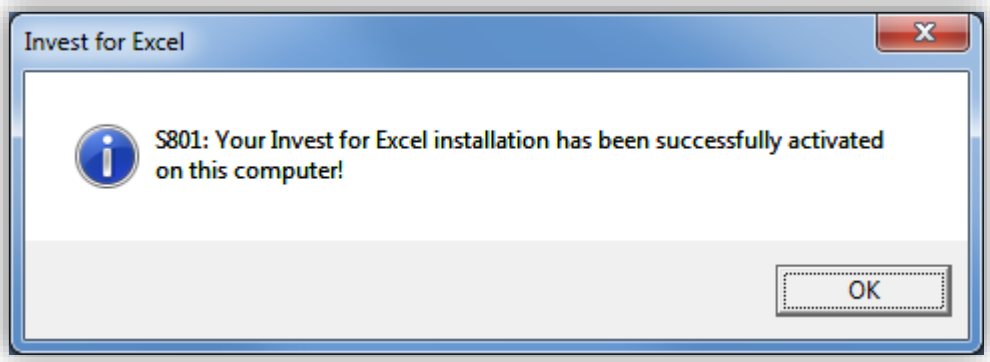
1.3.1 Activate online

When you start Invest for Excel for the first time, an activation form is shown:

Enter the license number that has been sent to your email. Depending on the license number, you could be asked to enter user information.



Press the “Activate” button to activate the license. A message is shown for successful activation or failure.

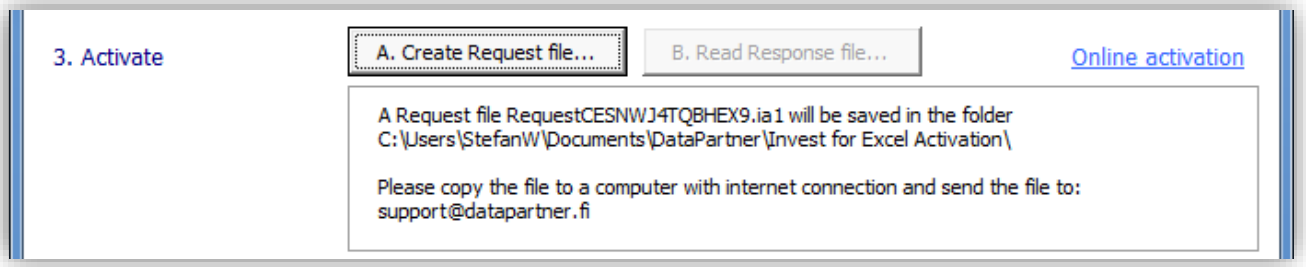


When you press OK, Invest for Excel is started. The next time you start Invest for Excel, no messages or forms are displayed.

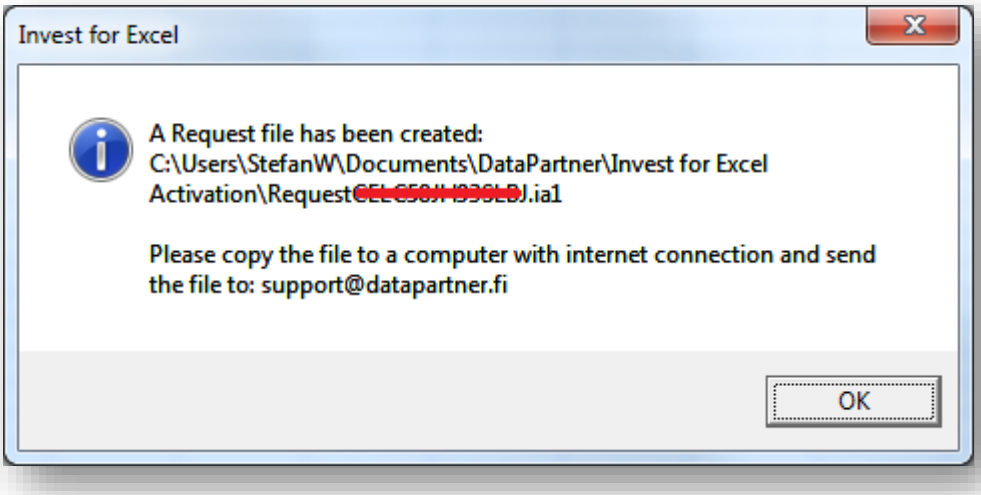
1.3.2 Activate offline

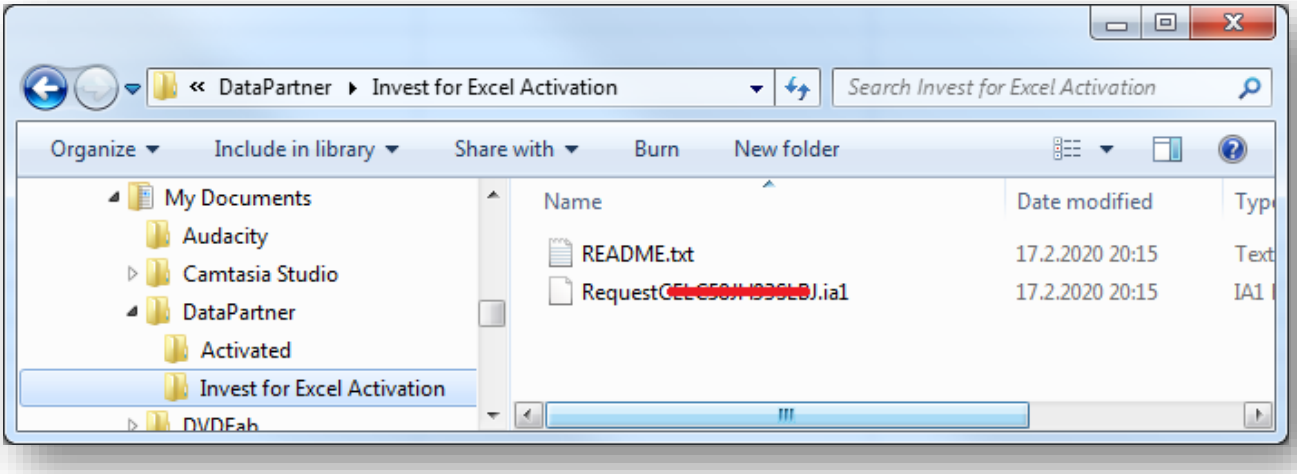
Offline activation works so that you send an activation request file to Datapartner. Press “Offline activation” to start.

Offline buttons are shown.

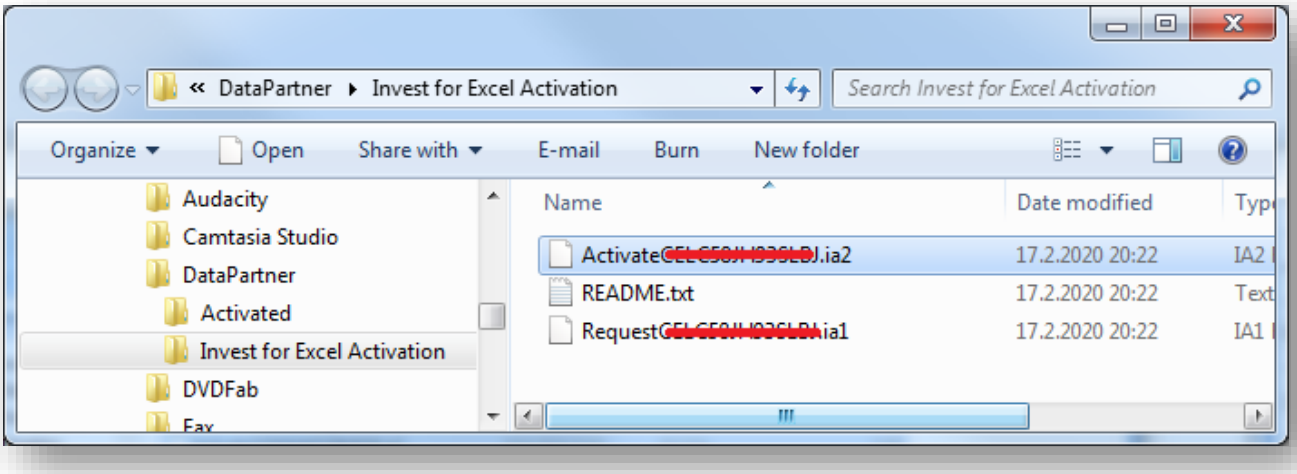


Press “A. Create Request file...”. A message is shown about where the request file (.ia1) is saved and then the folder is opened. A readme file is also written with the information where to send the request file.

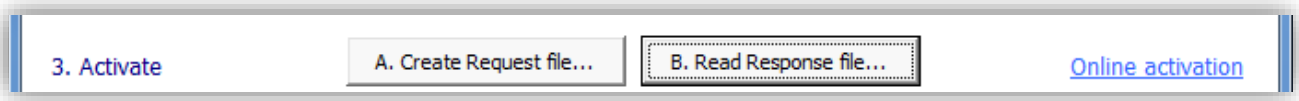




Datapartner will send back a response file with the activation information (.ia2). Copy the response file (*.ia2) to the folder including the request file (*.ia1).



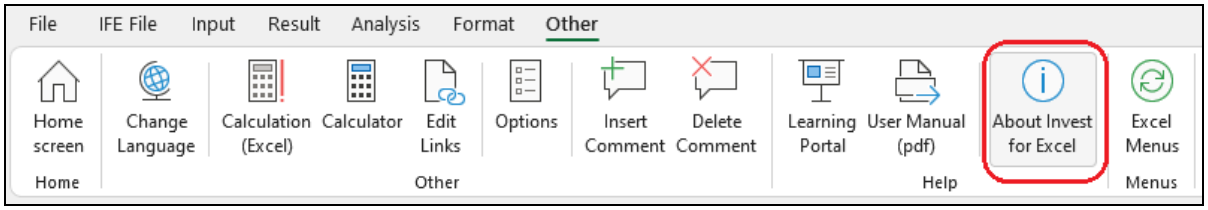
Read the response file by pressing “B. Read Response file” in the activation dialog box.

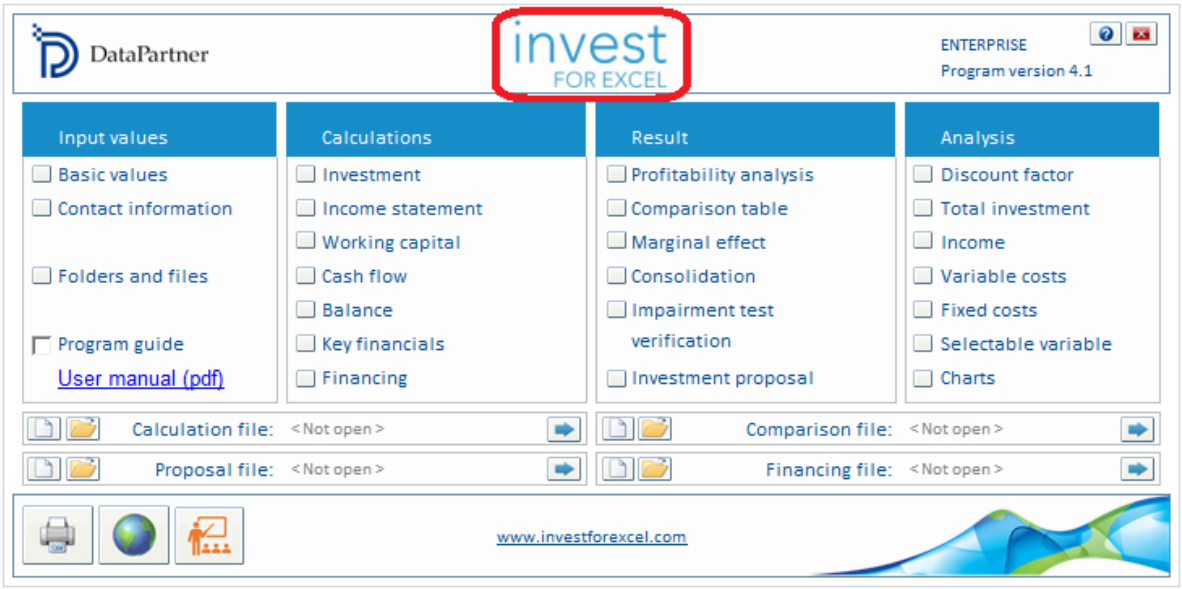


The software is ready to use.

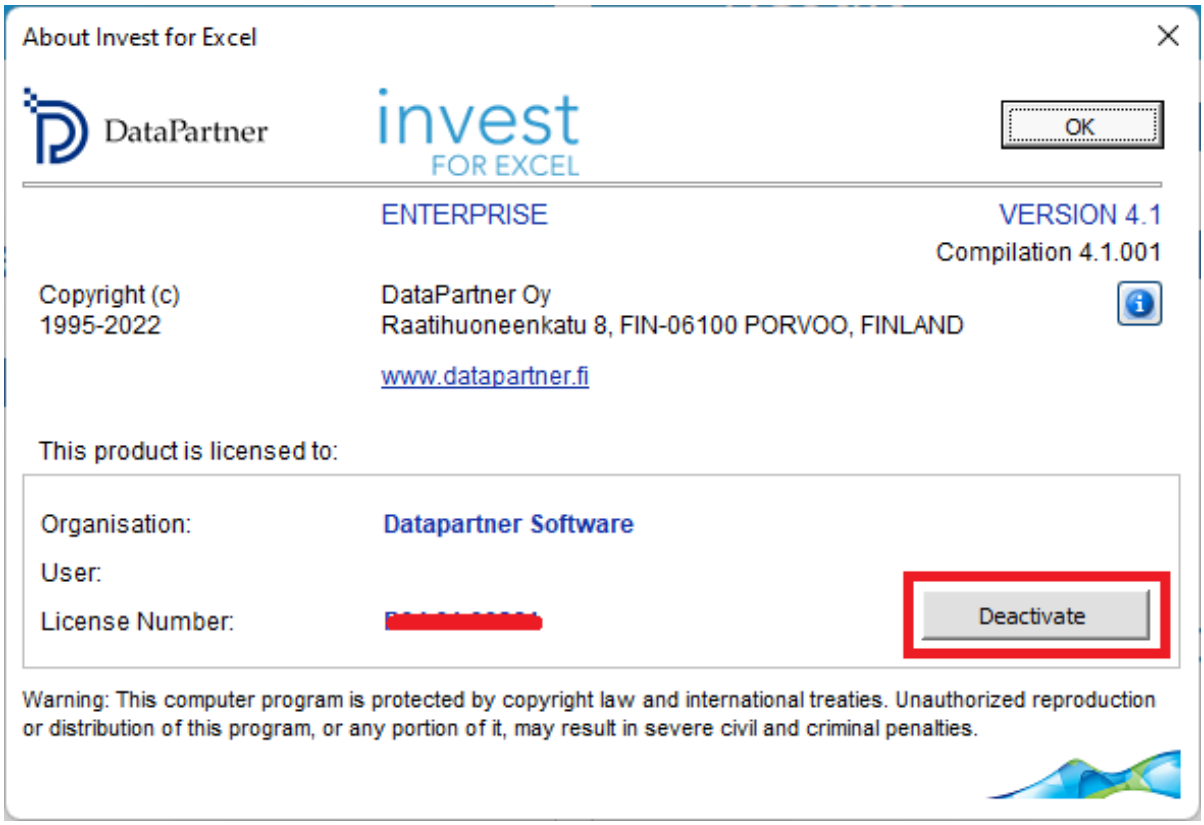
1.3.3 Deactivate

To deactivate Invest for Excel, open the “About Invest for Excel” dialog box either from the Invest for Excel “Other” menu or by pressing the Invest for Excel logo on the home page.

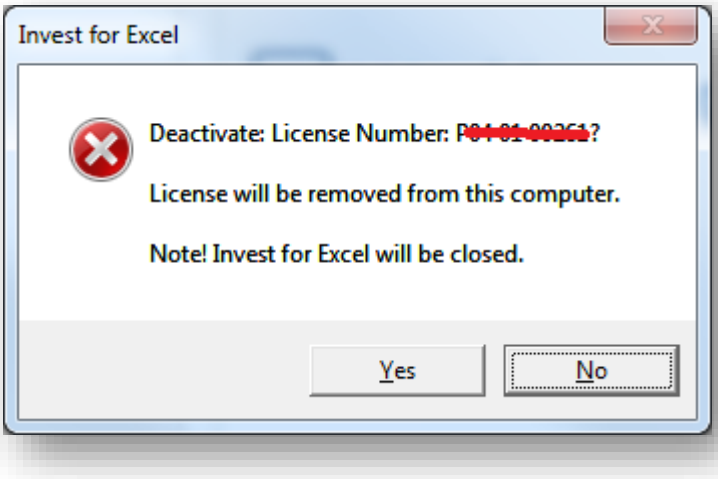




Press the “Deactivate” button in the “About Invest for Excel” to deactivate your license.



A confirmation message is shown.



Choose “Yes” to deactivate.

Note! After deactivating, please also uninstall Invest for Excel from the computer if you do not plan to use the software on that computer anymore.

1.4 Solving problems

Problems with installing program update?

If the installation doesn't update the files or there seems to be something wrong with the software, try uninstalling the software before running the update. From Start > Control Panel > Programs and features (Vista/7) remove all versions of the software (this doesn't remove the calculation files you have made). Windows 8: “Control Panel> Programs>Uninstall a program”. You might also check that the installation folder is empty (usually “C:\Program Files (x86) \DataPartner\Invest for Excel”). Then reinstall the program.

Problems with taking the program into use?

Note! Our Excel programs use macros. Allow the use of our macros the first time you use the program. If nothing happens when you try to run the program, then you might have as Macro Settings “Disable all macros without notification”, in that case you need to change to “Disable all macros with notification”. (Enable macros on use). The lowest security level is not recommended.

The program doesn't start?

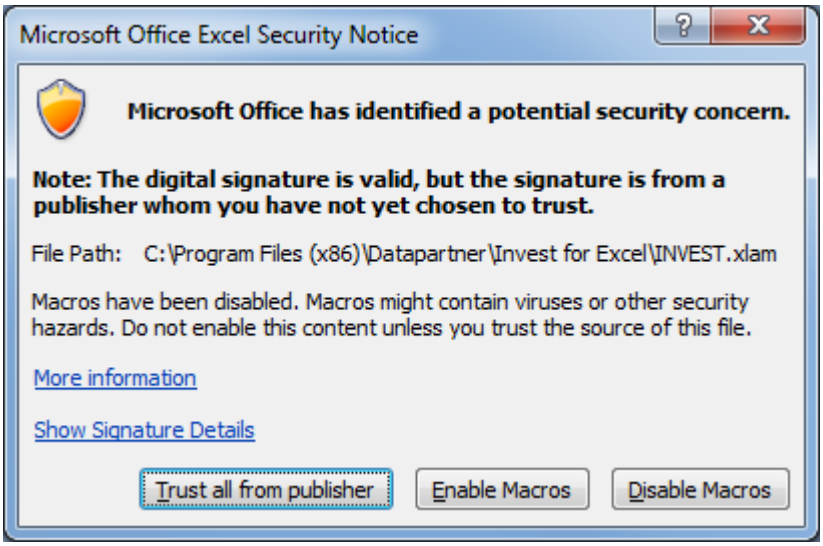
If the macro security level is high and the program doesn't start, then it is possible that the digital certificate has expired. Then you have to set the macro security level to "Medium" (in the Excel menu - "Tools" - "Macro" - "Security" - "Medium"). The lowest security level is not recommended. A new digital certificate will be distributed with the next program version.

1.5 Start-up

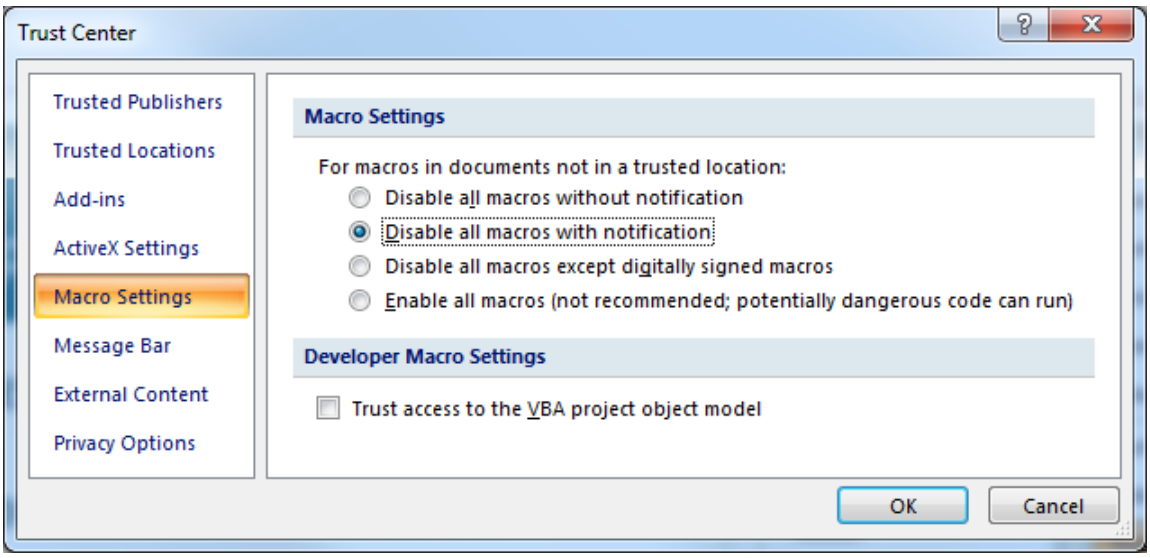
Invest for Excel’s start-up file is named INVEST.XLAM
You can start the program in four alternative ways:

- Click **Start** – select **Programs** – **(DataPartner)** – **Invest for Excel** or
- Start Excel and select from the menu: **File – Open** and select **INVEST.XLAM**, or
- Open the file INVEST.XLAM from the file list of files in Windows Explorer, or
- Click the Invest for Excel start-up icon on your desktop.

Enabling macros:



A program acquired from an unknown source may contain harmful viruses. Excel will ask you to enable or disable the macros. Select here **Enable macros** in order to activate Invest for Excel. Program files contain digital signatures. You can accept Datapartner as a reliable supplier (check “Trust all from publisher”). This way, the Security warning dialog box will not be shown again.



Note that appearance may vary depending on the version of the Microsoft Office used.

On-Screen Manual

To be able to view the Manual, you need to have the Adobe Acrobat Reader software installed in your computer. You can download it free of charge from the following Internet web site:

http://www.adobe.com, or direct from:
http://www.adobe.com/products/acrobat/readstep.html.

Note that you may also print out the manual on paper.

1.6 Components

Invest for Excel includes the following program files:

INVEST.XLAM	The start-up file controlling other components
INVHOME.XLSM	Home screen, from which all functions of the program can be accessed.
INVCODE.XLAM	Main program code file.
INVFILE.XLTM	Template file for investment calculations.
INVCOMP.XLTM	Template file for investment comparisons.
INVPROP.XLTM	Investment proposal template.
INVFIN.XLTM	Financing template.
INVITV.XLTM	Impairment test verification template.
INVCALC.XLAM	Program code file, calculator.
INVEST.INI & INVSTART.INI	Initialisation files containing start-up information.
INVM-UK.PDF, INVM-SWE.PDF, INVM-D.PDF, NVM-FIN.PDF, INVM-PL.PDF & INVM-RU.PDF	User manuals in Acrobat Reader format.
INVGUIDE.XLAM, INVGUIFI.XLAM, INVGUISE.XLAM, INVGUIUK.XLAM	
INVGUIPO.XLAM, INVGUISP.XLAM	Invest for Excel Guide function in several languages
WACCENG.BMP, WACCGER.BMP, WACCSWE.BMP, WACCFIN.BMP WACCPOL.BMP, WACCSPA.BMP	WACC calculation charts.
IRibEn01.XLAM, IRibEn02.XLAM	Program menus
IRibFi01.XLAM, IRibFi02.XLAM	
IRibGe01.XLAM, IRibGe02.XLAM	
IRibPo01.XLAM, IRibPo02.XLAM	
IRibRu01.XLAM, IRibRu02.XLAM	
IRibSp01.XLAM, IRibSp02.XLAM	
IRibSw01.XLAM, IRibSw02.XLAM	

Invest for Excel automatically creates a default directory called CALC, in which calculation files can be saved. If the software is running in a network, the CALC folder must have both read and write rights.

1.7 Entering Data

As a general rule, negative cash flows should be entered as negative (-) figures, and positive cash flows as positive (+) figures. Consequently, enter costs and investments as negative (-) figures, and profits or realisations (sale of investment objects) as positive (+) figures.

You should avoid using the Cut & Paste function. Use Copy and Paste command instead.

When calculating the profitability of an investment, try to estimate the marginal effects of the investment, unless you use the Marginal effect function. It is equally important to remember not to let the expected result influence the values you enter when making investment calculations. Do not change data only to get a positive net present value (NPV) etc., always be objective when entering numbers.

1.8 Working Order

When starting a new Investment calculation, always start by entering:

1) Basic Values and
2) Contact Information (if needed)

After that you specify:

3) Investments (capital expenditures)
4) Income and costs in the Income statement Table, and
5) Changes in working capital in the Working Capital table.

The program then calculates the following in respect of the investment:

6) Cash flow; the calculation can be supplemented with financing data.
7) Balance sheet: calculated on the basis of your data input. You may supplement the balance sheet with an opening balance.

Next you will see the result of the calculation in the

8) Profitability analysis.

Now you can analyse the effect of various variables on the profitability of the investment. These variables include:

9) Discount Rate used in calculations,
10) Total Investment,
11) Income,
12) Variable costs,
13) Fixed costs,
14) Income Variable, and
15) In addition to the above analyses, you can create analysis charts for any input variable

If necessary, you can always return to input screens to simulate different situations. That way you can have more than one variable in a chart. Remember to save your work!

If you have several alternative investment projects, you can compare them in the

16) Comparison table.

The differences between the alternatives can be illustrated using the following charts:
NPV chart, IRR chart, and Payback chart.

When you are satisfied with your calculations, you can process the results further to make an

17) Investment Proposal. Submit that proposal to the decision-makers.

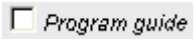
18) Option: If you have the Financing module, use it to produce financing calculations.
(Enterprise edition only)

19) Option: If you have created a calculation for asset impairment testing, use the impairment test verification.
(Enterprise edition only)

1.9 Home Screen (Start-up screen)

The Home Screen shows the contents and structure of the program. From here you can go to any program module. For example, click the button to the left of the text “Basic Values” to go to the **Basic Values** screen, where you begin any calculations.

The **Exit** command closes both Invest for Excel and Microsoft Excel. Remember to save your workbooks when you exit the program, otherwise your work may be lost. Please, note that the **Exit** command will also close all other Excel workbooks open at the time.



The Guide function contains useful tips about using the program. You can activate or close the Guide in the Home Screen. When starting a new function, a few tips on its use are displayed. Even when you are feeling more confident about using the program, you can check the comments on any particular part of the program by clicking on the help button  when available.

Create new file.

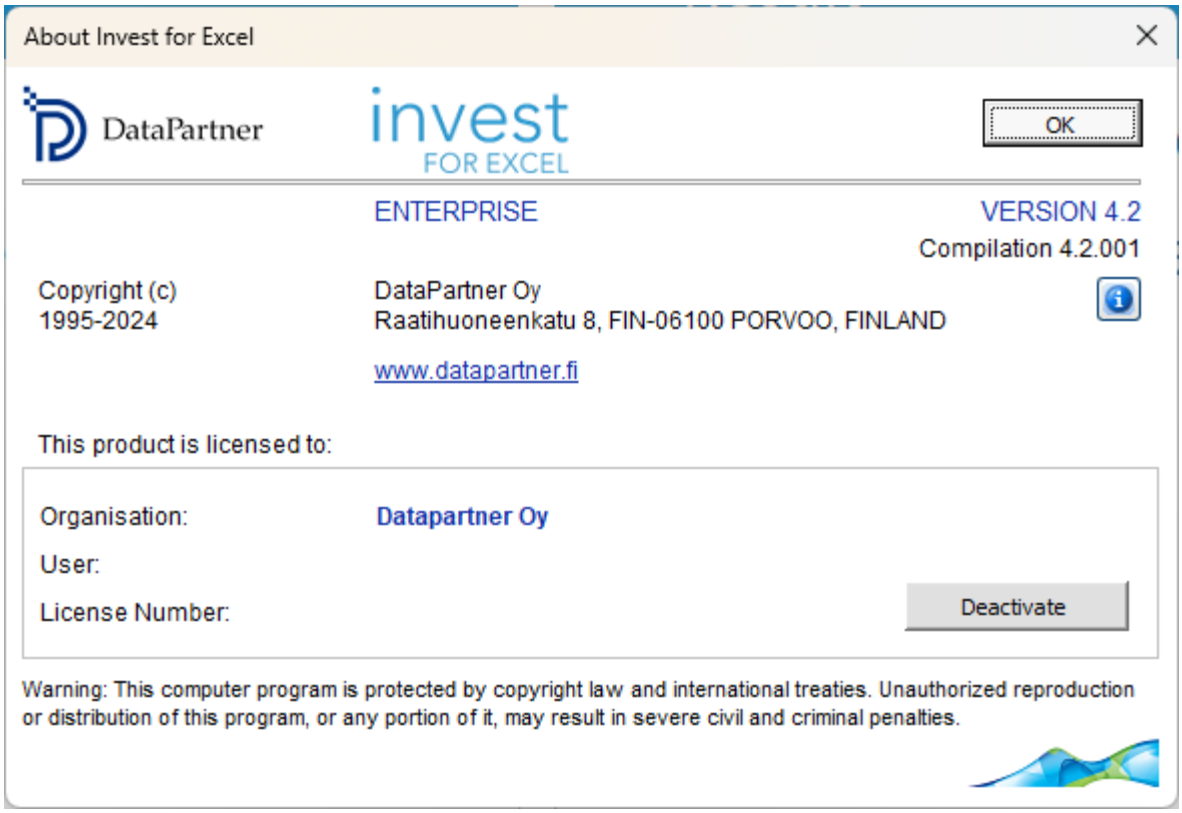
Open saved file.

Go to file.

Centralised printing of reports (see chapter 2.11).

The **Change Language** function: By pointing to this globe button you can quickly change the language of various parts of the calculation.

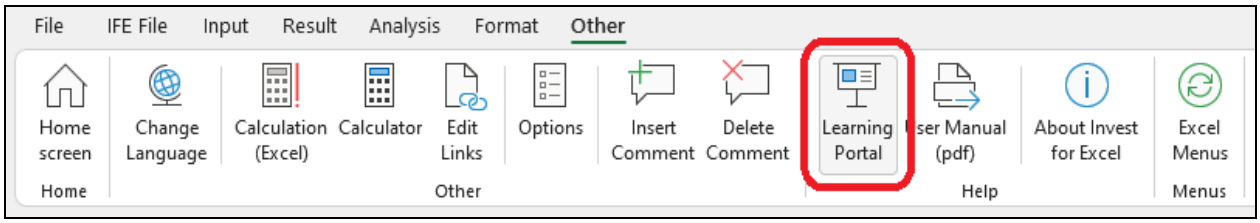
Click on the Invest for Excel logo to display information on the user licence:



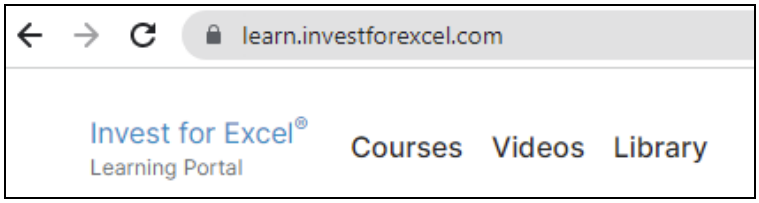
For more information on license activation, see chapter **8.3 About Invest for Excel**.

1.10 Learning portal

Easy access to the Invest for Excel Learning portal can be found on the Home screen and in menus.



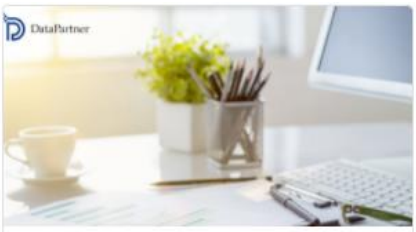
The Learning portal contains courses, videos and a library of material about using Invest for Excel.



learn.investforexcel.com

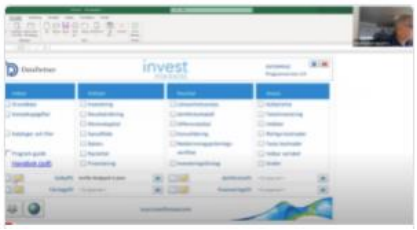
1.10.1 Courses

Sign up to our online courses to go through a guided learning path on a topic of your choice. You can learn at your own pace. The content is available from any device via web browser.



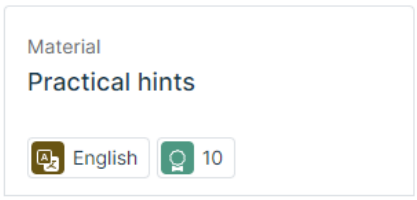
1.10.2 Videos

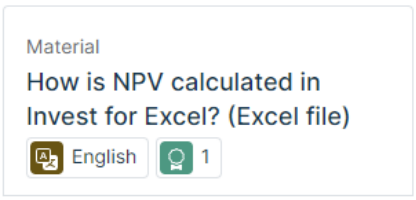
Watch educational videos, webinar recordings, and demonstrations of features at the video section.

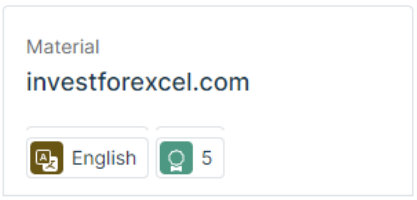


1.10.3 Library

A collection of readable materials such as practical hints, guides, frequently asked questions, educational articles, and more.





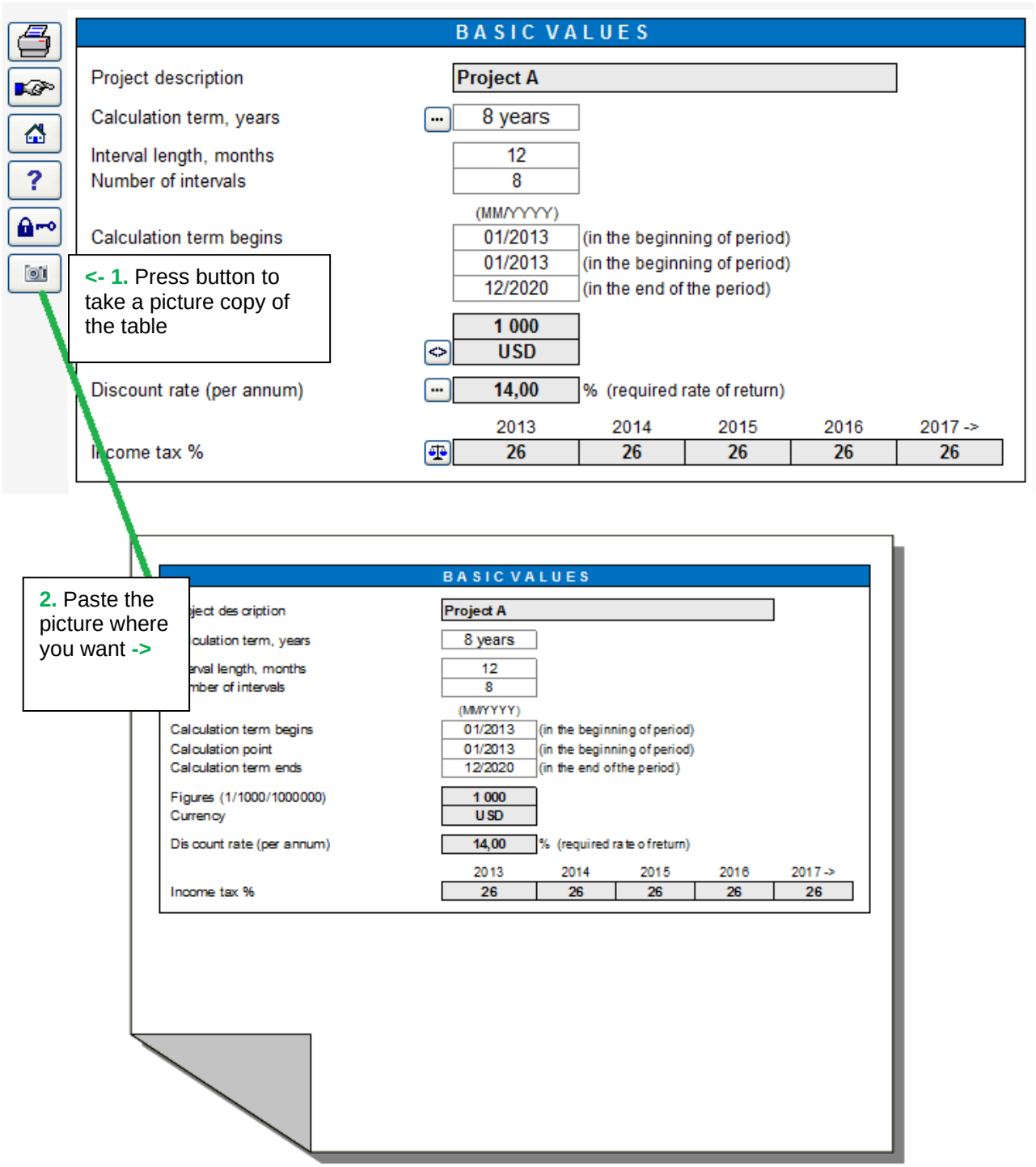


1.11 General buttons

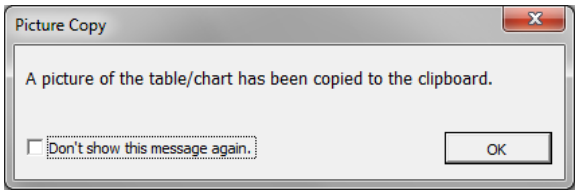
Button	Description
	Print current table.
	Move to previous table
	Move to next table.
	Move to the Invest for Excel home page.
	Create chart.
	Show help for current table.
	Pressing the camera button will place a picture copy of the table or chart in the clipboard. The picture can then be pasted into another sheet, document or software. See 1.9.1 Picture copy below.
	Unfreeze/freeze column headers (Calculation sheet)

1.11.1 Camera shot (copy picture)

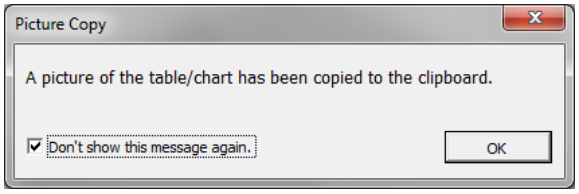
Invest for Excel files created with version 3.7 (or newer) templates have camera buttons at each table. Pressing the camera button will place a picture copy of the table or chart in the clipboard. The picture can then be pasted into another sheet, document or software.



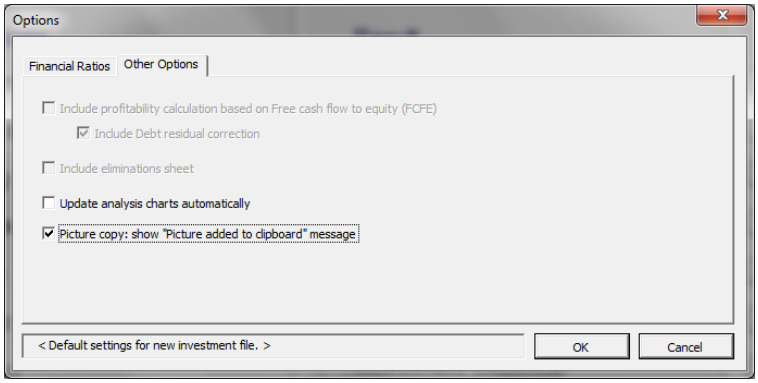
By default, a message is displayed telling that a picture has been copied to the clipboard.



Check “Don’t show this message again” before pressing OK, if you don’t want this message to be displayed again.



If you want to have the message displayed again, go to Invest for Excel’s Options and check “Picture copy: show "Picture added to clipboard" message”.



This function can also be applied by pressing Shift while clicking the  button. This way it can be used in calculation files created before version 3.7, which don’t have camera buttons!

Camera shot with Shift key

By default, no program buttons etc. are included when you copy a table to clipboard using the Camera shot button.

BASIC VALUES						
Project description	**New flight route**					
Calculation term, years	10 years					
Interval length, months	12					
Number of intervals	10					
	(MM/YYYY)					
Calculation term begins	01/2017	(in the beginning of period)				
Calculation point	01/2017	(in the beginning of period)				
Calculation term ends	12/2026	(in the end of the period)				
Figures (1/1000/1000000)	**1**					
Currency	**EUR**					
Discount rate (per annum)	**10,16**	% (required rate of return)				
	2017	2018	2019	2020	2021 ->	
Income tax %	**30**	**30**	**30**	**30**	**30**	

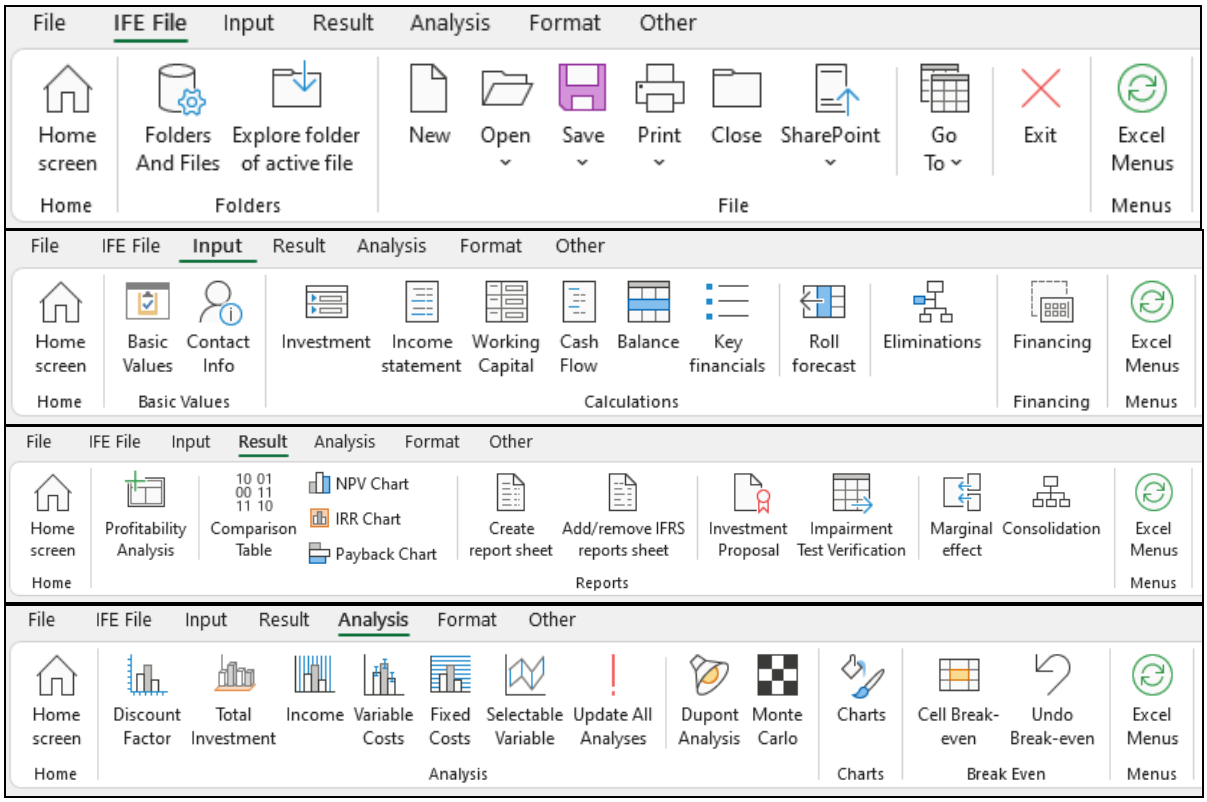
If you want to include program buttons, press Shift key when you click the Camera shot button.

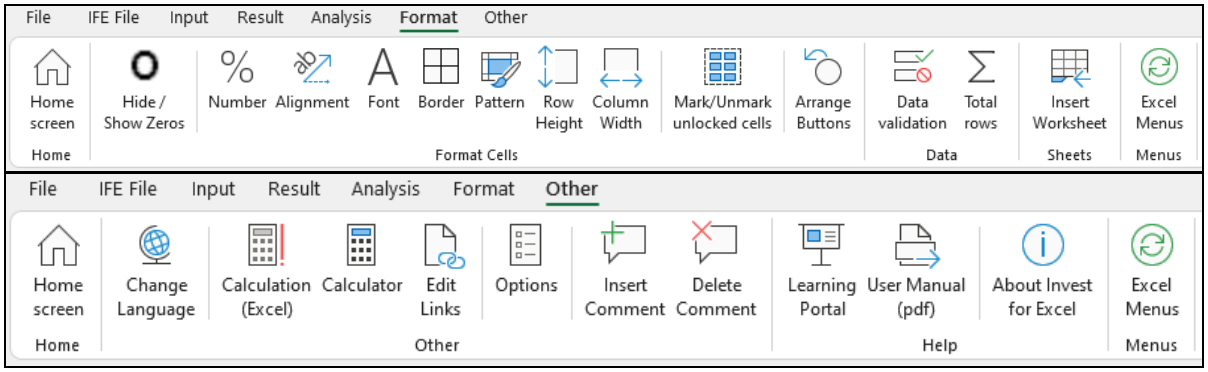
BASIC VALUES						
Project description		New flight route				
Calculation term, years	...	10 years				
Interval length, months		12				
Number of intervals		10				
		(MM/YYYY)				
Calculation term begins		01/2017	(in the beginning of period)			
Calculation point		01/2017	(in the beginning of period)			
Calculation term ends		12/2026	(in the end of the period)			
Figures (1/1000/1000000)		1				
Currency	<>	EUR				
Discount rate (per annum)	...	10,16	% (required rate of return)			
		2017	2018	2019	2020	2021 ->
Income tax %		30	30	30	30	30

1.12 Invest for Excel menus

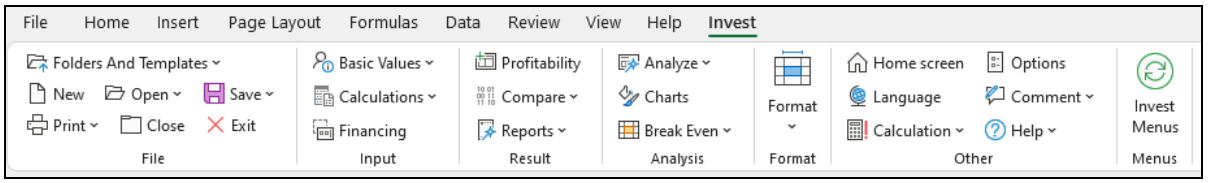
The Excel ribbon menu is modified to include Invest for Excel commands.

Invest for Excel menus

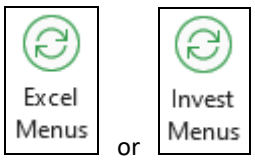




Excel menus



You can switch between Excel and Invest for Excel menus at any time by pressing:



or

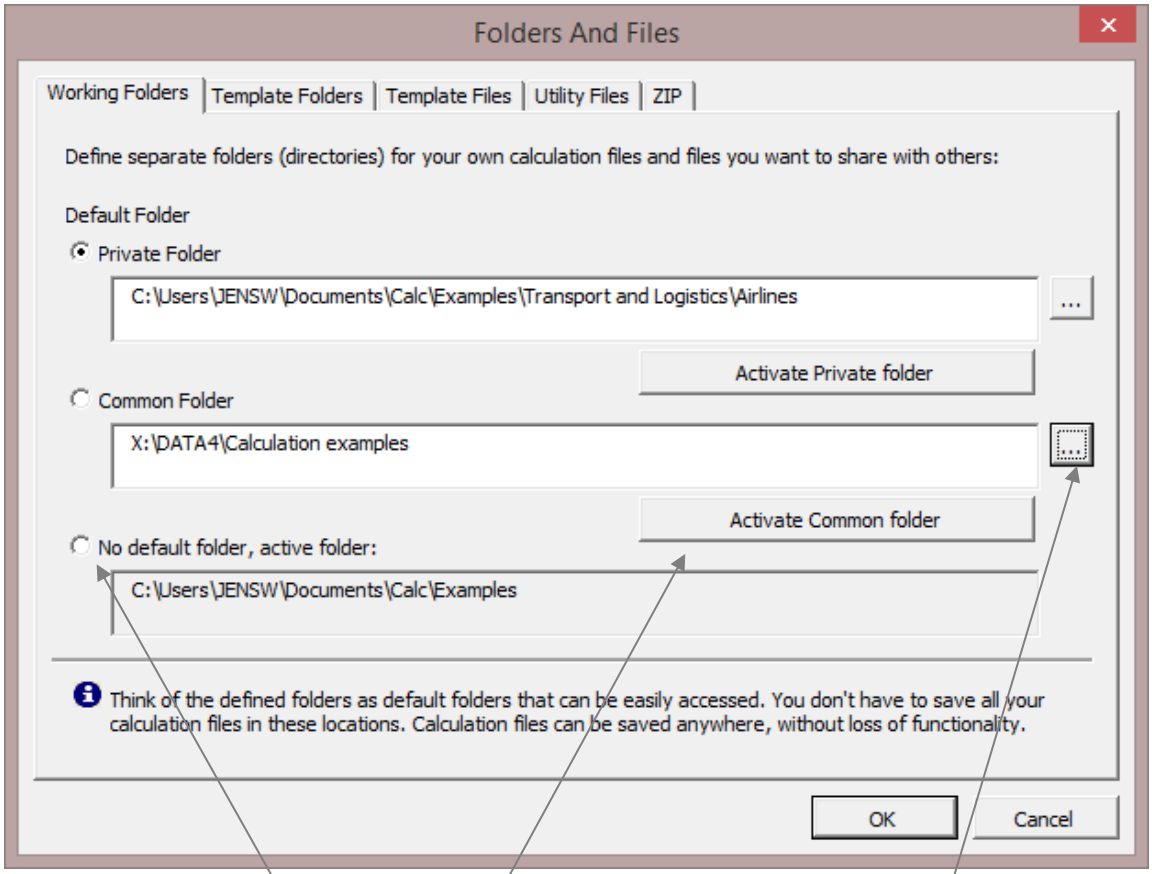
2 File commands

2.1 Folders and Files

2.1.1 Working Folders

By defining the folder, you decide on the name and path of the folder where you primarily save your calculations. You can have both a *private* folder and a *common default folder*. When you do calculations for your own use you save them in your *private folder*. When you want calculations to be shared with others, save them in the *common folder.* The private folder is normally located in a folder that only you have access to, and the common folder is located on a shared server.

Place the folder in a place on the server of which backups are taken automatically. Ask the PC Administrator to create on the server a common folder with read and write access for anybody doing investment calculations.



Define which folder you will use more often (the default folder), or select “No default folder”, meaning that the last used folder is active when opening and saving files.

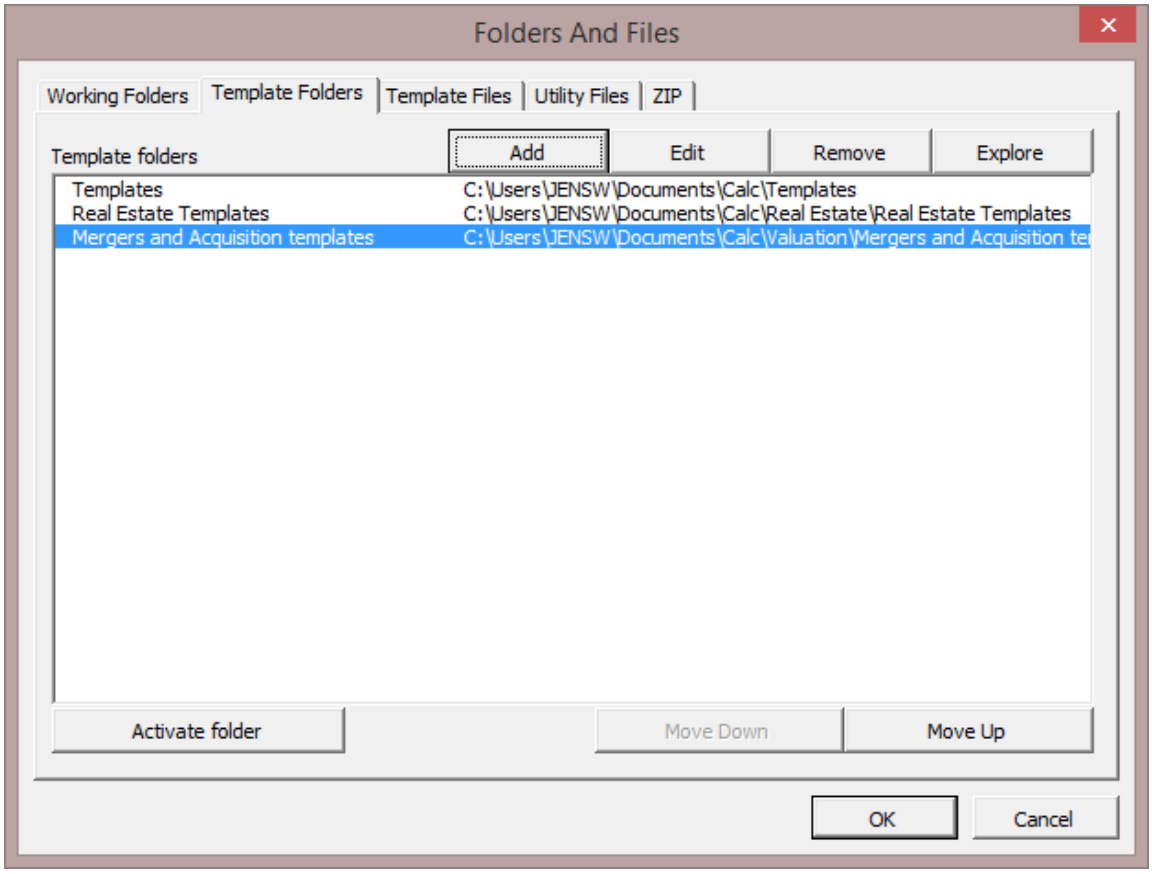
It’s possible to activate Private or Common folder at any time by pressing the activate buttons.

Define the path to the folder by typing it in, or by clicking on the button on the right hand side.

2.1.2 Template Folders

Templates are modified Invest for Excel files to be used as templates when starting a new calculation. E.g. the user wants own headers and footers, some pre-entered information, some pre-selected settings, some hidden rows, some renamed rows, pre-set depreciations, asset types and tax settings and some restrictions in user rights.

Template folders are folders where you save your templates. Here you can tell the program where your templates are located. When you create new files, you may choose whether you start from Invest for Excel's standard template or from one of your saved templates.



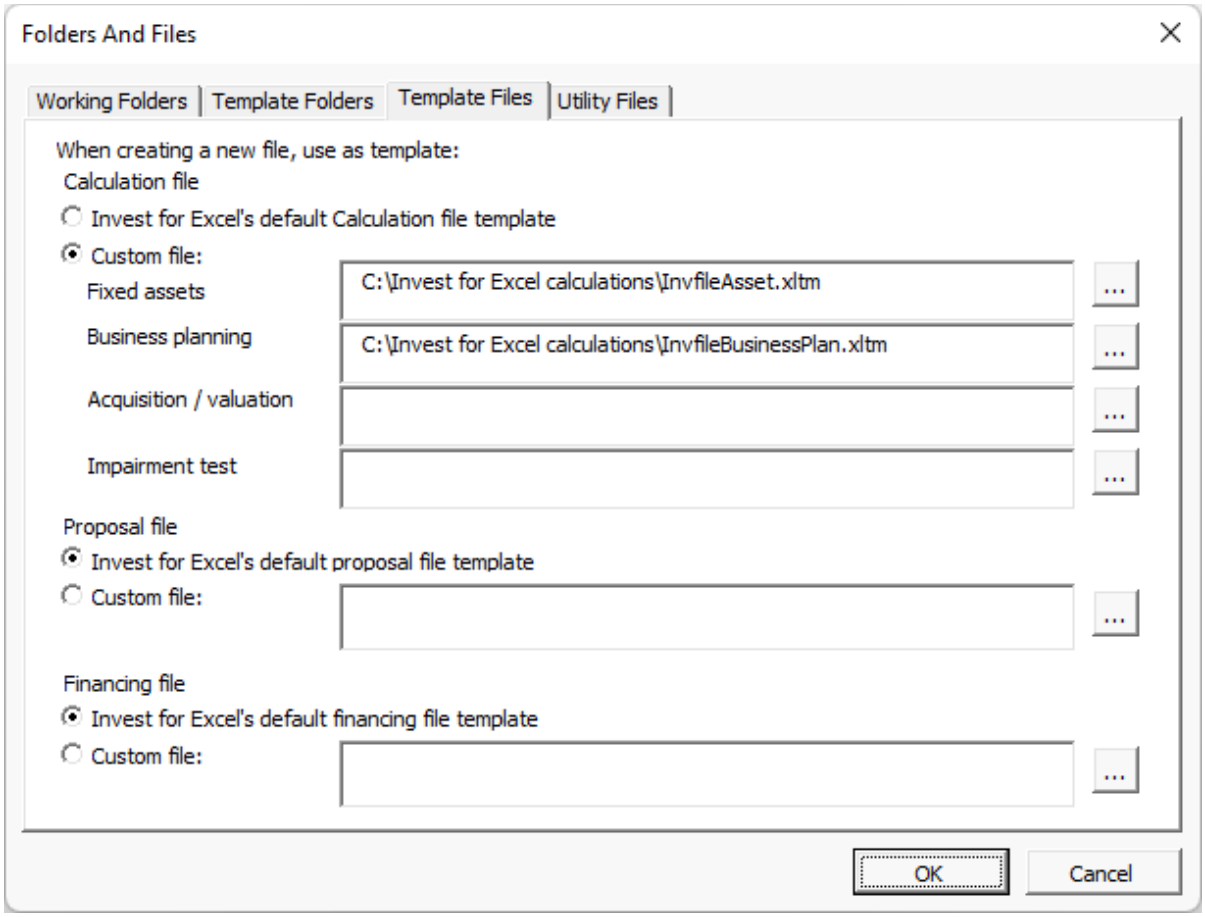
2.1.3 Template Files

By specifying template files, you decide whether to use the standard templates of Invest for Excel (default templates) or your company's own template.

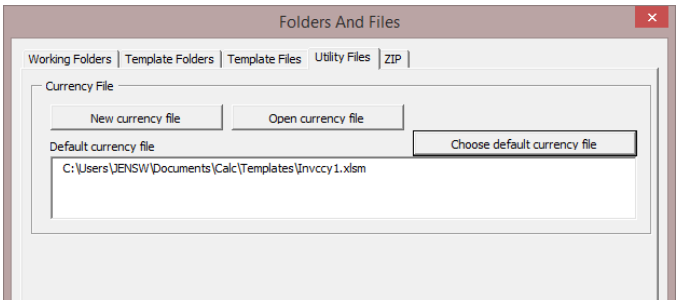
You can either enter the path to your own folder, or find it by clicking the  button on the right hand side.

If management wants to direct the calculation by setting certain default values, they can be put in customised templates for use in certain investment projects. The investment requests can also be customized according to the customer's wishes. In that case, the customer specific Proposal File shall be saved as the default template.

You can change the template in this dialogue box. Find it by clicking in the **Home Screen,** or in Invest for Excel's own **File** menu.

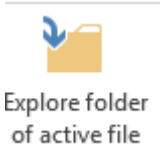


2.1.4 Utility Files



In the Utility files tab you can define default currency file, create a new currency file and open existing currency file. A currency file includes exchange rates for currencies.

2.2 Explore folder of active file

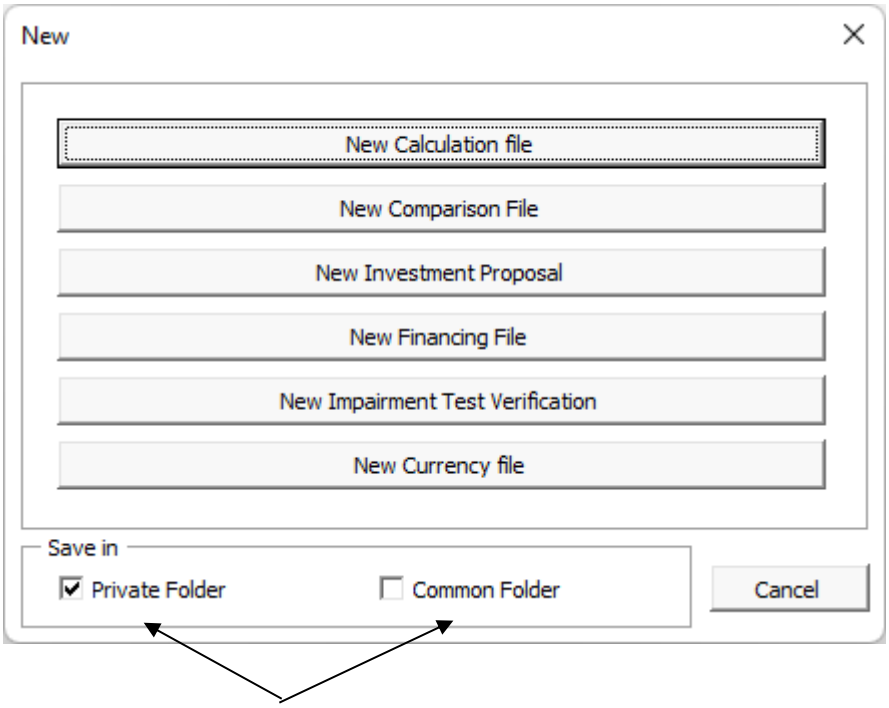


'Explore active file folder' opens a new Explorer window showing the folder for the active file.

2.3 New

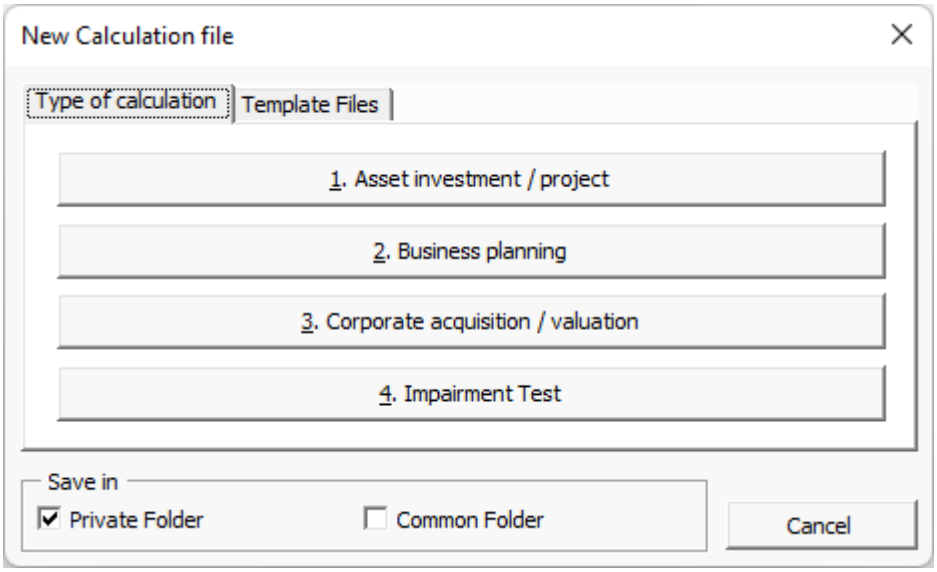
When creating a new calculation, comparison, proposal or financing file, go to Invest for Excel's own **File** menu, and select the command **New…**.

- To make a new calculation, select **New Calculation file,**
- To compare the results of different calculations scenarios, select **New Comparison File,**
- To make an investment proposal, select **New Investment Proposal,** or
- **New Financing File,** to plan debt financing.
- **New Impairment test verification** for a detailed impairment test verification.
- **New Currency File** to create a new list of currency conversion rates



Choose here if you want to save the file in your private folder (default) or in the common folder (e.g. on a file server). If neither is selected then the last accessed folder is used.

When you choose 'New Calculation file' and you are using the *Enterprise* edition of Invest for Excel you will get a new menu to select the main type of template (this doesn't apply for *Pro*, *Standard* or *Lite* editions):



For capital budgeting, financial modelling, profitability analysis, business planning. Lifecycle costing and product calculations, choose: **'1. Asset investment / project'**.

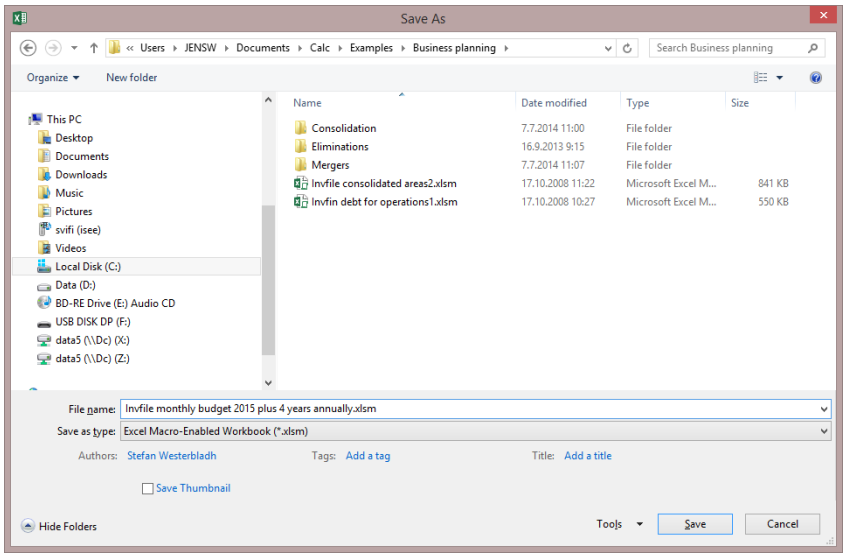
For Business plan type of calculations, choose '**2. Business plan**'. The business plan calculation file type is like the asset type with two historical years added by default. The result sheet includes Enterprise value and Equity value calculation with separate Excess cash and non-operating assets and Interest-bearing debt calculation tables.

Choose '**3. Corporate acquisition / valuation'**, for valuation of a company/ business, for mergers and acquisitions and if you want to see how long term planning affects the equity value of the corporation. This alternative provides extra lines showing group effects of acquisition. This function requires the **Enterprise** edition. Please refer to 'Corporate acquisition calculations' in Section 10 for more information.

Choose **'4. Impairment Test'** if you want to do an impairment test/ recoverability test on existing goodwill and assets. The created file is an asset investment calculation file with the following settings:

- Calculation term is five years by default.
- Calculation point is locked to the start of the calculation term. This is because compounding is not recognized in accounting standards.
- The result sheet shows an impairment test calculation in addition to the standard profitability key figures.
- The result sheet holds a button for creating/updating an impairment test verification.

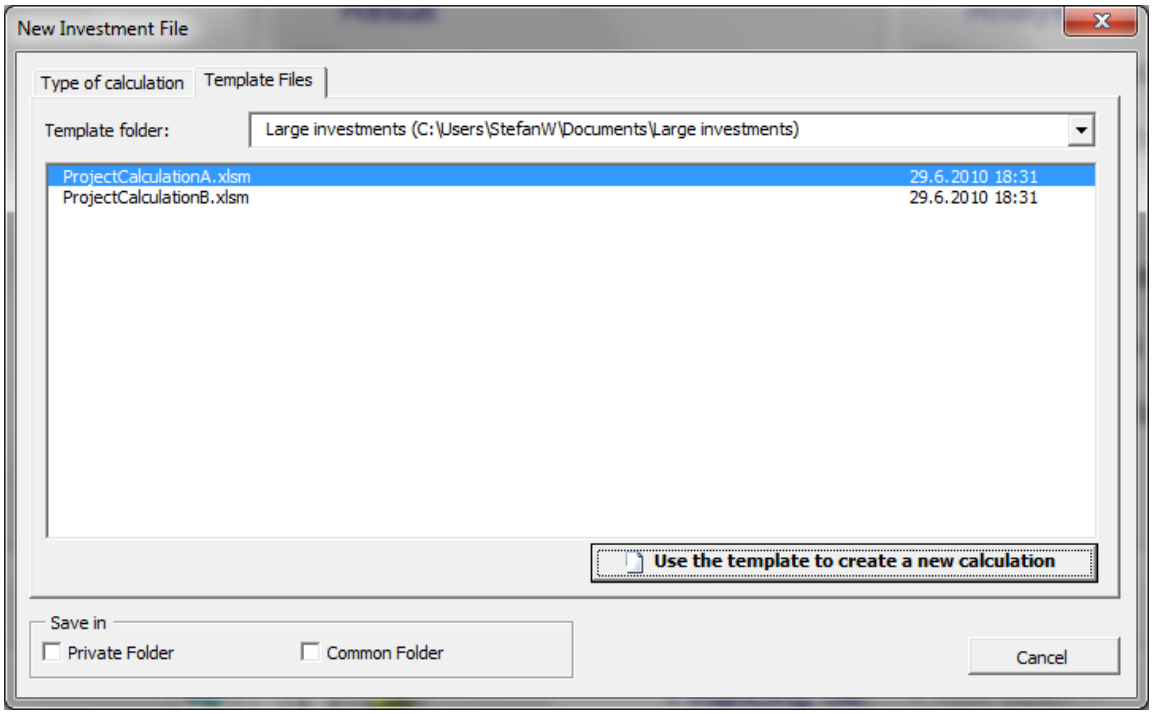
It is advisable to name the file and choose the folder at this point:



Replace the name and path suggested by the program with a suitable descriptive file name, in order to find your calculations easily on later occasions.

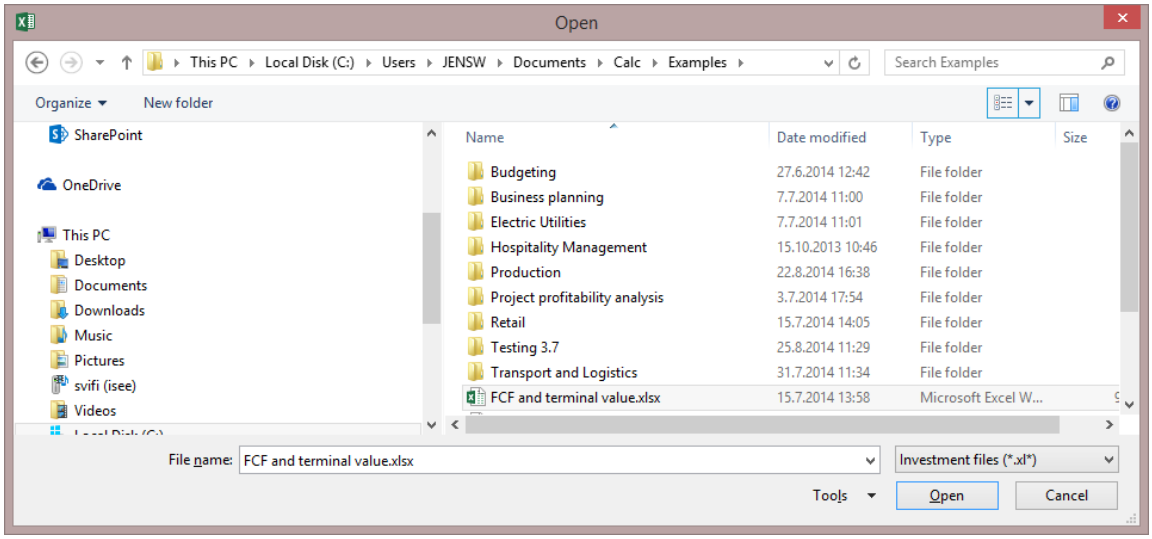
However we do recommend to keep the 'Invfile' – word in the beginning of the name in order to separate different types of Invest for Excel files.

Select the "Template Files" tab if you have premade template files in template folder. Choose the template you want and press "Use the template to create a new calculation":



2.4 Open

Go to the **File** menu and select **Open…** to open a previously saved file:

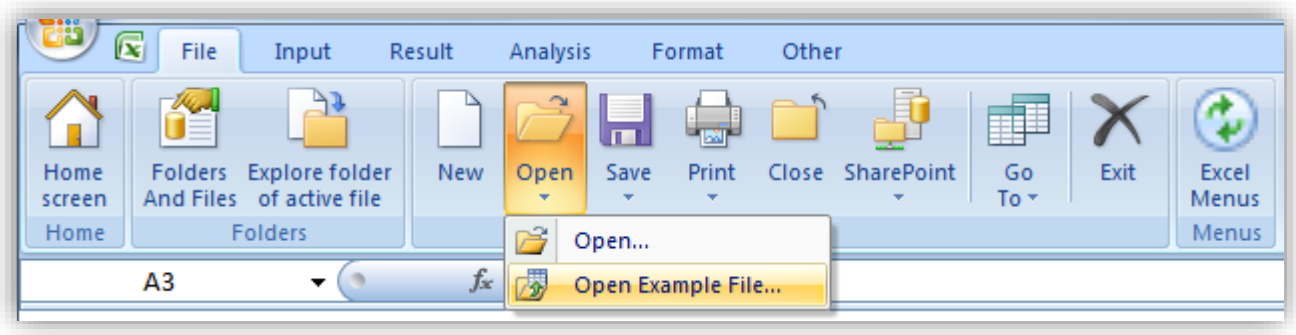


The appearance of the dialogue box differs to some extent depending on the operating system and version of Excel used. Note that, if you use Microsoft Excel's Open function, you will be prompted to activate macros.

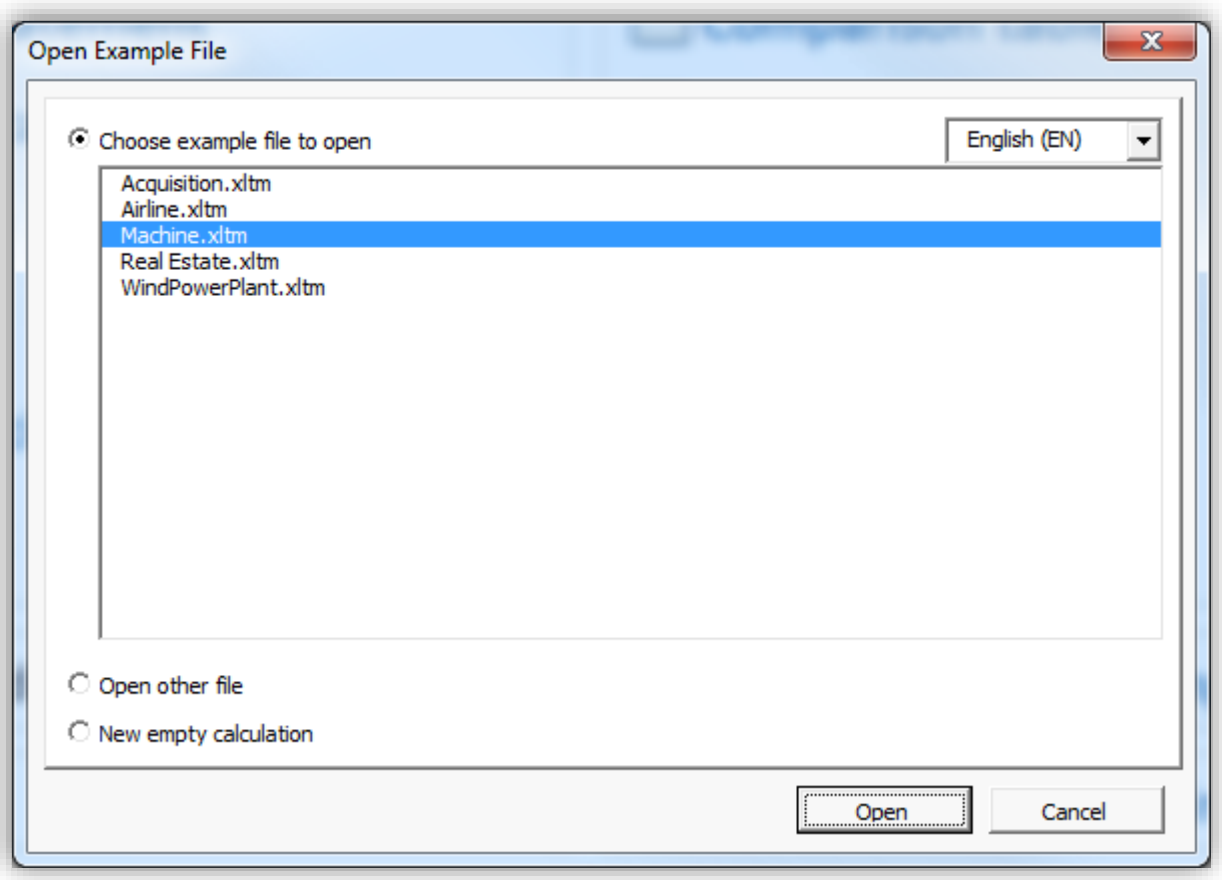
You can open a file from any drive and folder. When you start Invest for Excel, it activates the default folder you have specified. If you do not choose to save the files in another folder, Invest for Excel automatically saves all calculation files in this folder. You can also open other Excel files with this function.

2.4.1 Open example file

Example files can easily be opened from the Invest for Excel menu.



You can choose from available files per language.



2.5 Close

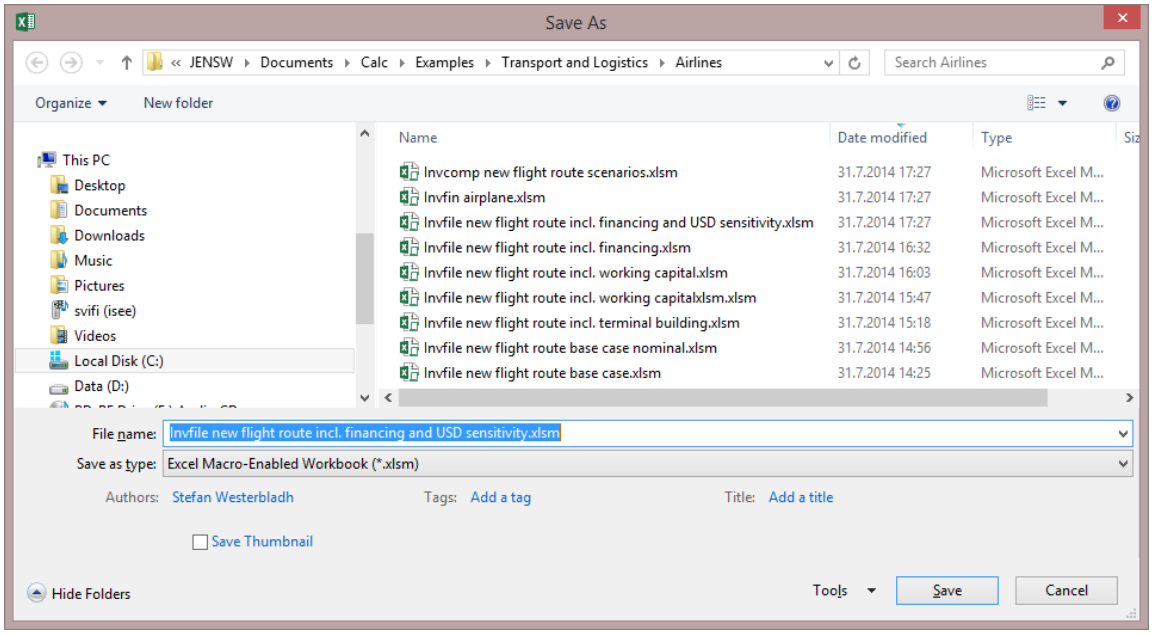
The **Close** function of the **File** menu will close the active Excel workbook, as the same function in Excel would do. If you have made changes to the file after last saving it, the program asks you "Do you want to save the changes you made to [file name]?":

2.6 Save

To save the file, left click the **File** menu, then select **Save** or **Save as** (or Save To Zip file or **Save Snapshot**).The operating system may limit the use of certain symbols or characters in the file name.

When you save a file by choosing **Save** in the **File** menu (or by clicking on the floppy icon in the toolbar on top), the file is saved in the active folder. The file will retain the name it had when you opened it, or given to a new file when created. It is safer to select the **Save as…** function, which allows you to specify folder and file name to use.

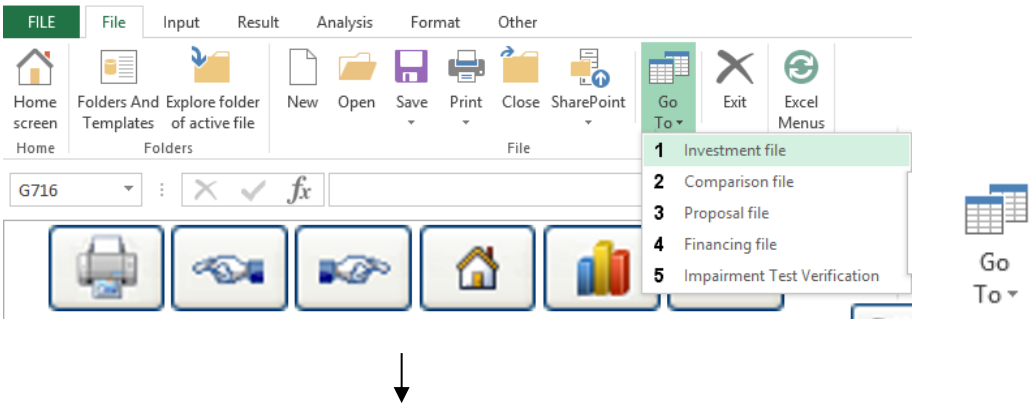
The appearance of the Save As dialog box differs depending on the operating system and version of Excel used.

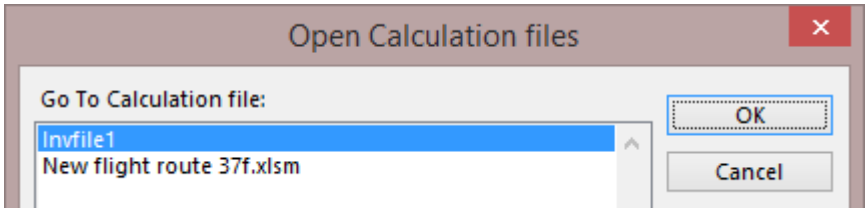


If "Save As..." is used, you will be prompted to replace any existing files.

2.6.1 Working simultaneously on several calculations

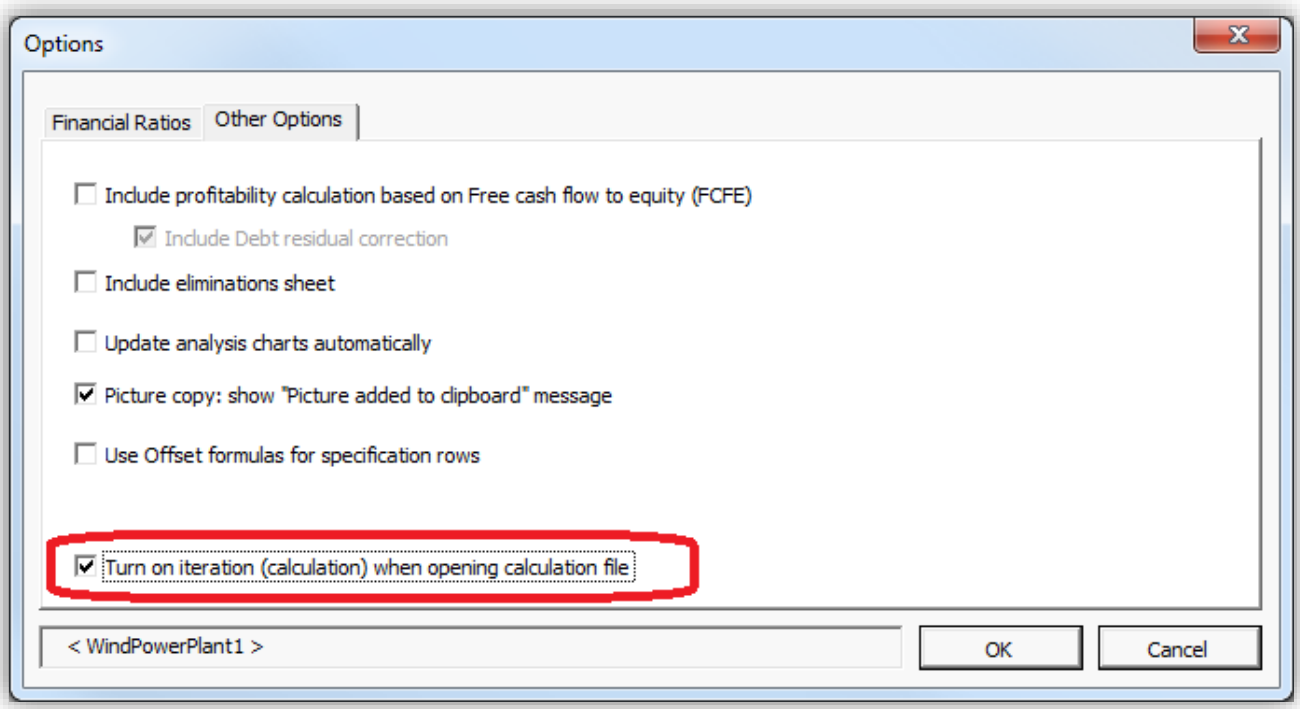
Invest for Excel supports simultaneous handling or processing of several calculation files. When you change from one function to another (for example via File>Go To>1 Calculation file), the program displays a list of all files related to that function. In order to choose the file you want, just click on the appropriate name. The situation could look as follows:





The same function applies to other type of files; you can work with several files at a time.

2.6.2 Turn on Iteration (calculation) when opening calculation file

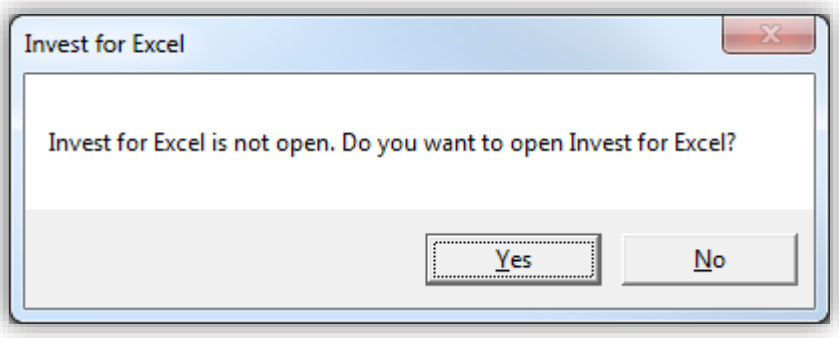


Iteration can be forced to turn on when a calculation file is opened by checking “Turn on iteration (calculation) when opening calculation file” in the Program options when the calculation file is active.

Note that you have turn off iteration manually in the calculation options when no longer needed.

2.6.3 Invest for Excel is automatically opened

When you open a Calculation file and Invest for Excel is not open, you will be asked if you want to open Invest for Excel. This feature requires that the calculation file is created in version 3.9 or newer.



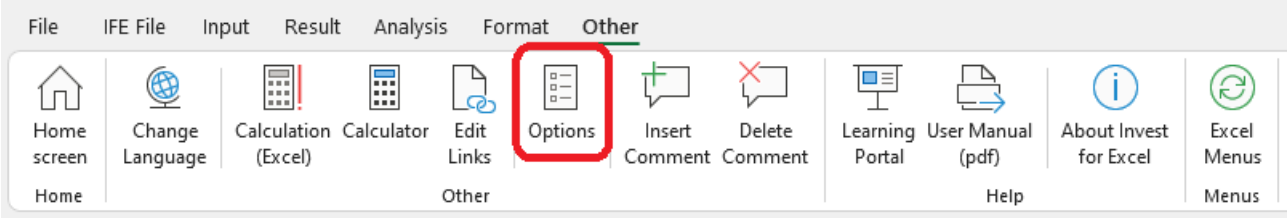
Click “Yes” to open Invest for Excel.

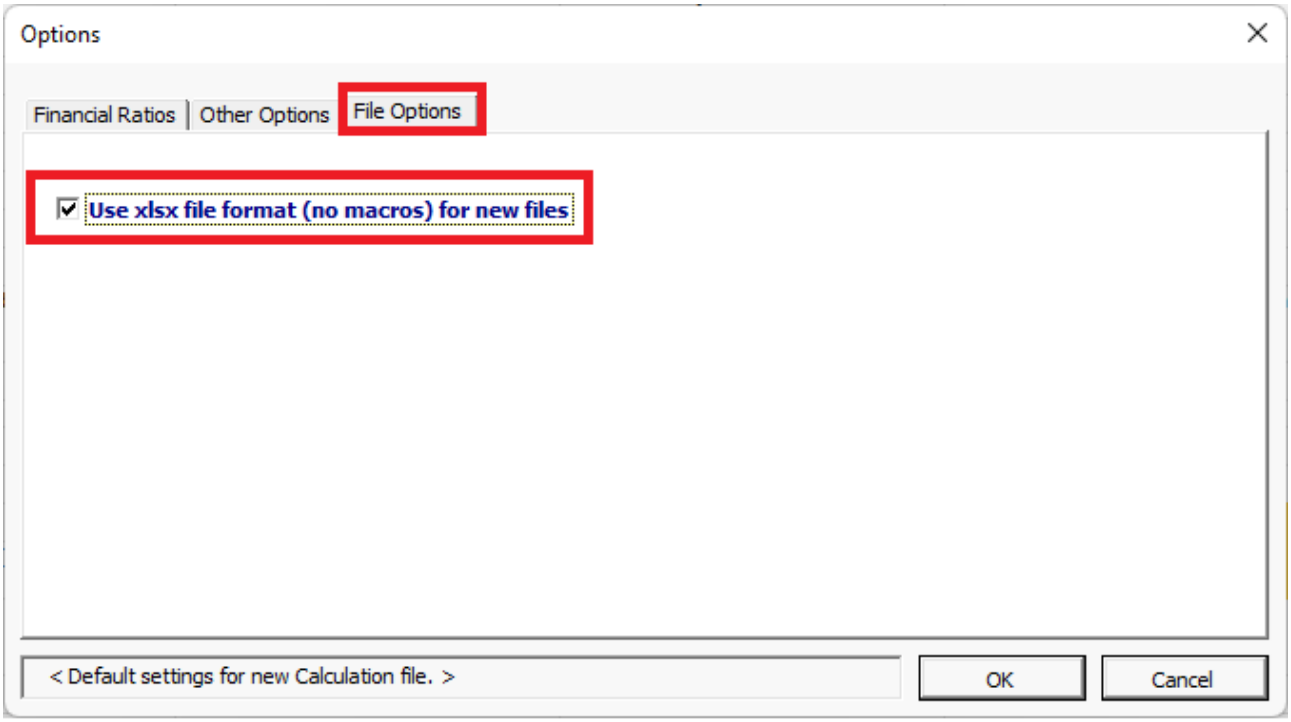
2.7 Xlsx file format

Xlsx file format is supported for all calculation files in Invest for Excel.

2.7.1 Use xlsx file format (no macros) for new files

Use the program option “Use xlsx file format (no macros) for new files” to create new files without macros.





When this option is used, new files are created from xltx-fileformat templates. Xltx templates don’t contain macros.

Note that files that don’t contain macros (xlsx) cannot be converted to files containing macros.

2.7.1.1 Force the use of xlsx file format

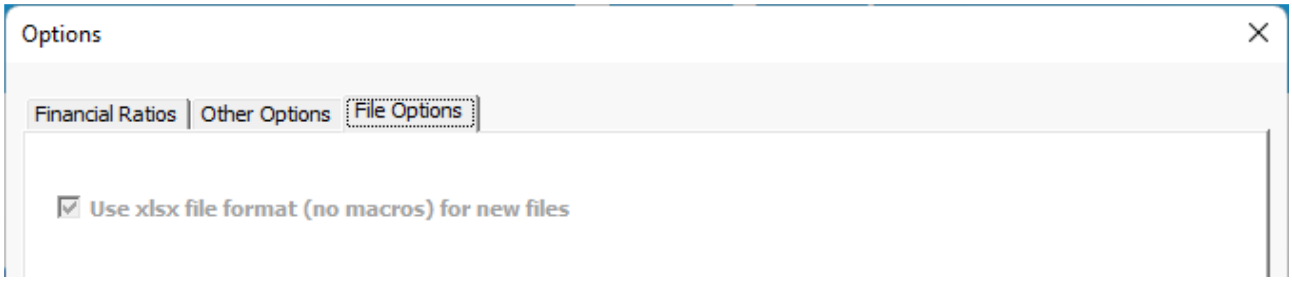
To force the use of xlsx file format for new files, add the following row to the **Invstart.ini** file in the program folder of Invest for Excel:

ForceXlsx=1

Note that this may require admin rights and the help of IT-support. The default path of the Invest for Excel program folder is C:\Program Files (x86)\DataPartner\Invest for Excel.

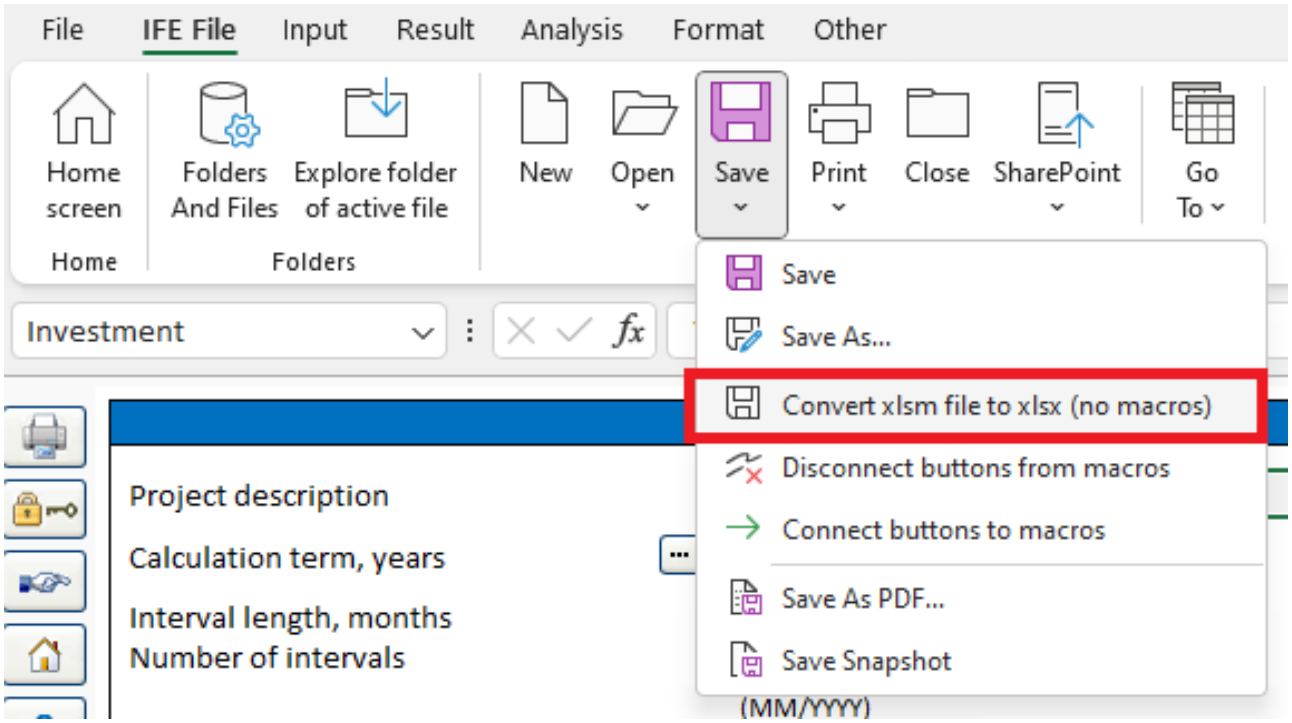
Alternatively, you can add the same row to a text file called **InvestForExcelOptions.ini** added to the folder **C:\ProgramData\DataPartner\Invest for Excel**. The advantage of this approach is that the setting applies to all users of the computer and there is no risk that the setting will be overwritten when Invest for Excel is updated.

When the use of xlsx file format is forced, the "Use xlsx file format (no macros) for new file" is disabled in Invest for Excel Options.



If a macro-enabled xlsm calculation file is opened when xlsx file format is forced, the file will automatically be converted to xlsx.

2.7.2 Convert xlsm file to xlsx (no macros)



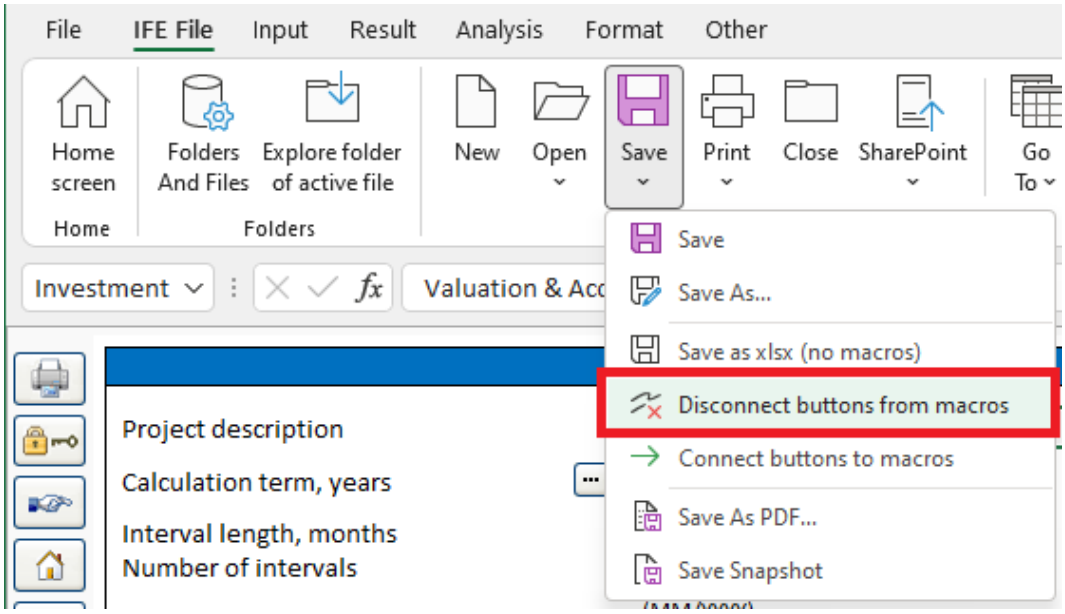
Use the command “Convert xlsm file to xlsx (no macros)” to save a macro-enabled xlsm-file as xlsx (no macros). The file is save in xlsx-fileformat, buttons are connected directly to program file Invcode.xlam and buttons are added for event-based functions. See New buttons in an xlsx-file.

The file is automatically named when saved, closed and re-opened.

Note that the xlsm-file is not saved separately before converting. If you have made changes to the xlsm file and want to keep the xlsm-file also, please save the file before converting to xlsx.

Note that files that don’t contain macros (xlsx) cannot be converted to files containing macros.

2.7.3 Disconnect buttons from macros

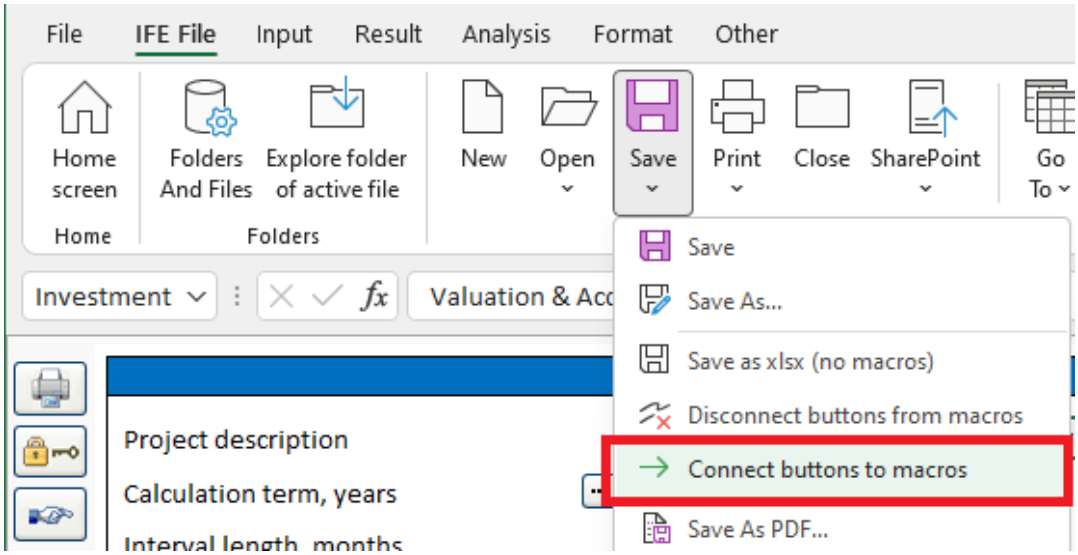


Use the command “Disconnect buttons from macros” to remove links to program file Invcode.xlam.

When closing an xlsx-file using Invest for Excels Close-command, this is done automatically.

If you close an xlsx-file using Microsoft Excels Close-command, this is not done automatically and the closed file will contain links to Invcode.xlam.

2.7.4 Connect buttons to macros



Use the command “Connect buttons to macros” to add links from buttons to program file Invcode.xlam. Use this command if buttons are not working.

When opening an xlsx-file using Invest for Excels Open-command, this is done automatically.

If you open an xlsx-file using Microsoft Excels open-command, this is not done automatically.

2.7.5 New buttons in a Calculation xlsx-file

An xlsx-file save using the “Save as xlsx (no macros)” function contains new manual update-buttons compared to an xlsm-file. This is because an xlsx-file does not contain event-based macros. Event-based macros are macros that are triggered when a cell value is changed as an example. The manual update-buttons are blue with an exclamation point .

2.7.5.1 Investments

INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	Depr.-%	1	1	1	1	12	12	12	12	12	(12/2026)
1 **Alpha Machine 37**		**-1 000 000**									**100 000**
Depreciation (declining balance)	25,00%		-20 833	-20 833	-20 833	-234 375	-175 781	-131 836	-98 877	-74 158	
Book value		1 000 000	979 167	958 333	937 500	703 125	527 344	395 508	296 631	222 473	0
2 **Production hall**		**-500 000**	**-500 000**	**-350 000**	**-350 000**						**400 000**
Depreciation (straight line)	4,00%	-1 667	-3 333	-4 500	-5 667	-68 000	-68 000	-68 000	-68 000	-68 000	
Book value		498 333	995 000	1 340 500	1 684 833	1 616 833	1 548 833	1 480 833	1 412 833	1 344 833	0
3 **Maintenance**							**-90 000**		**-45 000**		**22 500**
Depreciation (straight line)	25,00%						-22 500	-22 500	-33 750	-33 750	
Book value		0	0	0	0	0	67 500	45 000	56 250	22 500	0
4											**0**
Depreciation (straight line)											
Book value		0	0	0	0	0	0	0	0	0	0
Investments		**-1 500 000**	**-500 000**	**-350 000**	**-350 000**	**0**	**-90 000**	**0**	**-45 000**	**0**	
Realizations		0	0	0	0	0	0	0	0	0	1 589 806
Depreciation		-1 667	-24 167	-25 333	-26 500	-302 375	-266 281	-222 336	-200 627	-175 908	
Realization profit (+) / loss (-)		0	0	0	0	0	0	0	0	0	-1 067 306
Book value		1 498 333	1 974 167	2 298 833	2 622 333	2 319 958	2 143 677	1 921 341	1 765 714	1 589 806	0

A manual update-button on an investment row will update the depreciation for the investment.

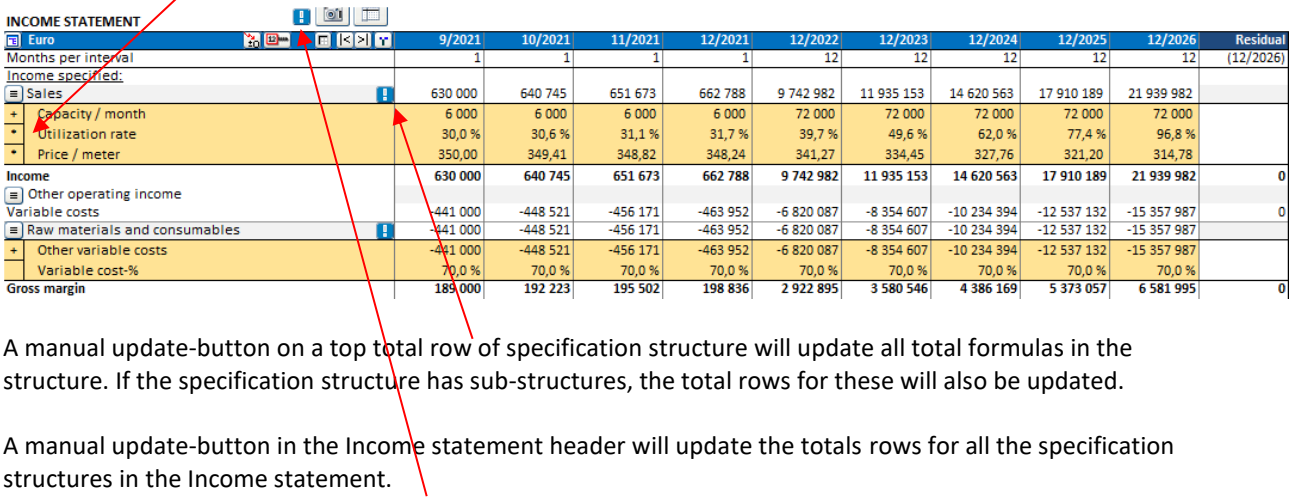
A manual update-button in the investment table header will update the depreciation for all the investments in the investment table.

In an acquisition calculation file buttons are also added for updating goodwill depreciation.

Goodwill calculation	Method	12/2018	12/2019	12/2020	12/2021	1/2022	12/2022	12/2023	12/2024	12/2025
Price	IFRS 3					9 000	0	0	0	0
Share, %						100,00				
Share capital						56	56	56	56	56
Share issue premium						0	0	0	0	0
Other restricted equity						0	0	0	0	0
Retained earnings						4 387	5 038	5 038	5 830	6 651
Profit (loss) for the period						651	0	792	821	852
Depreciation difference						183	183	183	183	183
Overvalue before tax liability						3 774	0	0	0	0
Deferred tax liability						1 468	0	0	0	0
Overvalue						5 242	0	0	0	0
Allocated overvalue before tax						3 500	0	0	0	0
Amount allocated on	Buildings and structures					1 000				
Depreciation	Straight line 20,0 %						-200	-200	-200	-200
Balance						1 000	800	600	400	200
Amount allocated on	Immaterial rights					500				
Depreciation	Straight line 2,5 %						-13	-13	-13	-13
Balance						500	488	475	463	450
Amount allocated on	Capitalized development cost					2 000				
Depreciation	Declining bal. 20,0 %						-400	-320	-256	-205
Balance						2 000	1 600	1 280	1 024	819
Allocated deferred tax liability						1 361	0	0	0	0

2.7.5.2 Income statement

Changing the operator for a specification row does not automatically update the total row formula in an xlsx-file.



INCOME STATEMENT

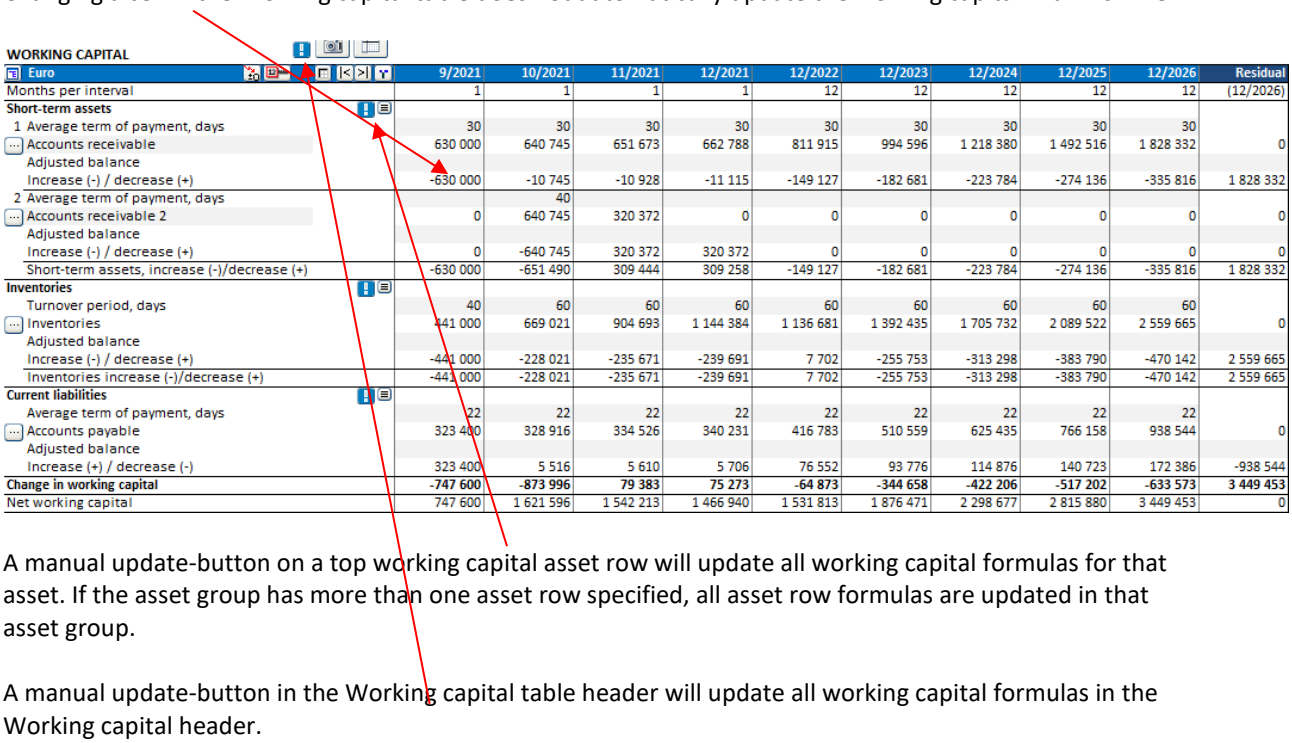
Euro	9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	1	1	1	1	12	12	12	12	12	(12/2026)
Income specified:										
Sales	630 000	640 745	651 673	662 788	9 742 982	11 935 153	14 620 563	17 910 189	21 939 982	
+ Capacity / month	6 000	6 000	6 000	6 000	72 000	72 000	72 000	72 000	72 000	
• Utilization rate	30,0 %	30,6 %	31,1 %	31,7 %	39,7 %	49,6 %	62,0 %	77,4 %	96,8 %	
• Price / meter	350,00	349,41	348,82	348,24	341,27	334,45	327,76	321,20	314,78	
Income	**630 000**	**640 745**	**651 673**	**662 788**	**9 742 982**	**11 935 153**	**14 620 563**	**17 910 189**	**21 939 982**	**0**
Other operating income										
Variable costs	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	0
Raw materials and consumables	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	
+ Other variable costs	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	
Variable cost-%	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	
Gross margin	**189 000**	**192 223**	**195 502**	**198 836**	**2 922 895**	**3 580 546**	**4 386 169**	**5 373 057**	**6 581 995**	**0**

A manual update-button on a top total row of specification structure will update all total formulas in the structure. If the specification structure has sub-structures, the total rows for these will also be updated.

A manual update-button in the Income statement header will update the totals rows for all the specification structures in the Income statement.

2.7.5.3 Working capital

Changing a cell in the Working capital table does not automatically update the working capital in an xlsx-file.



WORKING CAPITAL

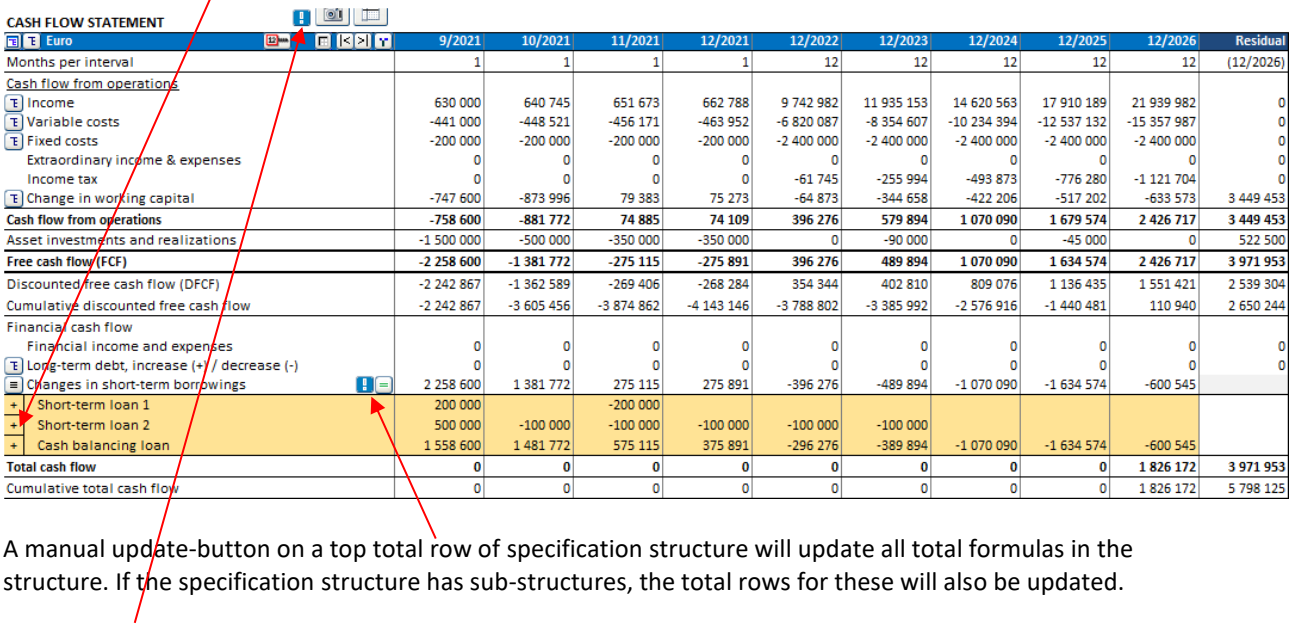
Euro	9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	1	1	1	1	12	12	12	12	12	(12/2026)
Short-term assets										
1 Average term of payment, days	30	30	30	30	30	30	30	30	30	
Accounts receivable	630 000	640 745	651 673	662 788	811 915	994 596	1 218 380	1 492 516	1 828 332	0
Adjusted balance										
Increase (-) / decrease (+)	-630 000	-10 745	-10 928	-11 115	-149 127	-182 681	-223 784	-274 136	-335 816	1 828 332
2 Average term of payment, days		40								
Accounts receivable 2	0	640 745	320 372	0	0	0	0	0	0	0
Adjusted balance										
Increase (-) / decrease (+)	0	-640 745	320 372	320 372	0	0	0	0	0	0
Short-term assets, increase (-)/decrease (+)	-630 000	-651 490	309 444	309 258	-149 127	-182 681	-223 784	-274 136	-335 816	1 828 332
Inventories										
Turnover period, days	40	60	60	60	60	60	60	60	60	
Inventories	441 000	669 021	904 693	1 144 384	1 136 681	1 392 435	1 705 732	2 089 522	2 559 665	0
Adjusted balance										
Increase (-) / decrease (+)	-441 000	-228 021	-235 671	-239 691	7 702	-255 753	-313 298	-383 790	-470 142	2 559 665
Inventories increase (-)/decrease (+)	-441 000	-228 021	-235 671	-239 691	7 702	-255 753	-313 298	-383 790	-470 142	2 559 665
Current liabilities										
Average term of payment, days	22	22	22	22	22	22	22	22	22	
Accounts payable	323 400	328 916	334 526	340 231	416 783	510 559	625 435	766 158	938 544	0
Adjusted balance										
Increase (+) / decrease (-)	323 400	5 516	5 610	5 706	76 552	93 776	114 876	140 723	172 386	-938 544
Change in working capital	**-747 600**	**-873 996**	**79 383**	**75 273**	**-64 873**	**-344 658**	**-422 206**	**-517 202**	**-633 573**	**3 449 453**
Net working capital	747 600	1 621 596	1 542 213	1 466 940	1 531 813	1 876 471	2 298 677	2 815 880	3 449 453	0

A manual update-button on a top working capital asset row will update all working capital formulas for that asset. If the asset group has more than one asset row specified, all asset row formulas are updated in that asset group.

A manual update-button in the Working capital table header will update all working capital formulas in the Working capital header.

2.7.5.4 Cash flow

Changing the operator for a specification row does not automatically update the total row formula in an xlsx-file.



CASH FLOW STATEMENT

Euro	9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	1	1	1	1	12	12	12	12	12	(12/2026)
Cash flow from operations										
Income	630 000	640 745	651 673	662 788	9 742 982	11 935 153	14 620 563	17 910 189	21 939 982	0
Variable costs	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	0
Fixed costs	-200 000	-200 000	-200 000	-200 000	-2 400 000	-2 400 000	-2 400 000	-2 400 000	-2 400 000	0
Extraordinary income & expenses	0	0	0	0	0	0	0	0	0	0
Income tax	0	0	0	0	-61 745	-255 994	-493 873	-776 280	-1 121 704	0
Change in working capital	-747 600	-873 996	79 383	75 273	-64 873	-344 658	-422 206	-517 202	-633 573	3 449 453
Cash flow from operations	**-758 600**	**-881 772**	**74 885**	**74 109**	**396 276**	**579 894**	**1 070 090**	**1 679 574**	**2 426 717**	**3 449 453**
Asset investments and realizations	-1 500 000	-500 000	-350 000	-350 000	0	-90 000	0	-45 000	0	522 500
Free cash flow (FCF)	**-2 258 600**	**-1 381 772**	**-275 115**	**-275 891**	**396 276**	**489 894**	**1 070 090**	**1 634 574**	**2 426 717**	**3 971 953**
Discounted free cash flow (DFCF)	-2 242 867	-1 362 589	-269 406	-268 284	354 344	402 810	809 076	1 136 435	1 551 421	2 539 304
Cumulative discounted free cash flow	-2 242 867	-3 605 456	-3 874 862	-4 143 146	-3 788 802	-3 385 992	-2 576 916	-1 440 481	110 940	2 650 244
Financial cash flow										
Financial income and expenses	0	0	0	0	0	0	0	0	0	0
Long-term debt, increase (+) / decrease (-)	0	0	0	0	0	0	0	0	0	0
Changes in short-term borrowings	2 258 600	1 381 772	275 115	275 891	-396 276	-489 894	-1 070 090	-1 634 574	-600 545	
+ Short-term loan 1	200 000		-200 000							
+ Short-term loan 2	500 000	-100 000	-100 000	-100 000	-100 000	-100 000				
+ Cash balancing loan	1 558 600	1 481 772	575 115	375 891	-296 276	-389 894	-1 070 090	-1 634 574	-600 545	
Total cash flow	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1 826 172**	**3 971 953**
Cumulative total cash flow	0	0	0	0	0	0	0	0	1 826 172	5 798 125

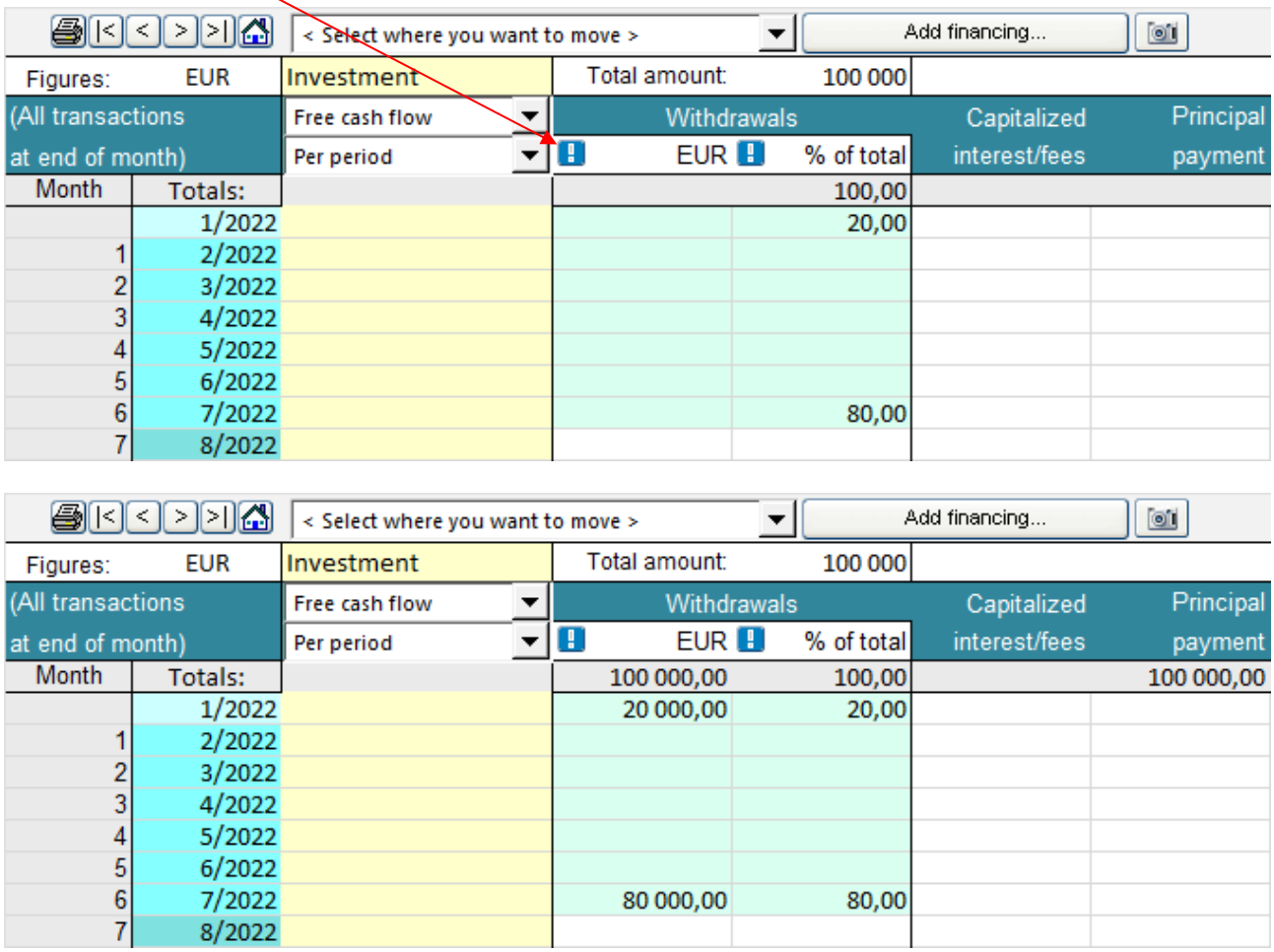
A manual update-button on a top total row of specification structure will update all total formulas in the structure. If the specification structure has sub-structures, the total rows for these will also be updated.

A manual update-button in the Cash flow header will update the totals rows for all the specification structures in the Cash flow table.

2.7.6 New buttons in a Financing xlsx-file

Two manual update buttons are added to the Spec sheet of each financing in the Financing file.

When you enter percentages for withdrawals you can update the withdrawal amounts by pressing the button in the first column of the Withdrawals columns.



< Select where you want to move >

Add financing...

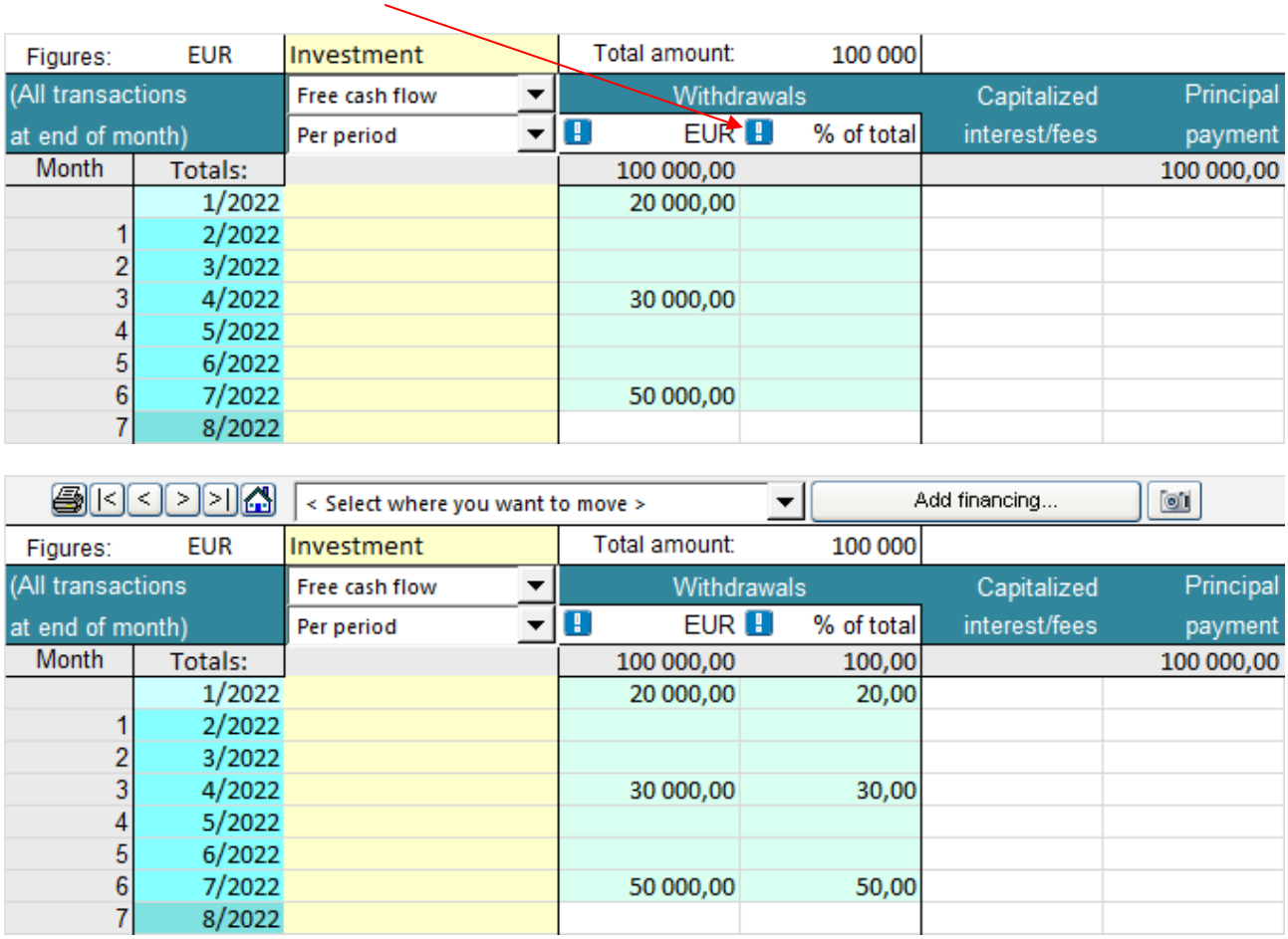
Figures:	EUR	Investment	Total amount:	100 000		
(All transactions at end of month)		Free cash flow	Withdrawals		Capitalized interest/fees	Principal payment
		Per period	EUR	% of total		
Month	Totals:			100,00		
	1/2022			20,00		
1	2/2022					
2	3/2022					
3	4/2022					
4	5/2022					
5	6/2022					
6	7/2022			80,00		
7	8/2022					

< Select where you want to move >

Add financing...

Figures:	EUR	Investment	Total amount:	100 000		
(All transactions at end of month)		Free cash flow	Withdrawals		Capitalized interest/fees	Principal payment
		Per period	EUR	% of total		
Month	Totals:		100 000,00	100,00		100 000,00
	1/2022		20 000,00	20,00		
1	2/2022					
2	3/2022					
3	4/2022					
4	5/2022					
5	6/2022					
6	7/2022		80 000,00	80,00		
7	8/2022					

When you enter withdrawals you can update the withdrawal percentages by pressing the button in the second column of the Withdrawals columns.



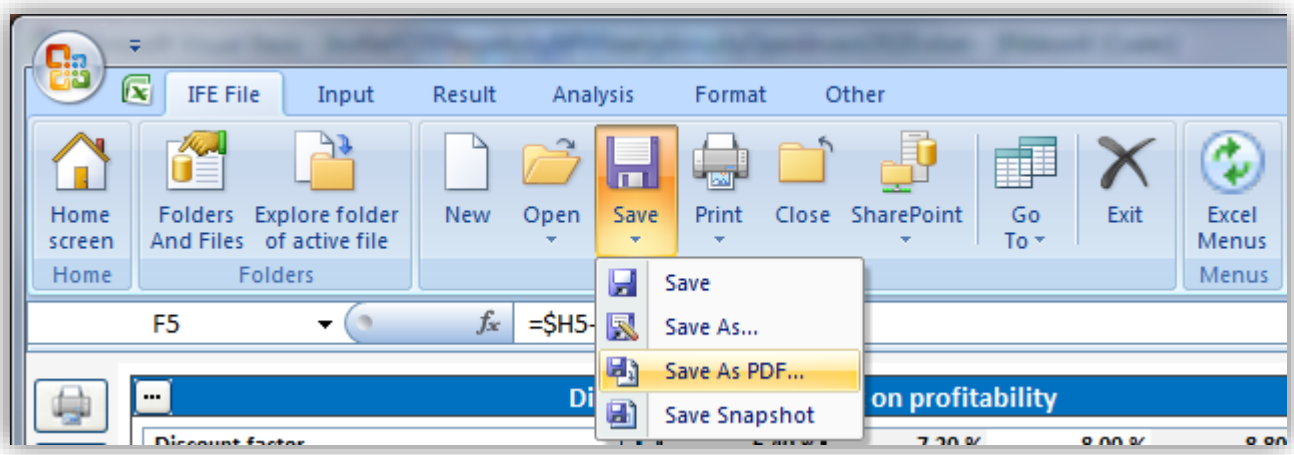
Figures:	EUR	Investment	Total amount:	100 000			
(All transactions at end of month)		Free cash flow / Per period	Withdrawals			Capitalized interest/fees	Principal payment
Month	Totals:		EUR	% of total			
	1/2022		20 000,00				
1	2/2022						
2	3/2022						
3	4/2022		30 000,00				
4	5/2022						
5	6/2022						
6	7/2022		50 000,00				
7	8/2022						

< Select where you want to move > | Add financing...

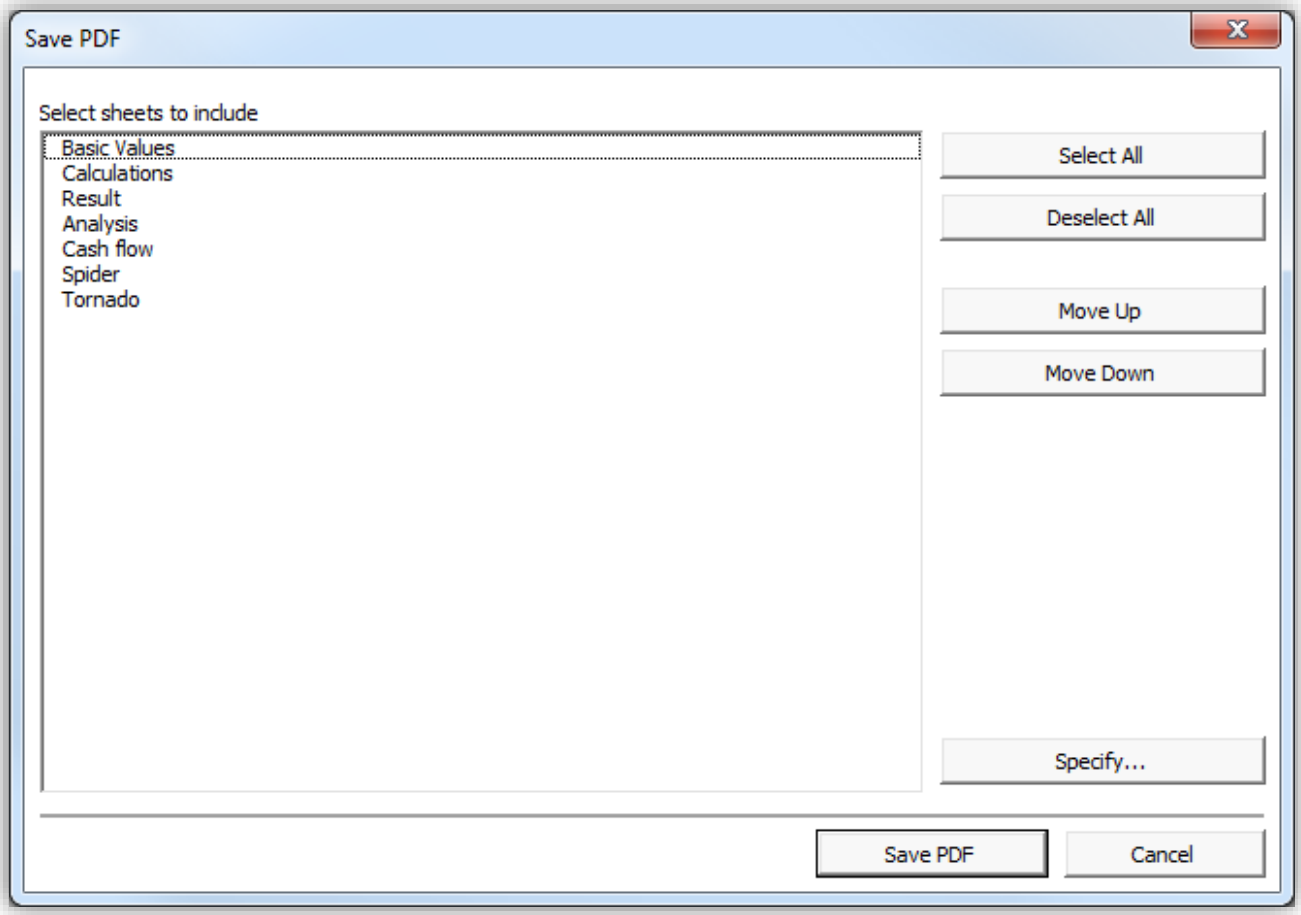
Figures:	EUR	Investment	Total amount:	100 000			
(All transactions at end of month)		Free cash flow / Per period	Withdrawals			Capitalized interest/fees	Principal payment
Month	Totals:		EUR	% of total			
	1/2022		20 000,00	20,00			
1	2/2022						
2	3/2022						
3	4/2022		30 000,00	30,00			
4	5/2022						
5	6/2022						
6	7/2022		50 000,00	50,00			
7	8/2022						

2.8 Save As PDF

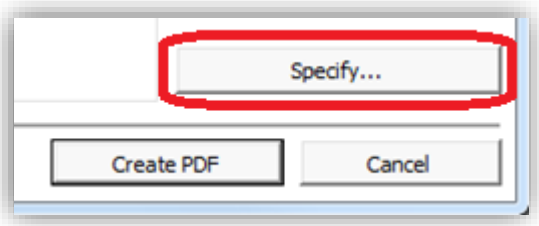
PDF files can be easily created from an active Invest for Excel file. Choose Save As PDF... from the “Save” dropdown menu in the “IFE File” tab.



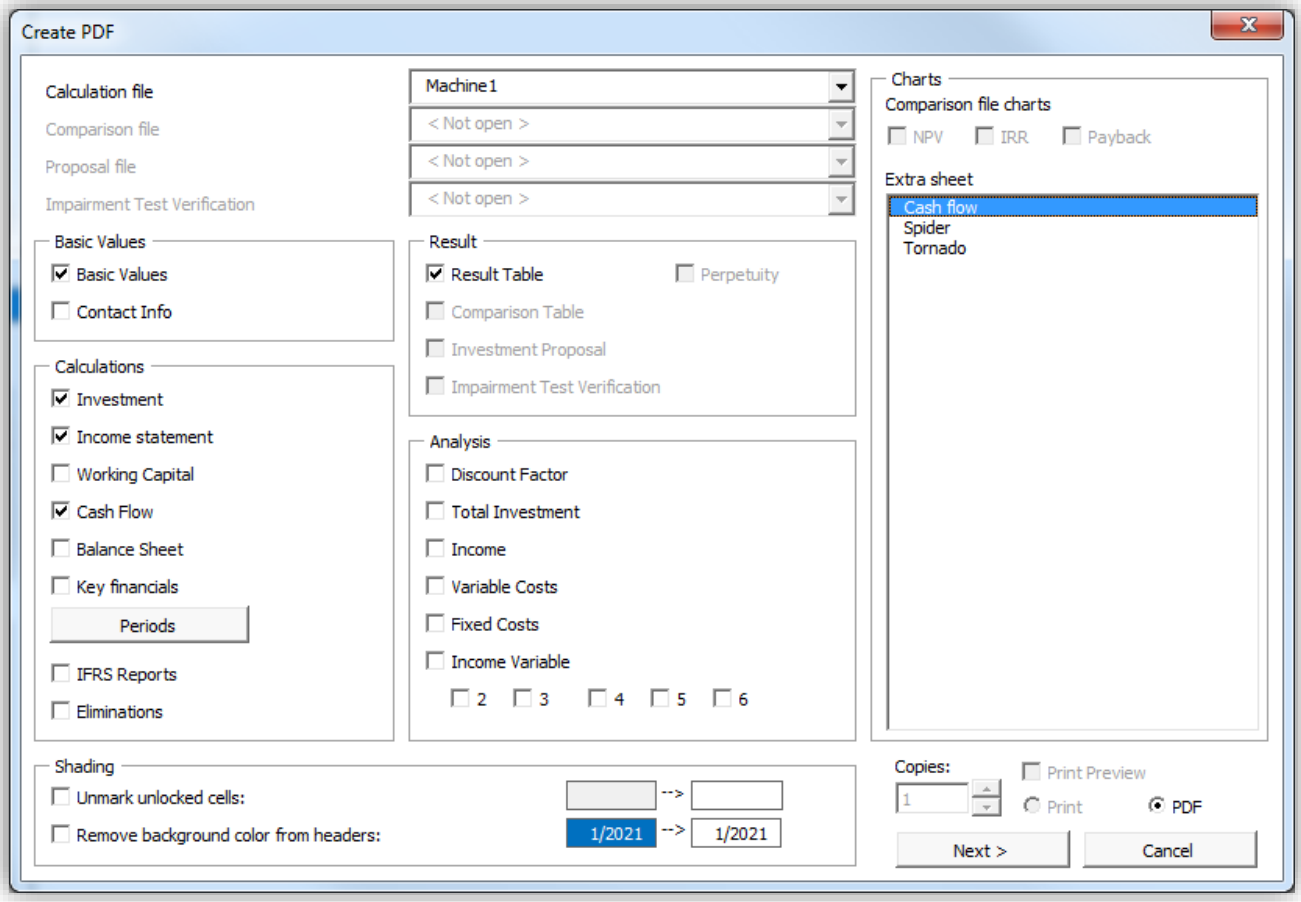
Choose what sheets to include in the PDF file. You can also change the order of sheets for the PDF file using the “Move Up” and “Move Down” buttons.



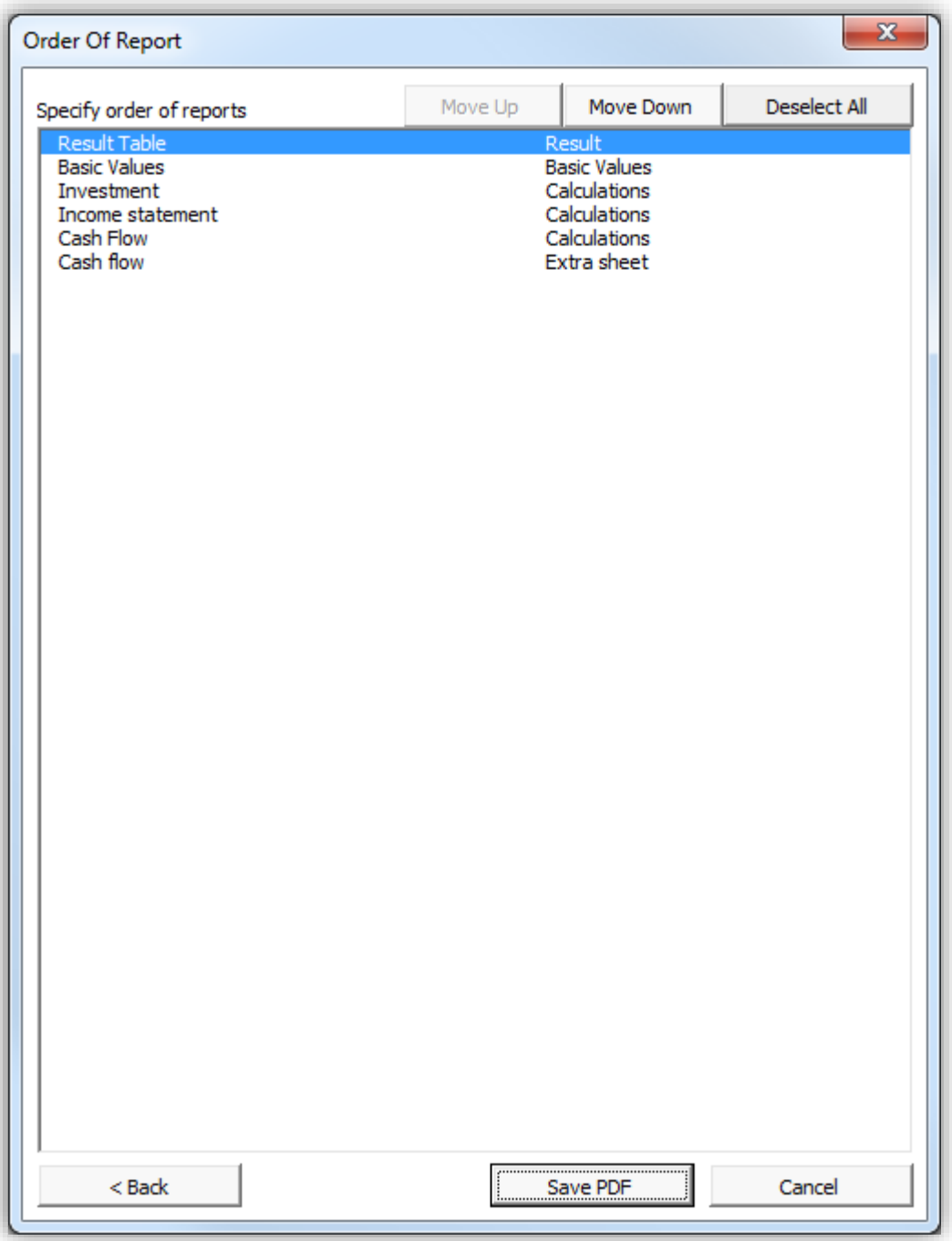
If the file is a Calculation file, you can specify which tables and reports to include. Press the “Specify...” button.



A window is shown for selecting reports to include. The same window is used for printing.



After selecting reports to include, you can specify the order you want them to be in the PDF file. Note that reports can't be moved within sheets. You can go back to change the included reports by pressing "< Back".



Press "Save PDF" to create the PDF file.

2.9 Save Snapshot

”Save Snapshot” creates a light (file size about ¼ of original size) copy of active calculation file. The Invest for Excel formulas are deleted, the cells contain only values, and all cells are locked. Buttons and program macros are also left out. Date and time (“YYYY-MM-DD_HH-MM-SS”) is added to file name.

NO CHANGES ARE MADE TO THE ORIGINAL CALCULATION FILE.

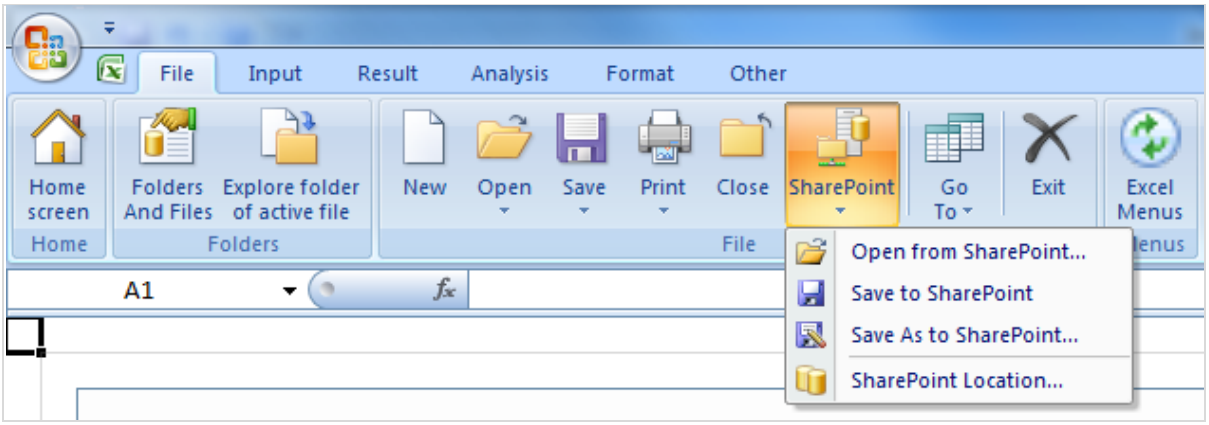
Example uses:

- Thanks to the fact that numbers can’t be changed in a Snapshot file, it can be for documentation and reporting issues (for example: as addendum for investment proposals, for post audit purposes, for banks within finance talks).
- The Snapshot-file does not include program buttons or program macros, so the file can be given to a person who does not have Invest for Excel.
- The Snapshot-file is suited for sending via e-mail, thanks to the small file size.

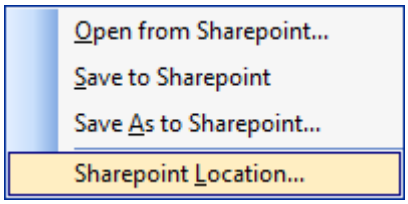
NOTE! Hidden rows can’t be unhidden in a Snapshot file.

2.10 SharePoint file menu

A SharePoint file menu has been added for quick open from and save to a SharePoint location. (Enterprise -edition is required)



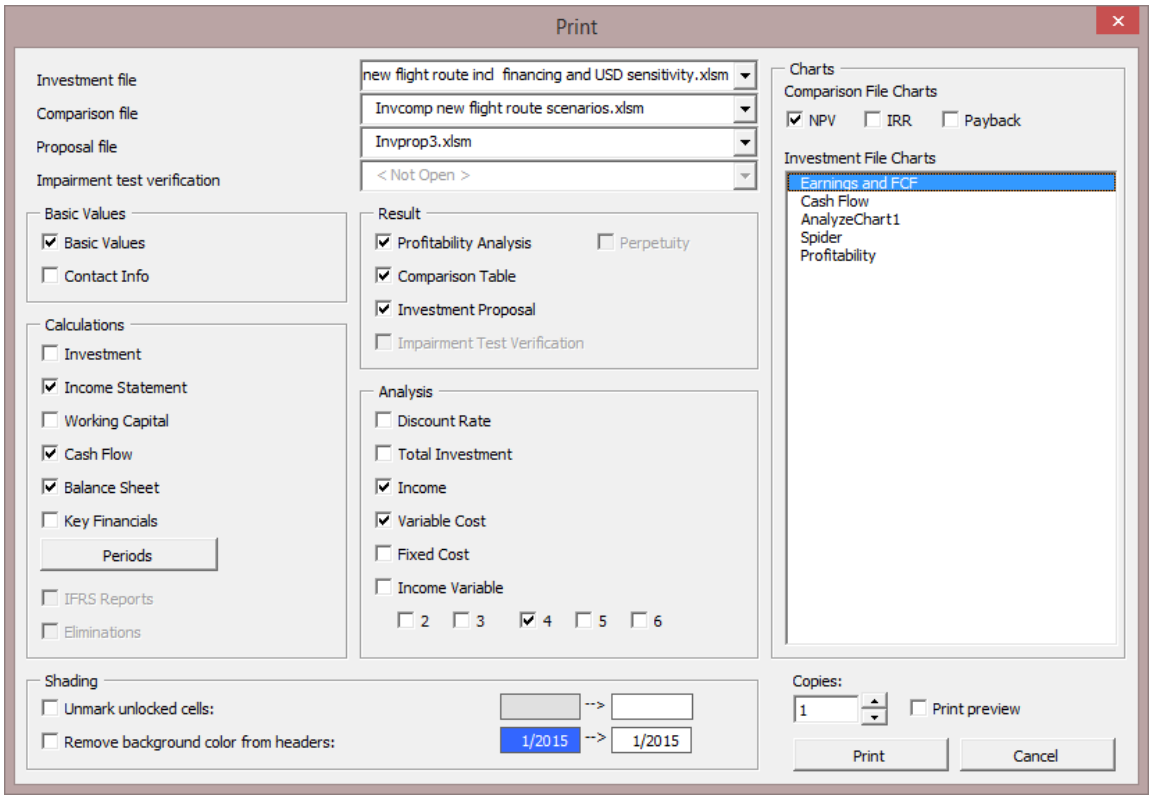
To set default SharePoint location, select SharePoint location in the Invest for Excel SharePoint menu.



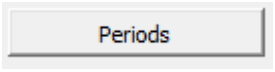
Enter SharePoint location and press OK.

2.11 Print

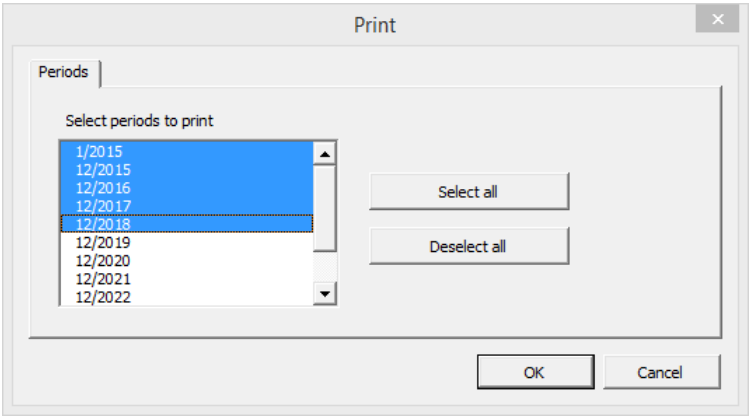
Select the reports to be printed:



Select what you want to print and from which files, and then click the **Print** button. You can also select the number of copies to print. **Preview** is a good way to ensure that you get what you intend to print. In **Preview,** you can use all Excel's printing options to make the hard copy look the way you want it to look. Please note that the charts you have created are listed to the right of the dialogue box, and they can be selected to the print queue.



You may select the columns to be printed (e.g. only the 1st five years). When you press the Periods… -button, the following dialog box appears:

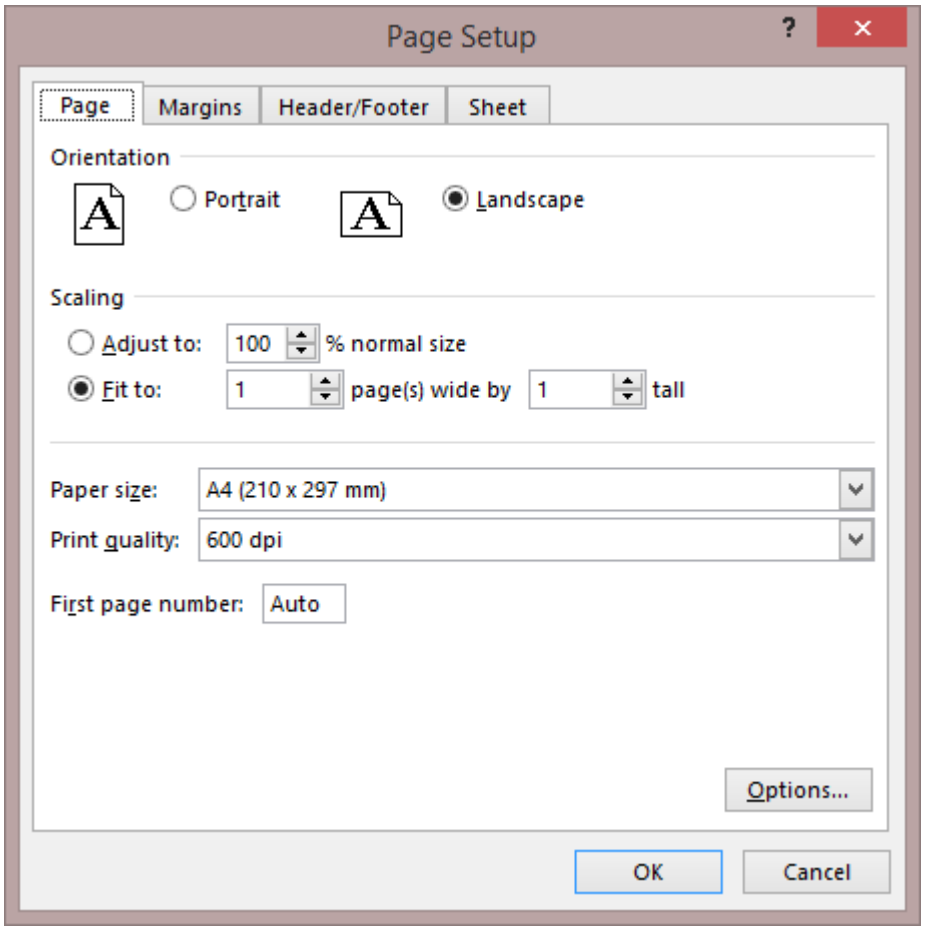


The periods marked blue will be printed.

Each screen of the program also has a **Print** button for printing the active screen.

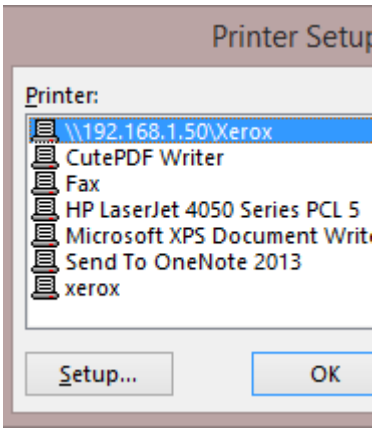
2.12 Page Setup

An Excel function for changing the page setup for printing. Refer to Excel's Help function for further information.



2.13 Printer

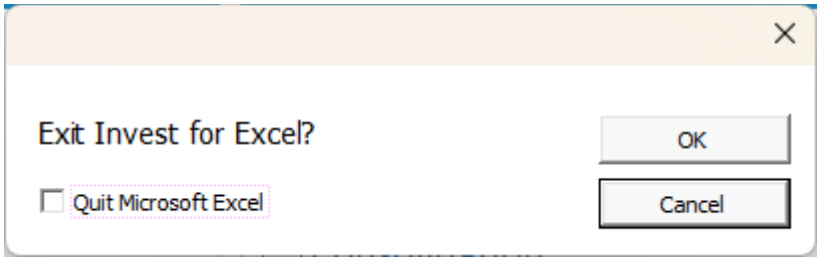
To select the printer, go to Invest for Excel's own **File** menu and click on **Printer**.



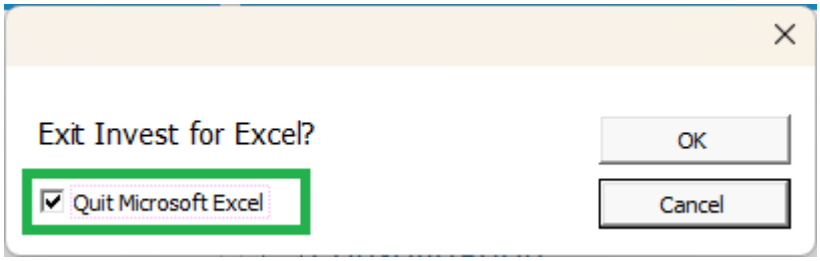
2.14 Exit

To exit Invest for Excel, go to the **File** menu and click **Exit**.

When you exit Invest for Excel, you can choose to stay in Microsoft Excel or close both Invest for Excel and Microsoft Excel.



Check **Quit Microsoft Excel** and press OK to close both Invest for Excel and Microsoft Excel.

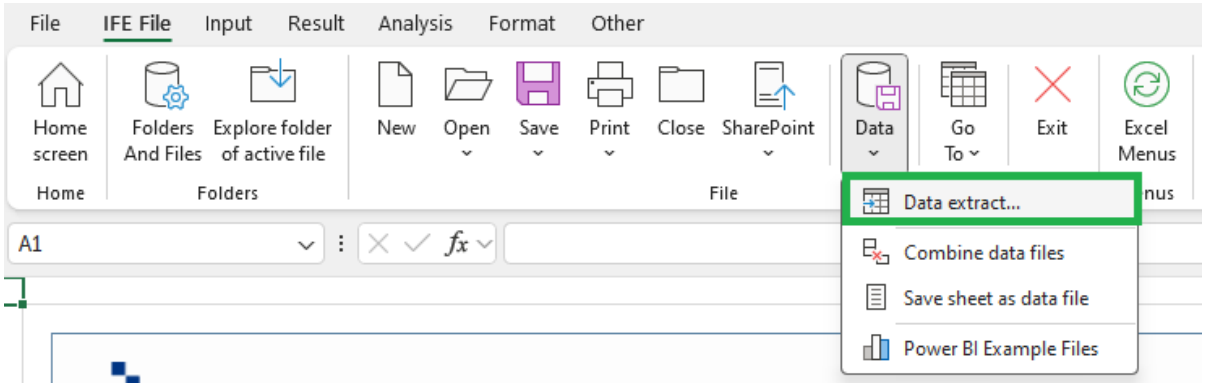


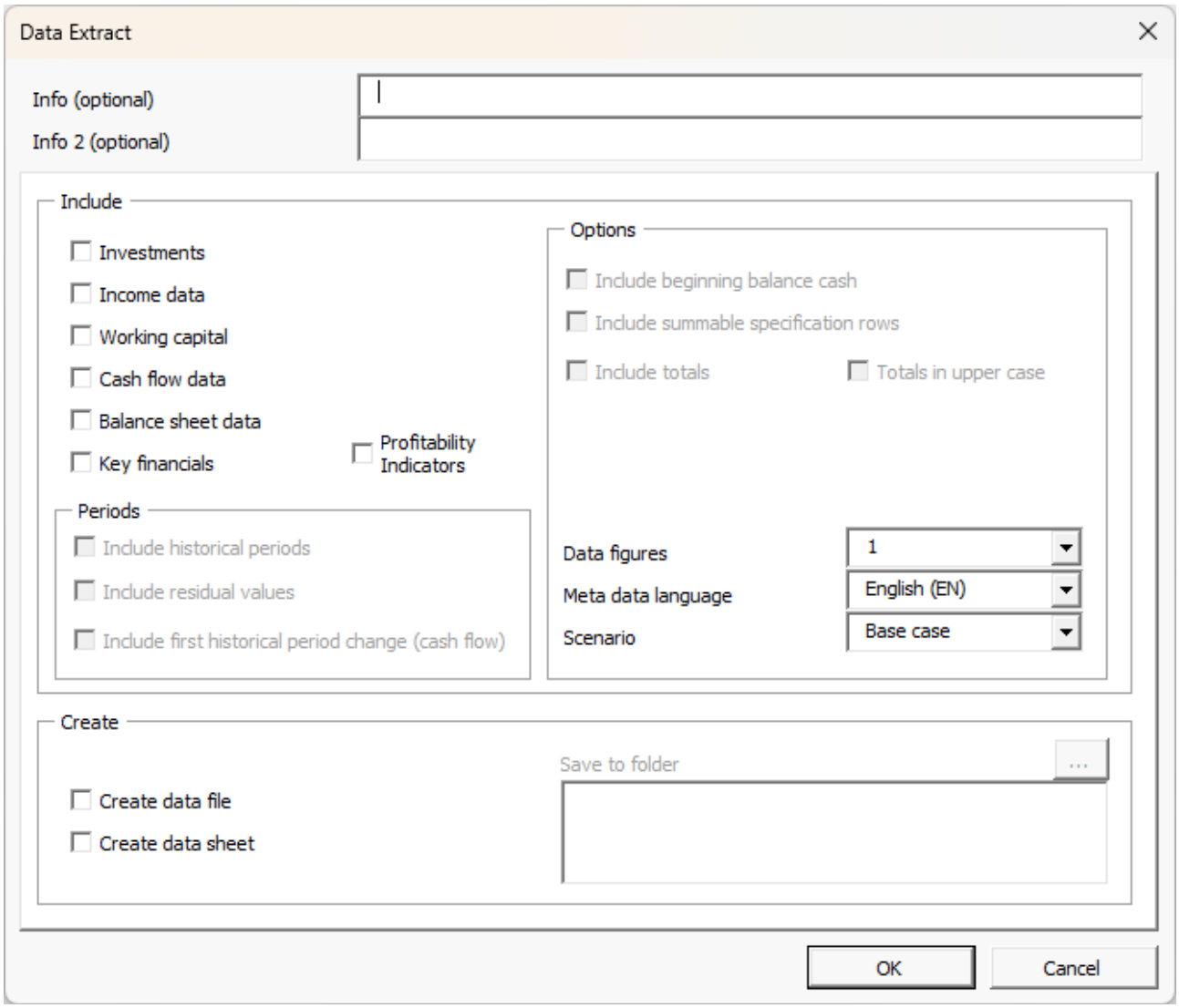
The program asks you whether or not to save the changes made to any open Excel workbooks since they were last saved.

2.15 Data

2.15.1 Data extract

Data can be extracted from a calculation file by using the “Data extract” function in the IFE File – Data menu.





Data extract is useful when you want to use Invest for Excel data in a database type of application, for example Microsoft Power BI Desktop.

Power BI has been used in this document as examples of how the extracted data can be used. Data can of course also be used in other applications.

Data extract can also be used to analyse calculation data in Excel, for example in using Pivot tables.

You can choose to include investment data, income data, working capital data, cash flow data, balance sheet data, key financials table data from Calculations sheet and profitability indicators from Result sheet. Each type of data is extracted to a separate sheet/data file.

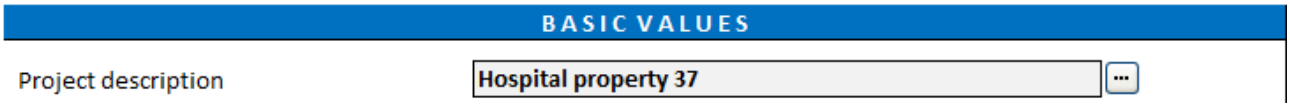
2.15.1.1 Info fields

Two optional info fields are available for including calculation project-specific information. You can for example enter an identifier used in the system where you use the data.

All project-specific fields:

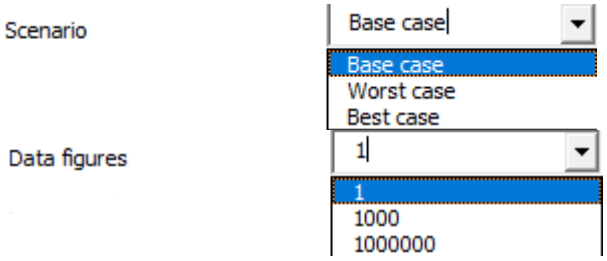
Project	Info	Info 2	Scenario	Figures	Currency
Hospital property 37	AB12300755		Base case	1	€
Hospital property 37	AB12300755		Base case	1	€
Hospital property 37	AB12300755		Base case	1	€

Project is taken from the Basic values table:



2.15.1.2 Other calculation project-specific fields

Calculation-specific fields are Scenario, Figures and Currency. Scenario and figures (monetary units) can be changed in the Data Extract dialog box, but currency is the currency taken from the Basic values sheet. Note that you can also enter your own Scenario description.



2.15.1.3 Period fields

Period fields include Date, Year, Month and Financial year. These fields correspond to the periods in Calculation file columns.

Date	Year	Month	Financial year
1.1.2021	2021	1	2021
31.12.2040	2040	12	2040
31.12.2021	2021	12	2021

2.15.1.4 Investments

Investments includes data from the Investments and realizations table.

Table and Table sort fields can be used to filter investments from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Investments	100	Investment	100001	C0500	Building	3611001
Investments	100	Investment	100001	C0500	Building	3611001
Investments	100	Depreciation	270000	C0500	Building	3611001

Row type is used to group rows of different kind. Row type sort can be used to sort row types (when possible). Row types for investments can include Investment, Depreciation, Book value, Imputed depreciation and Imputed book value.

If totals are included, the following row types can be included: Total Investments, Total Realizations, Total Depreciation, Total Realization profit/loss, Total Book value, Total Imputed depreciation and Total Imputed book value.

Row code is an internal identifier used by Invest for Excel. It is included for reference.
Row name is the row description and Row sort can be used to sort rows (when possible).

Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Buildings and structures	8000	Proposed investment	10000	Value	-300 000,00
Buildings and structures	8000	Proposed investment	10000	Residual Value	60 000,00
Buildings and structures	8000	Proposed investment	10000	Value	-12 000,00

Row name 2 is asset type and Row sort 2 can be used to sort Row name 2 (when possible).

Row name 3 is Proposed investment or Reinvestment and Row sort 3 can be used to sort Row name 3 (when possible).

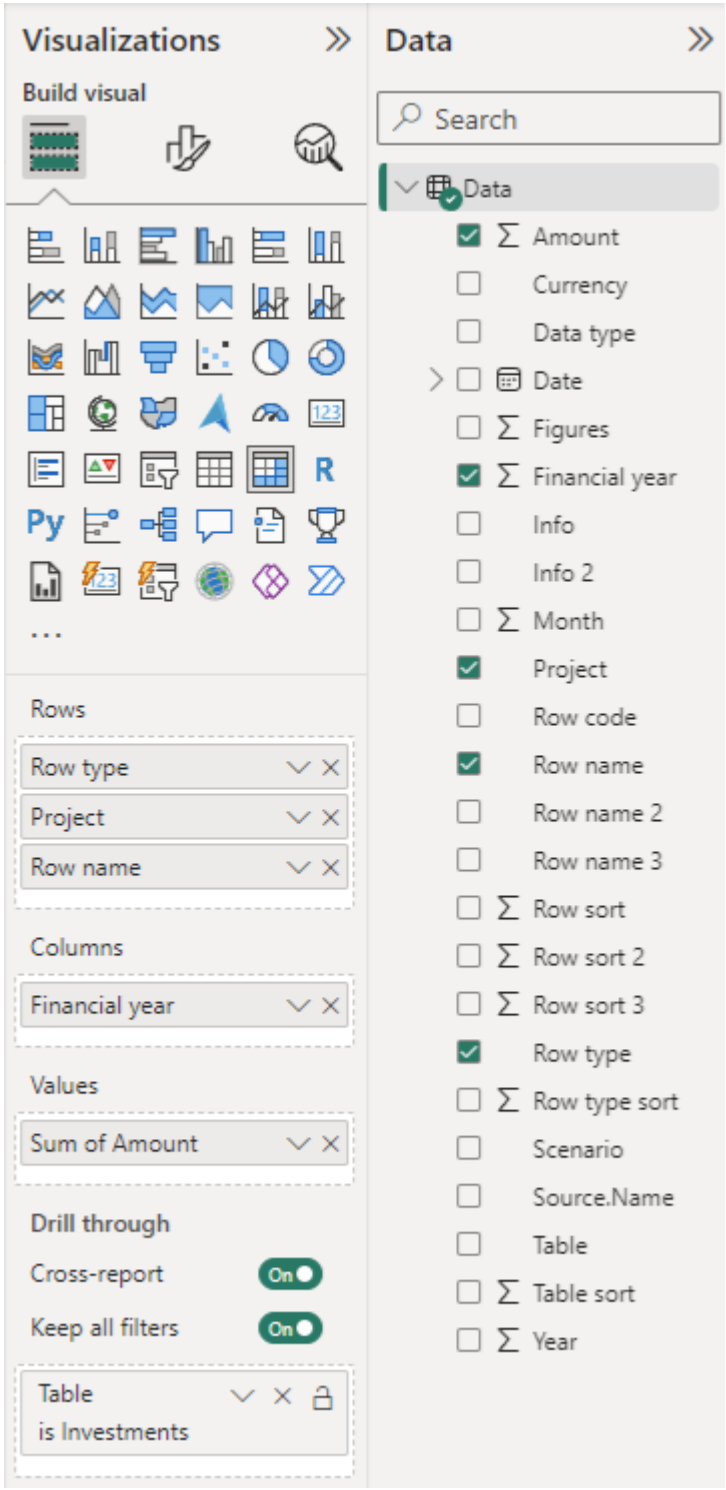
Data type holds info on what kind of data the row holds. Possible data types are Value, Residual Value, Total and Residual Value Total.

The Amount field holds the amount for the row and period. Zero values are not included.

Example of a matrix report in Power BI (Investment data from four example files):

Investments and realizations	2021	2022	2023	2024	2025	2026
Investment						
Alpha Machine 37						
Alpha Machine 37	-1 000 000					100 000
Production hall	-1 700 000					400 000
Maintenance			-90 000		-45 000	22 500
Hospital property 37						
Building	-300 000					
Land area	-100 000					
Equipment	-70 000	-20 000	-20 000	-20 000	-20 000	-20 000
Electricity and water	-15 000	-15 000	-15 000	-15 000		
Heating and air conditioning		-20 000	-20 000	-20 000		
Major repairs		-222 000	-111 000	-55 500		
New flight route	**-4 950 000**		**600 000**			
Wind power plant 1 MW	**-3 610 000**					
Depreciation						
Alpha Machine 37	**-77 667**	**-302 375**	**-266 281**	**-222 336**	**-200 627**	**-175 908**
Hospital property 37	**-28 143**	**-46 023**	**-59 463**	**-70 683**	**-74 683**	**-64 683**
New flight route	**-518 750**	**-518 750**	**-495 000**	**-495 000**	**-495 000**	**-495 000**
Wind power plant 1 MW		**-240 667**	**-240 667**	**-240 667**	**-240 667**	**-240 667**
Book value	**11 316 378**	**10 485 563**	**9 531 715**	**8 613 530**	**7 667 553**	**5 121 490**
TOTAL INVESTMENTS	**-11 745 000**	**-277 000**	**-256 000**	**-110 500**	**-65 000**	**-20 000**
TOTAL REALIZATIONS			**148 438**			**1 589 806**
TOTAL DEPRECIATION	**-624 560**	**-1 107 815**	**-1 061 411**	**-1 028 685**	**-1 010 976**	**-976 257**
TOTAL REALIZATION PROFIT/LOSS			**451 563**			**-1 067 306**
TOTAL BOOK VALUE	**11 316 378**	**10 485 563**	**9 531 715**	**8 613 530**	**7 667 553**	**5 121 490**

The matrix visualization settings of the example:



2.15.1.5 Income data

Income data include data in the Income statement.

Table and Table sort fields can be used to filter Income from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Income	200	Income	200000	C9000S01	Income from rents, ground floor	210000
Income	200	Income	200000	C9000S01	Income from rents, ground floor	210000
Income	200	Income	200000	C9000S01	Income from rents, ground floor	210000

Row type is used to group rows of different kind. Row type sort can be used to sort row types (when possible). Row types for income can include Income, Other income, Variable costs, Fixed costs etc.

If totals are included, the following row types can be included: Income total, Gross margin, EBITDA; Operating income before depreciation, EBIT; Operating income, Net income for the period.

Row code is an internal identifier used by Invest for Excel. It is included for reference.

Row name is the row description and Row sort can be used to sort rows (when possible).

Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Archive		Archive		Value	70 247,52
Archive		Archive		Value	71 652,47
Archive		Archive		Value	73 085,52

Row name 2 is first level specification row text when available and when specification rows are included, otherwise Row name 2 is a duplicate of Row name. Row sort 2 is empty for Income data.

Row name 3 is second level specification row text when available and when specification rows are included, otherwise Row name 3 is a duplicate of Row name 2. Row sort 3 is empty for Income data.

Data type holds info on what kind of data the row holds. Possible data types are Value, Residual Value, Total and Residual Value Total.

The Amount field holds the amount for the row and period. Zero values are not included.

Example of a matrix report in Power BI (Income data from example file):

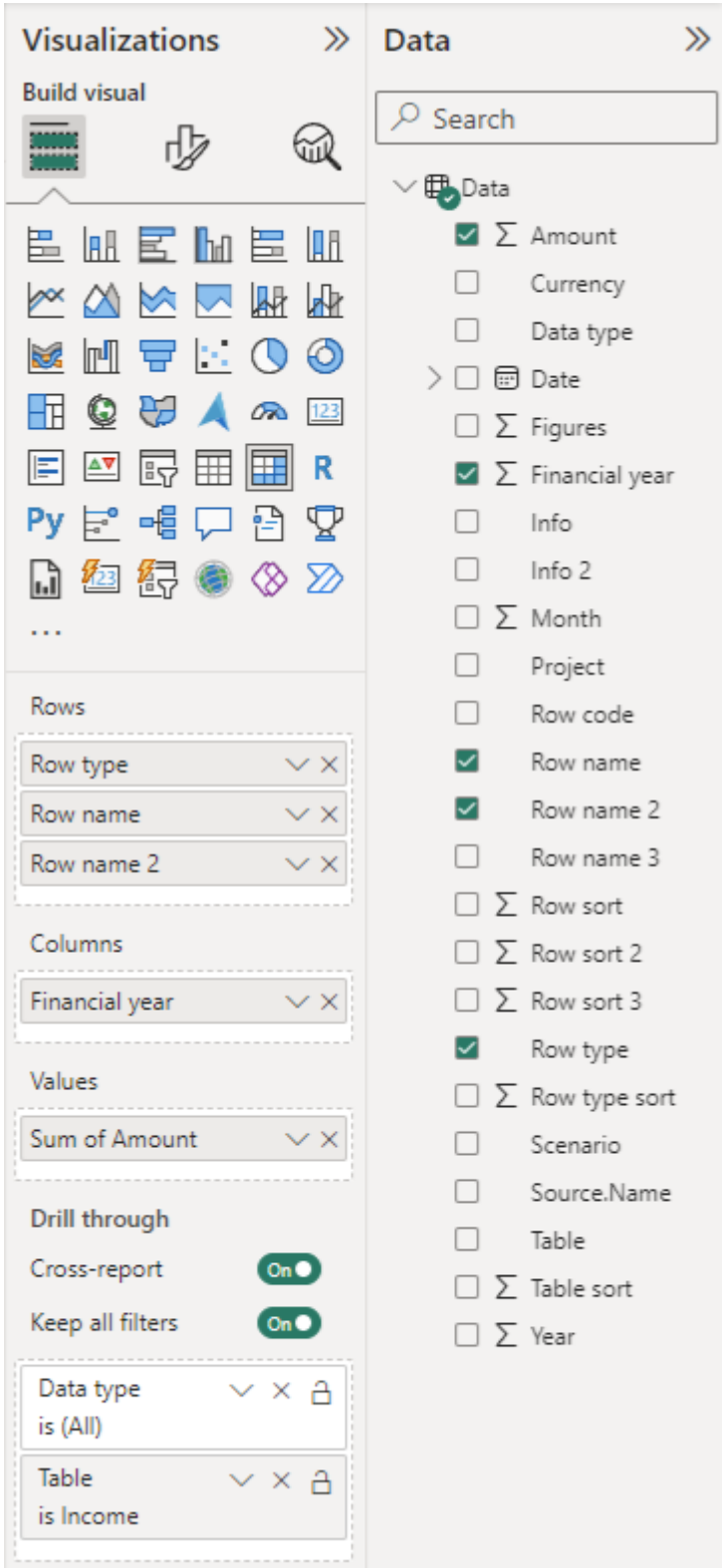
Project

Hospital property 37

€

Income statement	2021	2022	2023	2024	2025	2026
Income						
Income from rents, ground floor						
Archive	70 248	71 652	73 086	74 547	76 038	77 559
Kitchen	48 030	48 990	49 970	50 970	51 989	53 029
Surgery	70 584	71 996	73 436	74 904	76 402	77 930
Income from rents, first floor	**204 400**	**208 488**	**212 658**	**216 911**	**221 249**	**225 674**
Income from rents, second floor	**79 992**	**81 592**	**83 224**	**84 888**	**86 586**	**88 318**
Income from rents, third floor	**166 414**	**169 742**	**173 137**	**176 600**	**180 132**	**183 735**
INCOME TOTAL	**639 667**	**652 461**	**665 510**	**678 820**	**692 396**	**706 244**
Variable costs						
External charges						
Cleaning	-44 400	-45 288	-46 194	-47 118	-48 060	-49 021
Security services	-3 180	-3 244	-3 308	-3 375	-3 442	-3 511
Other variable costs	**-359 064**	**-340 765**	**-322 591**	**-329 042**	**-335 623**	**-342 336**
GROSS MARGIN	**233 023**	**263 164**	**293 417**	**299 285**	**305 271**	**311 376**
Fixed costs						
Staff costs						
Estate management; Accounting	-15 000	-15 300	-15 606	-15 918	-16 236	-16 561
Service men (2 persons)	-76 000	-77 520	-79 070	-80 652	-82 265	-83 910
Other fixed costs	**-53 500**	**-54 570**	**-55 661**	**-56 775**	**-57 910**	**-59 068**
EBITDA; OPERATING INCOME BEFORE DEPRECIATION	**88 523**	**115 774**	**143 079**	**145 941**	**148 860**	**151 837**
Depreciation	**-28 143**	**-46 023**	**-59 463**	**-70 683**	**-74 683**	**-64 683**
EBIT; OPERATING INCOME	**60 380**	**69 751**	**83 616**	**75 258**	**74 177**	**87 154**
Income tax	**-16 907**	**-19 530**	**-23 413**	**-21 072**	**-20 769**	**-24 403**
NET INCOME FOR THE PERIOD	**43 474**	**50 221**	**60 204**	**54 186**	**53 407**	**62 751**

The matrix visualization settings of the example:



2.15.1.6 Working capital

Working capital include data in the Working capital table.

Table and Table sort fields can be used to filter Working capital from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Working Capital	300	Short-term assets (change)	351000	C3031	Accounts receivable, Increase (-) / decrease (+)	3511000
Working Capital	300	Short-term assets (change)	351000	C3031	Accounts receivable, Increase (-) / decrease (+)	3511000
Working Capital	300	Short-term assets (change)	351000	C3031	Accounts receivable, Increase (-) / decrease (+)	3511000

Row type is used to group rows of different kind. Row type sort can be used to sort row types (when possible). Row types for working capital can include Short-term assets (change), Inventories (change) and Current liabilities (change).

If totals are included, Change in working capital (total) and Net working capital are included.
Row code is an internal identifier used by Invest for Excel. It is included for reference.
Row name is the row description and Row sort can be used to sort rows (when possible).

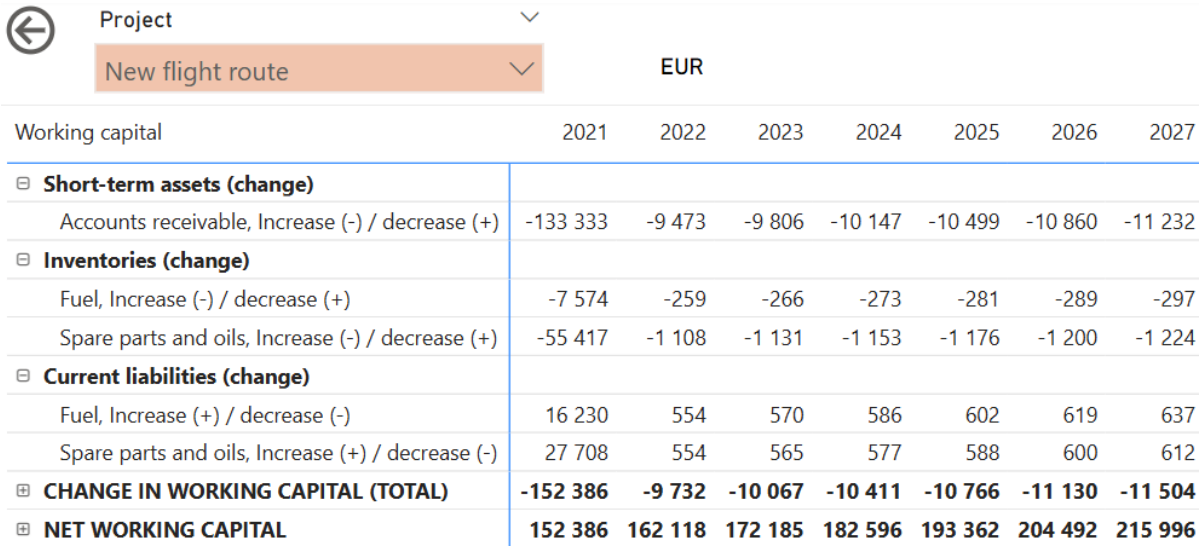
Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Accounts receivable, Increase (-) / decrease (+)		Accounts receivable, Increase (-) / decrease (+)		Value	-133 333,33
Accounts receivable, Increase (-) / decrease (+)		Accounts receivable, Increase (-) / decrease (+)		Value	-9 473,33
Accounts receivable, Increase (-) / decrease (+)		Accounts receivable, Increase (-) / decrease (+)		Value	-9 805,60

Row name 2 is a duplicate of Row name. Row sort 2 is not used.
Row name 3 is a duplicate of Row name 2. Row sort 3 is not used.

Data type holds info on what kind of data the row holds. Possible data types are Value, Residual Value, Total and Residual Value Total.

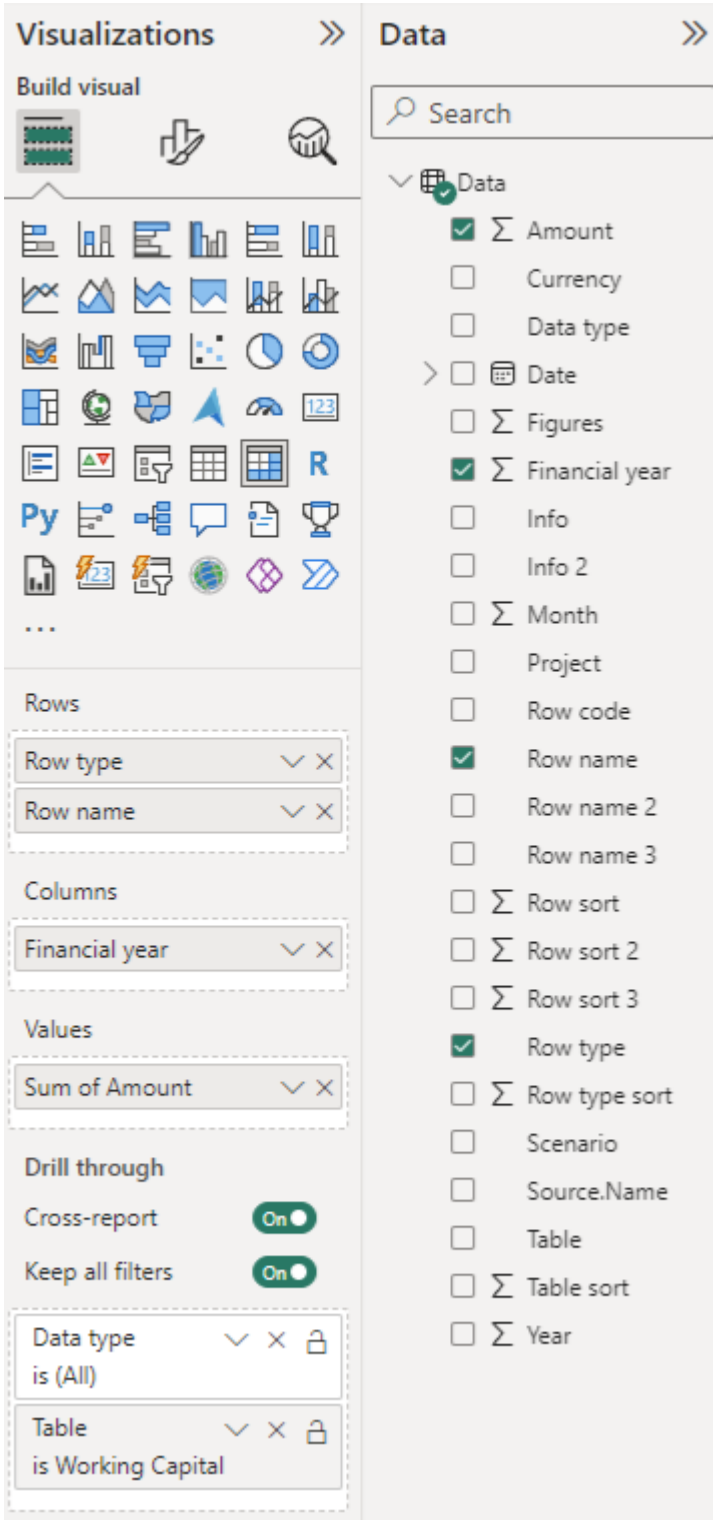
The Amount field holds the amount for the row and period. Zero values are not included.

Example of a matrix report in Power BI (Working capital from example file):



Working capital	2021	2022	2023	2024	2025	2026	2027
Short-term assets (change)							
Accounts receivable, Increase (-) / decrease (+)	-133 333	-9 473	-9 806	-10 147	-10 499	-10 860	-11 232
Inventories (change)							
Fuel, Increase (-) / decrease (+)	-7 574	-259	-266	-273	-281	-289	-297
Spare parts and oils, Increase (-) / decrease (+)	-55 417	-1 108	-1 131	-1 153	-1 176	-1 200	-1 224
Current liabilities (change)							
Fuel, Increase (+) / decrease (-)	16 230	554	570	586	602	619	637
Spare parts and oils, Increase (+) / decrease (-)	27 708	554	565	577	588	600	612
CHANGE IN WORKING CAPITAL (TOTAL)	**-152 386**	**-9 732**	**-10 067**	**-10 411**	**-10 766**	**-11 130**	**-11 504**
NET WORKING CAPITAL	**152 386**	**162 118**	**172 185**	**182 596**	**193 362**	**204 492**	**215 996**

The matrix visualization settings of the example:



2.15.1.7 Cash flow data

Cash flow data include data from the Cash flow table. For Income and Investment rows more detailed data is included when available.

Table and Table sort fields can be used to filter Cash flow from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Cash Flow	400	Income	200000	C9000	Passenger traffic	210000
Cash Flow	400	Income	200000	C9000	Passenger traffic	210000
Cash Flow	400	Income	200000	C9000	Passenger traffic	210000

Row type is used to group rows of different kind. Row type sort can be used to sort row types (when possible). Row types for cash flow can include Income, Variable costs, Fixed costs, Income tax, Change in working capital, Asset investments and realizations etc.

If totals are included, the following row types can be included: Cash flow from operations, Free cash flow (FCF), Discounted free cash flow (DFCF), Total cash flow and Cumulative total cash flow.

Row code is an internal identifier used by Invest for Excel. It is included for reference. Row name is the row description and Row sort can be used to sort rows (when possible).

Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Passenger traffic		Passenger traffic		Value	1 400 000,00
Passenger traffic		Passenger traffic		Value	1 513 680,00
Passenger traffic		Passenger traffic		Value	1 631 347,20

Row name 2 is first level specification row text when available and when specification rows are included, otherwise Row name 2 is a duplicate of Row name. Row sort 2 is not used.

Row name 3 is second level specification row text when available and when specification rows are included, otherwise Row name 3 is a duplicate of Row name 2. Row sort 3 is not used.

Data type holds info on what kind of data the row holds. Possible data types are Value, Residual Value, Total and Residual Value Total.

The Amount field holds the amount for the row and period. Zero values are not included.

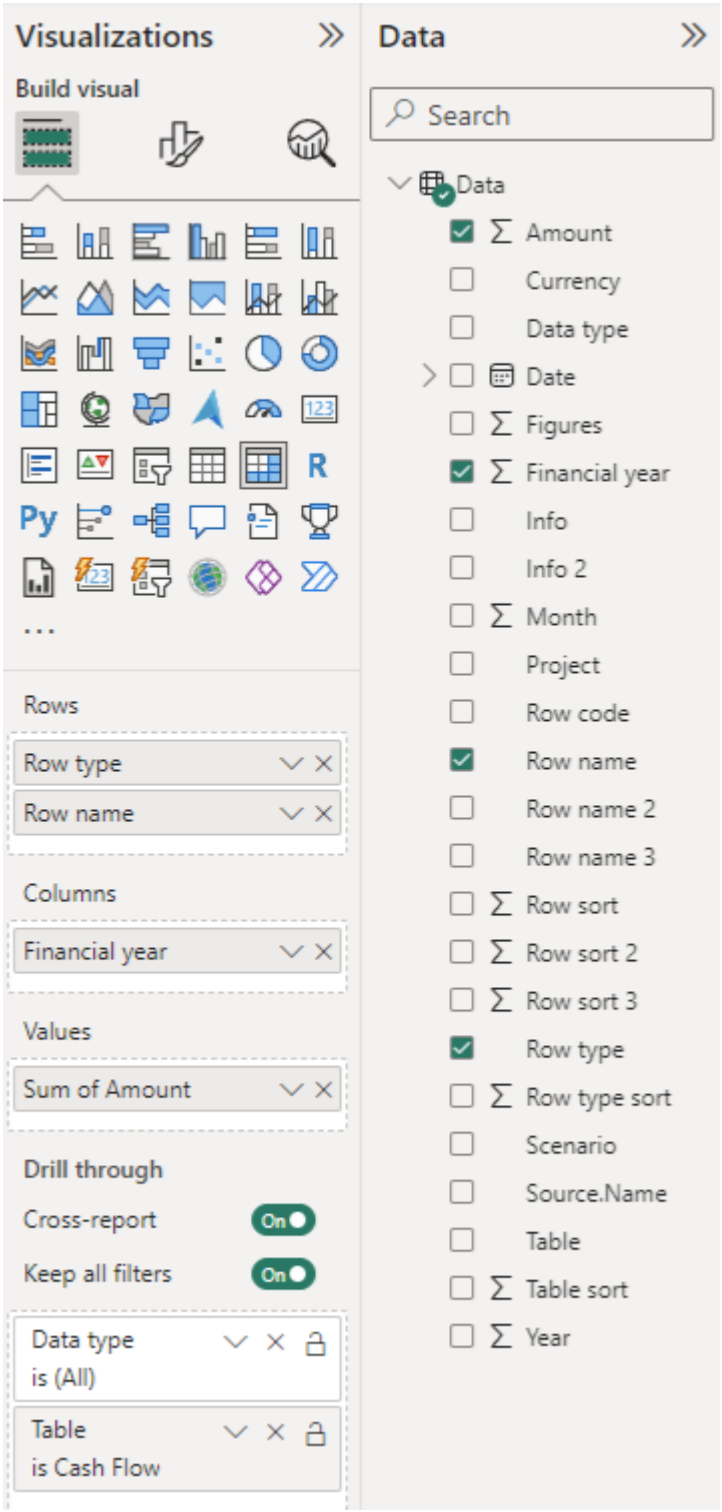
Example of a matrix report in Power BI (Cash flow from example file):

Project: New flight route

EUR

Cash flow	2021	2022	2023	2024	2025
Income					
Passenger traffic	1 400 000	1 513 680	1 631 347	1 753 116	1 879 102
Mail service revenue	200 000	200 000	200 000	200 000	200 000
Variable costs	**-269 760**	**-282 499**	**-295 640**	**-309 194**	**-323 171**
Fixed costs	**-582 500**	**-594 150**	**-606 033**	**-670 464**	**-683 873**
Income tax	**-68 697**	**-95 484**	**-265 871**	**-143 538**	**-173 118**
Change in working capital					
Short-term assets	-133 333	-9 473	-9 806	-10 147	-10 499
Inventories	-62 991	-1 367	-1 396	-1 427	-1 457
Current liabilities	43 938	1 108	1 135	1 162	1 190
CASH FLOW FROM OPERATIONS	**526 657**	**731 815**	**653 736**	**819 509**	**888 175**
Asset investments and realizations					
Aircraft	-4 750 000				
Restoration of airstrip	-200 000				
Terminal building			148 438		
Extraordinary income & expenses			**451 563**		
FREE CASH FLOW (FCF)	**-4 423 343**	**731 815**	**1 253 736**	**819 509**	**888 175**
DISCOUNTED FREE CASH FLOW (DFCF)	**-4 471 916**	**603 050**	**937 852**	**556 491**	**547 494**
CUMULATIVE DISCOUNTED FREE CASH FLOW	**-4 471 916**	**-3 868 866**	**-2 931 014**	**-2 374 523**	**-1 827 029**
Financial income and expenses	**-120 276**	**-180 415**	**-146 050**	**-111 685**	**-77 321**
Correction of income tax for financial items	**36 083**	**54 124**	**43 815**	**33 506**	**23 196**
Long-term debt, increase (+) / decrease (-)	**3 483 333**	**-633 333**	**-633 333**	**-633 333**	**-633 333**
Equity, increase (+) / decrease (-)	**1 187 500**				
TOTAL CASH FLOW	**163 297**	**-27 809**	**518 168**	**107 996**	**200 717**
CUMULATIVE TOTAL CASH FLOW	**163 297**	**135 488**	**653 656**	**761 653**	**962 370**

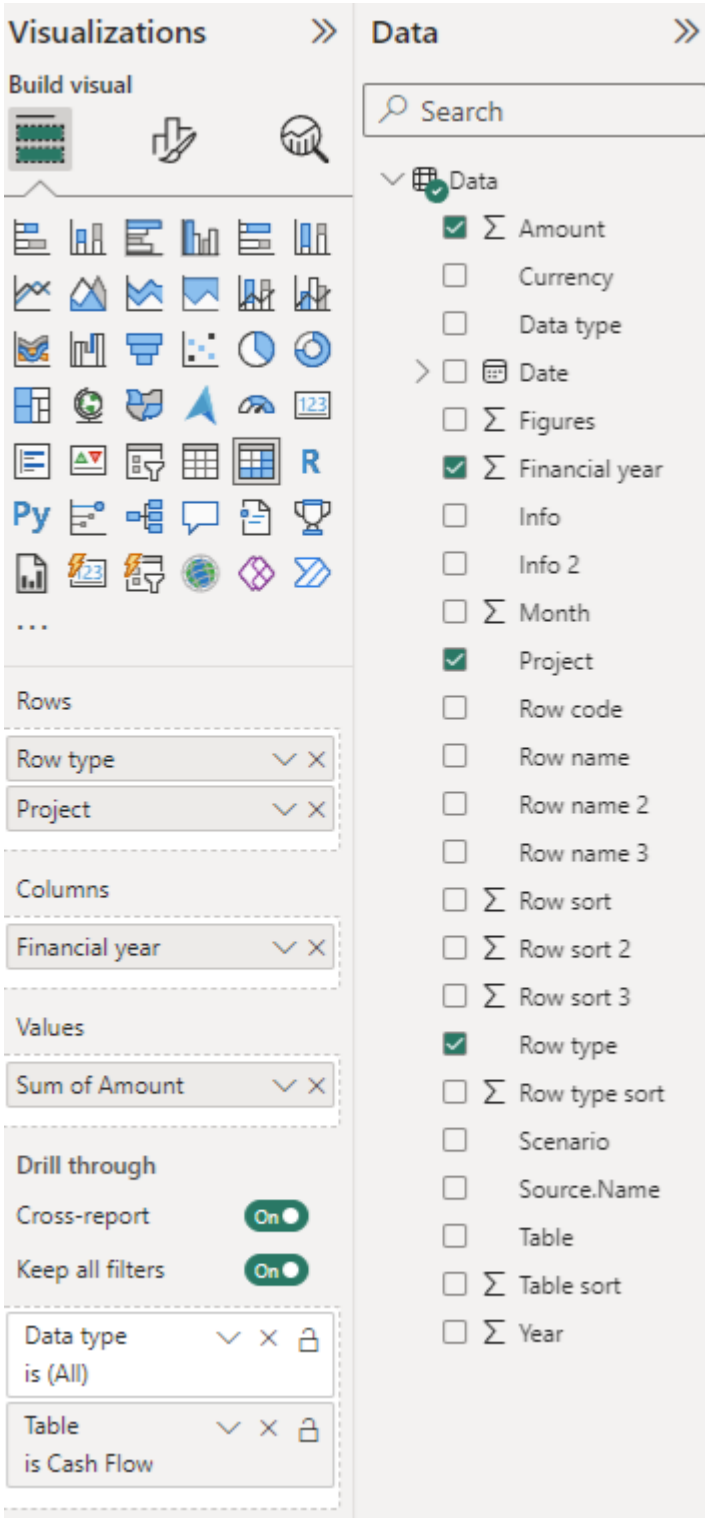
The matrix visualization settings of the example:



Alternative example of a matrix report in Power BI (Cash flow from example files):

Cash flow	2021	2022	2023	2024	2025
⊟ **Income**					
Alpha Machine 37	2 585 206	9 742 982	11 935 153	14 620 563	17 910 189
Hospital property 37	639 667	652 461	665 510	678 820	692 396
New flight route	1 600 000	1 713 680	1 831 347	1 953 116	2 079 102
Wind power plant 1 MW		669 870	689 966	710 665	731 985
⊞ **Variable costs**	**-2 486 048**	**-7 491 884**	**-9 022 340**	**-10 923 122**	**-13 247 429**
⊞ **Fixed costs**	**-1 527 000**	**-3 231 540**	**-3 249 071**	**-3 319 289**	**-3 338 630**
⊞ **Income tax**	**-85 604**	**-176 760**	**-545 278**	**-658 483**	**-970 167**
⊞ **Change in working capital**	**-1 166 980**	**-203 880**	**-271 149**	**-329 910**	**-401 815**
⊞ **CASH FLOW FROM OPERATIONS**	**-440 758**	**1 674 929**	**2 034 139**	**2 732 359**	**3 455 632**
⊟ **Asset investments and realizations**					
Alpha Machine 37	-2 700 000		-90 000		-45 000
Hospital property 37	-485 000	-277 000	-166 000	-110 500	-20 000
New flight route	-4 950 000		148 438		
Wind power plant 1 MW	-3 610 000				
⊞ **Extraordinary income & expenses**			**451 563**		
⊞ **FREE CASH FLOW (FCF)**	**-12 185 758**	**1 397 929**	**2 378 139**	**2 621 859**	**3 390 632**
⊞ **DISCOUNTED FREE CASH FLOW (DFCF)**	**-12 037 043**	**1 179 632**	**1 824 881**	**1 871 020**	**2 230 566**
⊞ **CUMULATIVE DISCOUNTED FREE CASH FLOW**	**-12 037 043**	**-10 857 411**	**-9 032 530**	**-7 161 511**	**-4 930 944**
⊞ **Financial income and expenses**	**-120 276**	**-180 415**	**-146 050**	**-111 685**	**-77 321**
⊞ **Correction of income tax for financial items**	**36 083**	**54 124**	**43 815**	**33 506**	**23 196**
⊞ **Long-term debt, increase (+) / decrease (-)**	**3 483 333**	**-633 333**	**-633 333**	**-633 333**	**-633 333**
⊞ **Equity, increase (+) / decrease (-)**	**1 187 500**				
⊞ **TOTAL CASH FLOW**	**-7 599 118**	**638 306**	**1 642 571**	**1 910 346**	**2 703 174**
⊞ **CUMULATIVE TOTAL CASH FLOW**	**-7 599 118**	**-6 960 812**	**-5 318 242**	**-3 407 895**	**-704 721**

The matrix visualization settings of the alternative example:



2.15.1.8 Balance sheet data

Balance sheet data include data in the Balance sheet.

Table and Table sort fields can be used to filter Balance from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Balance	500	ASSETS	600000	C5650	Machinery and equipment	6040000
Balance	500	ASSETS	600000	C5650	Machinery and equipment	6040000
Balance	500	ASSETS	600000	C5650	Machinery and equipment	6040000

Row type is used to group rows of different kind. Row type sort can be used to sort row types (when possible).
Row types for Balance include ASSETS and SHAREHOLDERS' EQUITY AND LIABILITIES.

Totals are not included for Balance sheet data.

Row code is an internal identifier used by Invest for Excel. It is included for reference. Row name is the row description and Row sort can be used to sort rows (when possible).

Row sort	Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
6040000	Fixed assets and other non-current assets	6000000	Tangible assets	6010000	Value	4 627 187,50
6040000	Fixed assets and other non-current assets	6000000	Tangible assets	6010000	Value	4 108 437,50
6040000	Fixed assets and other non-current assets	6000000	Tangible assets	6010000	Value	3 465 000,00

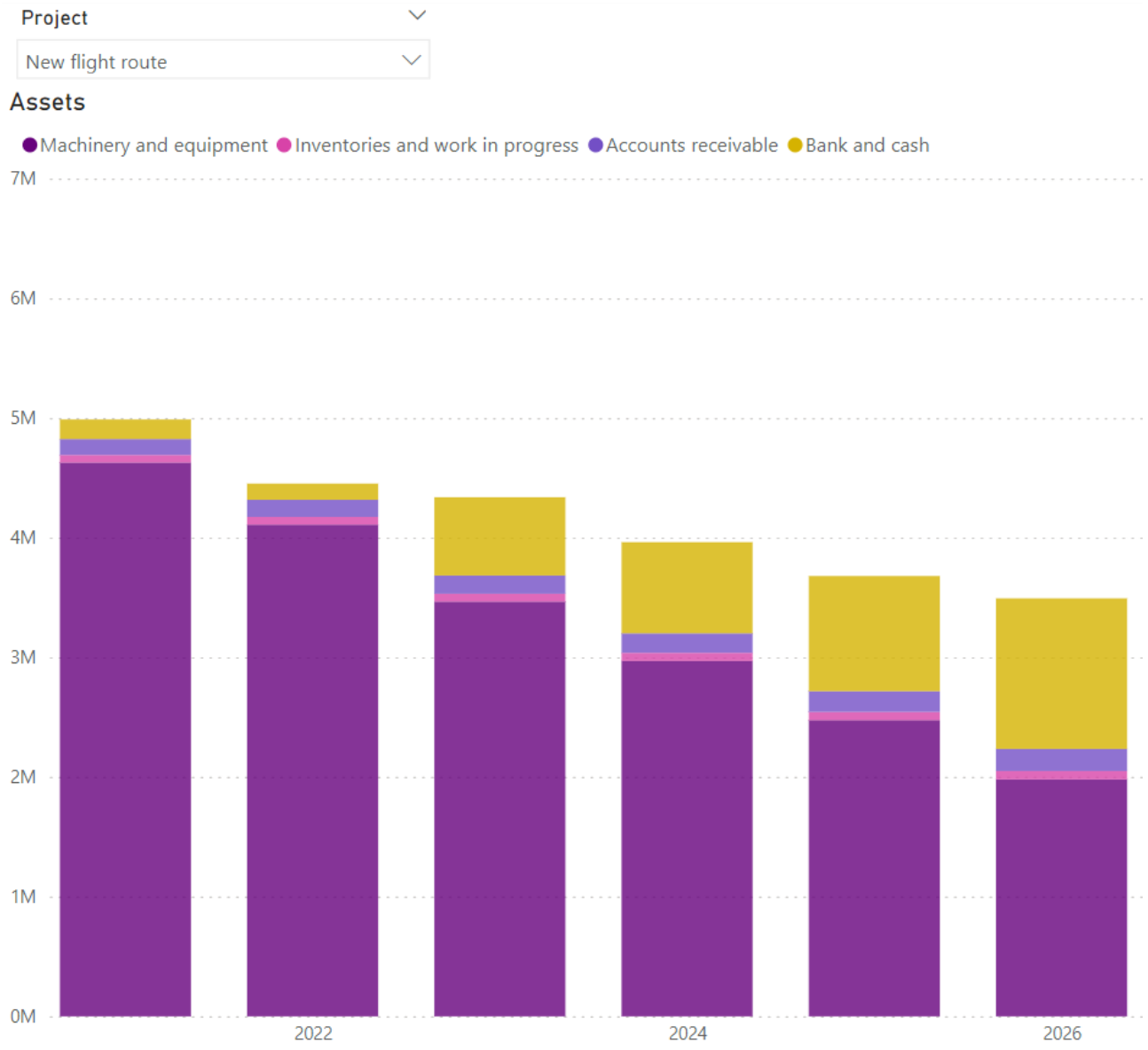
Row name 2 is first level header row text. Row sort 2 can be used to sort Row name 2 (when possible).

Row name 3 is second level header row text. Row sort 3 can be used to sort Row name 3 (when possible).

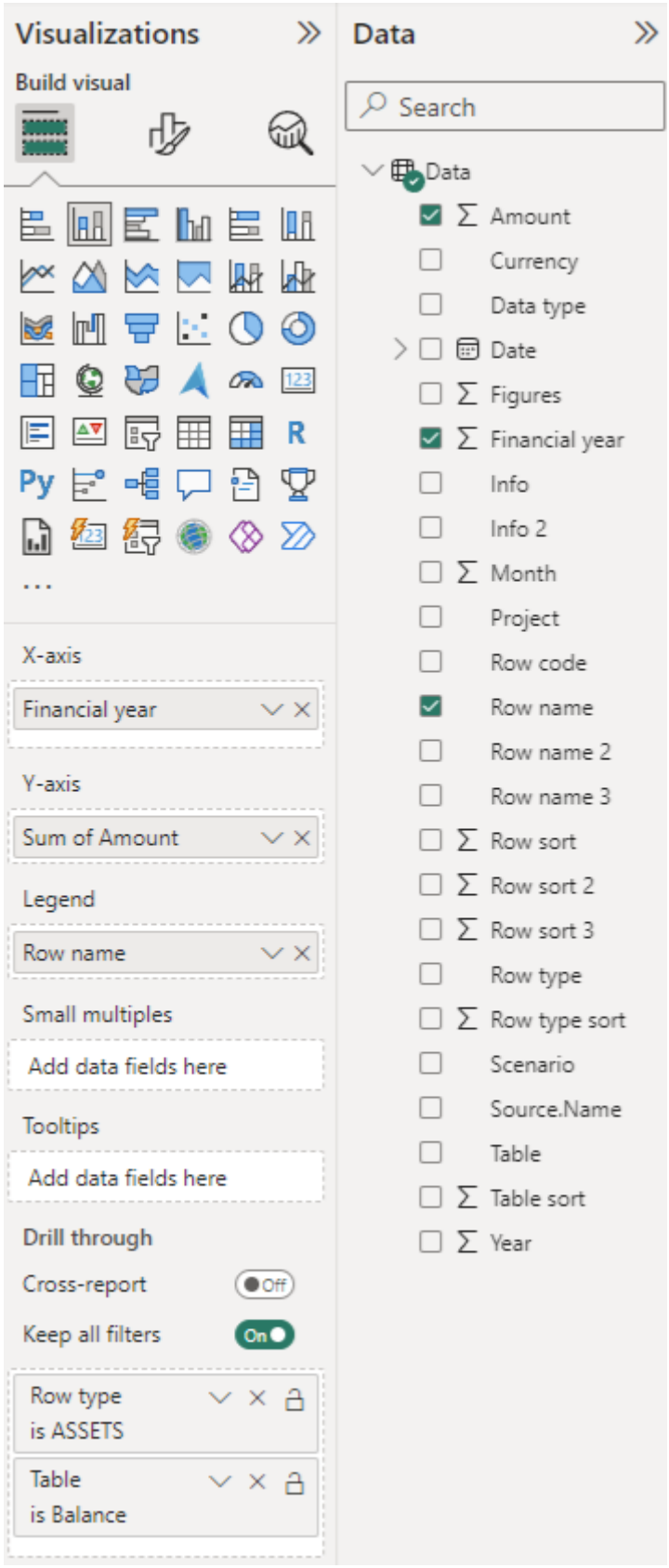
Data type holds info on what kind of data the row holds. Possible data types are Value and Residual Value.

The Amount field holds the amount for the row and period. Zero values are not included.

Example of a stacked column chart in Power BI (Balance from example file):



The stacked column chart visualization settings of the example:



2.15.1.9 Key financials

Key financials include data in the Key financials table.

Table and Table sort fields can be used to filter Key financials from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Key financials	600	Liquidity	1100	C8202	Current Ratio	7020000
Key financials	600	Liquidity	1100	C8202	Current Ratio	7020000
Key financials	600	Liquidity	1100	C8202	Current Ratio	7020000

Row type is used to group rows of different kind. Row type sort can be used to sort row types (when possible). Row types for Key financials include texts from rows that have no numeric data (i.e. headers) in the Key financials table.

Totals are not included for Key financials.

Row code is an internal identifier used by Invest for Excel. It is included for reference. Row name is the row description from a row with numeric data in the Key financials table and Row sort can be used to sort rows (when possible).

Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Current Ratio		Current Ratio		Indicator	0,53
Current Ratio		Current Ratio		Indicator	0,51
Current Ratio		Current Ratio		Indicator	1,28

Row name 2 is a duplicate of Row name. Row sort 2 is not used.
Row name 3 is a duplicate of Row name 2. Row sort 3 is not used.

Data type holds info on what kind of data the row holds. Possible data types are Value and Residual Value.

The Amount field holds the amount for the row and period. Zero values are not included. If the number format is %, the amount is multiplied with 100.

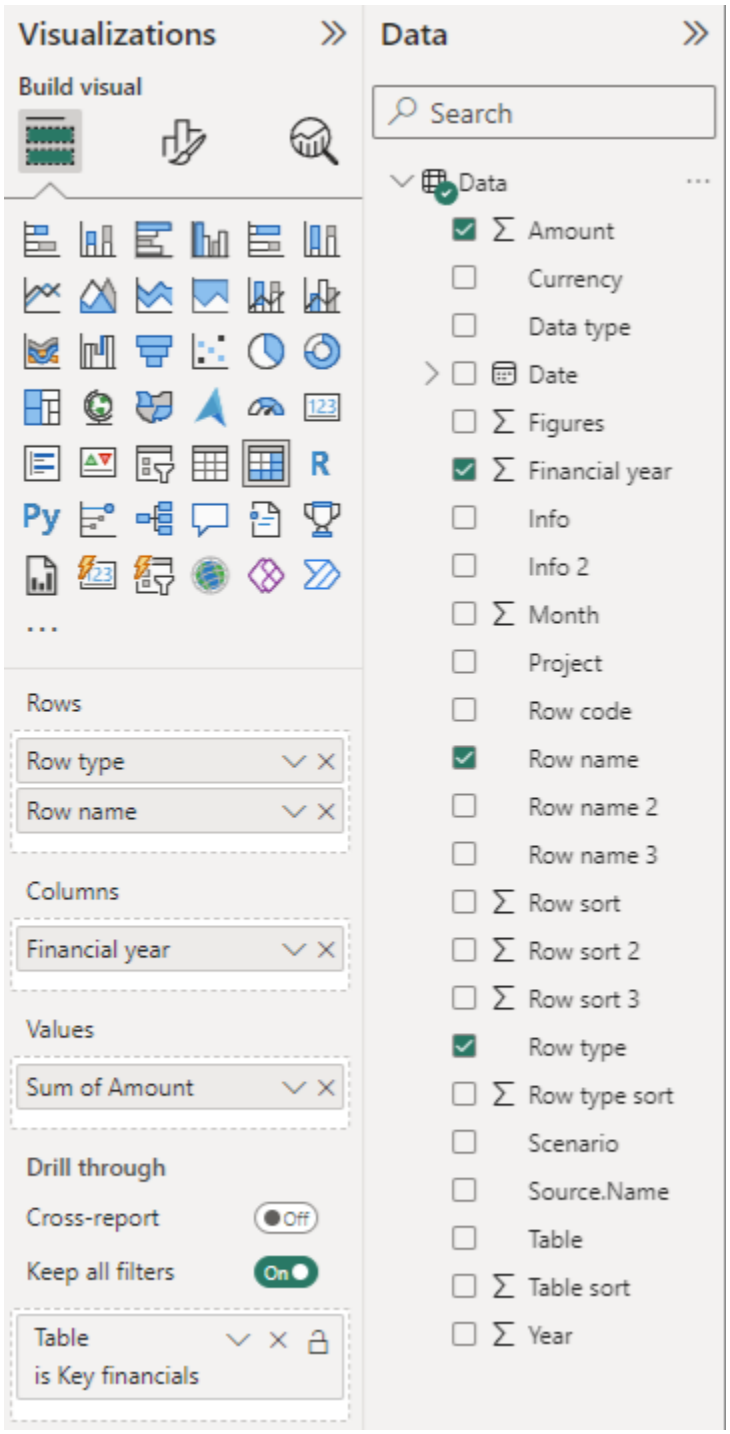
Example of a matrix report in Power BI (Key financials from example file):

Project

New flight route

Key financials	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Liquidity										
Current Ratio	0,53	0,51	1,28	1,46	1,77	4,13	43,84	64,24	85,11	106,43
Quick Ratio	0,44	0,41	1,19	1,36	1,67	3,94	42,43	62,84	83,72	105,04
Absolute Liquidity Ratio	0,30	0,25	1,24	1,47	1,89	6,90				
Cash Ratio	0,24	0,20	0,96	1,12	1,41	3,43	38,60	58,88	79,63	100,83
Turnover										
Inventory Turnover Ratio	6,57	4,42	4,52	4,63	4,74	4,84	4,95	5,06	5,16	5,27
Receivables Turnover Ratio	24,00	12,41	12,40	12,39	12,37	12,36	12,36	12,35	12,34	12,33
Capital Turnover Ratio	1,27	1,26	0,98	0,91	0,84	0,75	0,67	0,61	0,55	0,50
Asset Turnover Ratio	0,64	0,36	0,42	0,47	0,54	0,62	0,65	0,62	0,56	0,51
Net Working Capital Ratio	10,50	10,57	10,64	10,70	10,75	10,80	10,85	10,90	10,94	10,98
Profitability										
GROSS MARGIN	83,14	83,52	83,86	84,17	84,46	84,72	84,97	85,19	85,40	85,60
EBITDA Margin	46,73	48,84	50,76	49,84	51,56	53,15	54,61	55,97	57,23	58,41
EBIT Margin	14,31	18,57	23,74	24,50	27,76	30,75	33,50	36,04	38,39	40,58
Earnings Margin	4,76	5,63	28,29	13,15	16,83	20,16	23,19	25,23	26,88	28,41
Return On Assets (ROA)	3,05	2,05	11,79	6,19	9,16	12,42	15,07	15,53	15,02	14,47
Return on net assets (RONA), %	4,61	7,03	22,41	14,09	19,83	28,00	40,42	61,33	103,31	228,08
Return On Capital Employed (ROCE)	5,31	8,44	11,88	14,58	19,25	21,73	21,40	20,83	20,17	19,46
Return On Average Capital Employed (ROACE)	10,63	7,88	11,70	13,79	18,38	22,19	23,11	22,47	21,70	20,88
Return On Investment (ROI)	1,60	2,29	12,65	6,90	10,18	13,72	15,65	15,28	14,69	14,10
Return On Equity (ROE)	12,04	7,36	32,00	12,79	15,14	16,45	16,98	16,54	15,86	15,16
Business risk										
Operating Leverage		1,15	1,14	1,02	1,07	1,06	1,05	1,04	1,03	1,03
Financial Leverage		0,95	2,69	0,71	1,07	1,04	1,03	1,01	1,00	1,00
Total Leverage		1,10	3,08	0,72	1,14	1,10	1,08	1,05	1,03	1,03
Financial risk										
Debt Ratio (Leverage)	0,71	0,65	0,52	0,41	0,27	0,10	0,01	0,01	0,01	
Debt-to-Equity Ratio (Net Gearing)	2,79	2,13	1,20	0,76	0,40	0,13	0,01	0,01	0,01	
Interest Coverage Ratio	1,90	1,76	2,98	4,28	7,46	15,81	91,40			
Debt Service Coverage Ratio	6,22	1,03	1,19	1,31	1,51	1,74	3,94			
Stability										
Fixed Asset Ratio	1,07	1,09	0,95	0,91	0,83	0,63	0,40	0,23	0,10	
Current Asset to Fixed Asset	0,08	0,08	0,25	0,33	0,49	0,76	1,51	3,39	9,21	
Proprietary Ratio (Equity Ratio)	0,25	0,31	0,43	0,54	0,68	0,84	0,93	0,94	0,95	0,96

The matrix visualization settings of the example:



2.15.1.10 Profitability indicators

Profitability indicators include data in the Profitability analysis (Result sheet).

Table and Table sort fields can be used to filter Profitability indicators from other type of data.

Table	Table sort	Row type	Row type sort	Row code	Row name	Row sort
Profitability	900	To Firm	100	C120	Nominal value of all investments	9010000
Profitability	900	To Firm	100	C130	Required rate of return, %	9020000
Profitability	900	To Firm	100	C140	Calculation term	9030000

Row type is To Firm or To Equity. Totals are not included for Key financials.

Row code is an internal identifier used by Invest for Excel. It is included for reference. Row name is the row description in the Profitability analysis and Row sort can be used to sort rows (when possible).

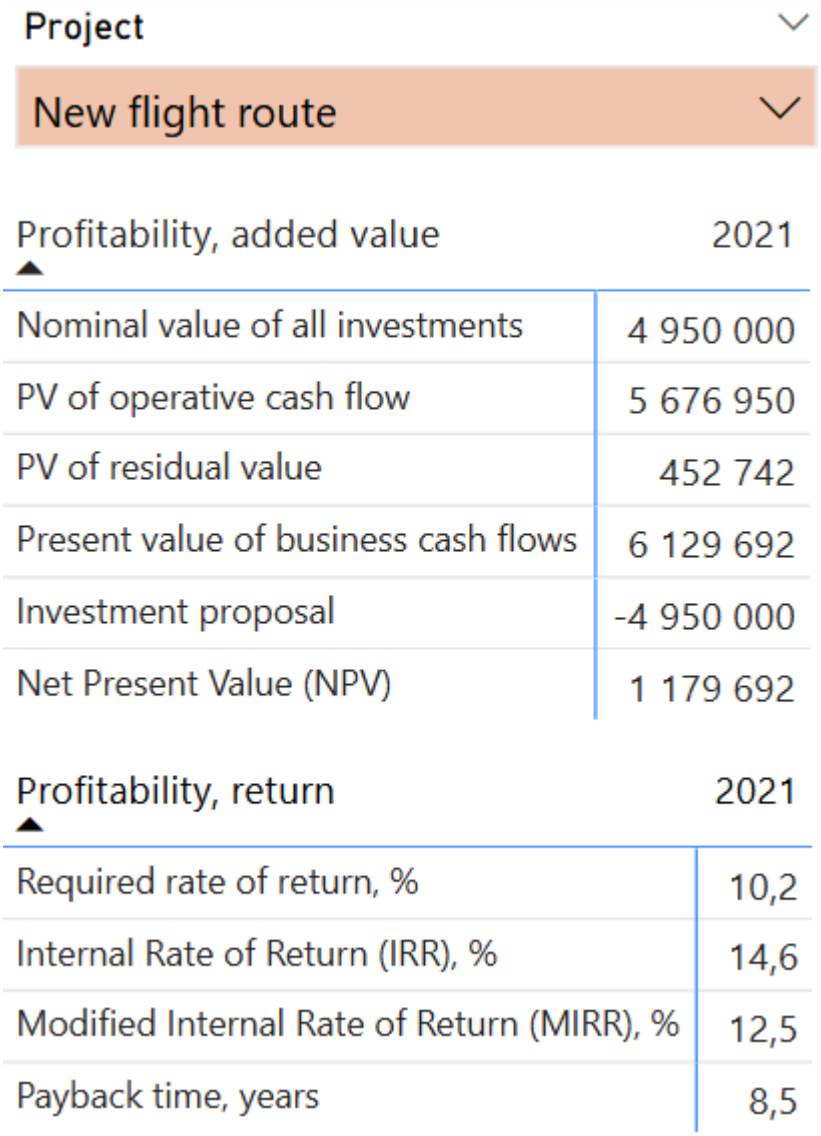
Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Nominal value of all investments		Nominal value of all investments		Value	4 950 000,00
Required rate of return, %		Required rate of return, %		Rate of return	10,16
Calculation term		Calculation term		Years	10,00

Row name 2 is a duplicate of Row name. Row sort 2 is not used.
Row name 3 is a duplicate of Row name 2. Row sort 3 is not used.

Data type holds info on what kind of data the row holds. Possible data types are Rate of return, Present value, Annuity, Index, Years, Value Added and Value.

The Amount field holds the amount for the row. Zero values are not included. Return-% amounts are multiplied with 100.

Example of a matrix report in Power BI (Profitability indicators from example file):



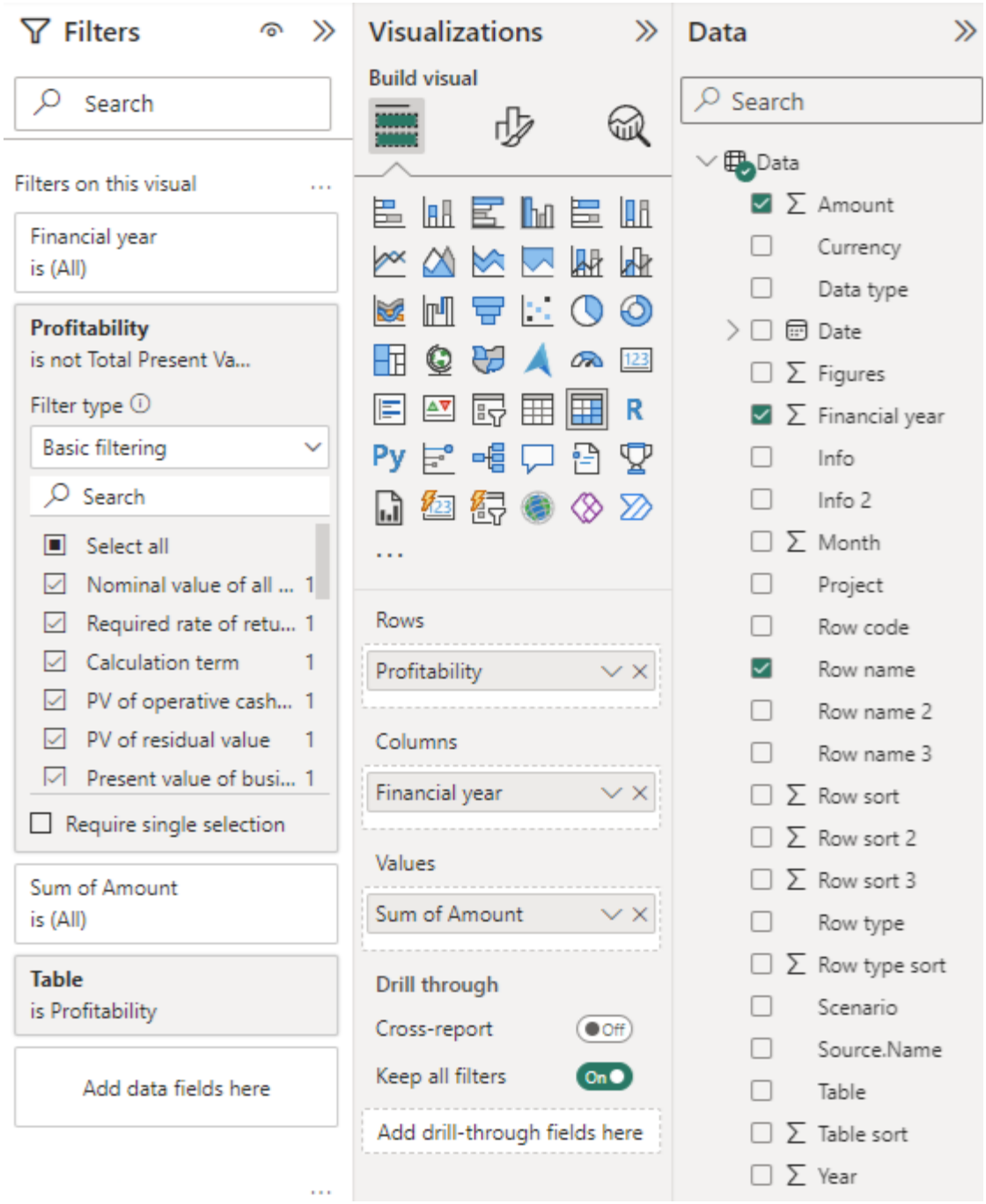
Project

New flight route

Profitability, added value	2021
Nominal value of all investments	4 950 000
PV of operative cash flow	5 676 950
PV of residual value	452 742
Present value of business cash flows	6 129 692
Investment proposal	-4 950 000
Net Present Value (NPV)	1 179 692

Profitability, return	2021
Required rate of return, %	10,2
Internal Rate of Return (IRR), %	14,6
Modified Internal Rate of Return (MIRR), %	12,5
Payback time, years	8,5

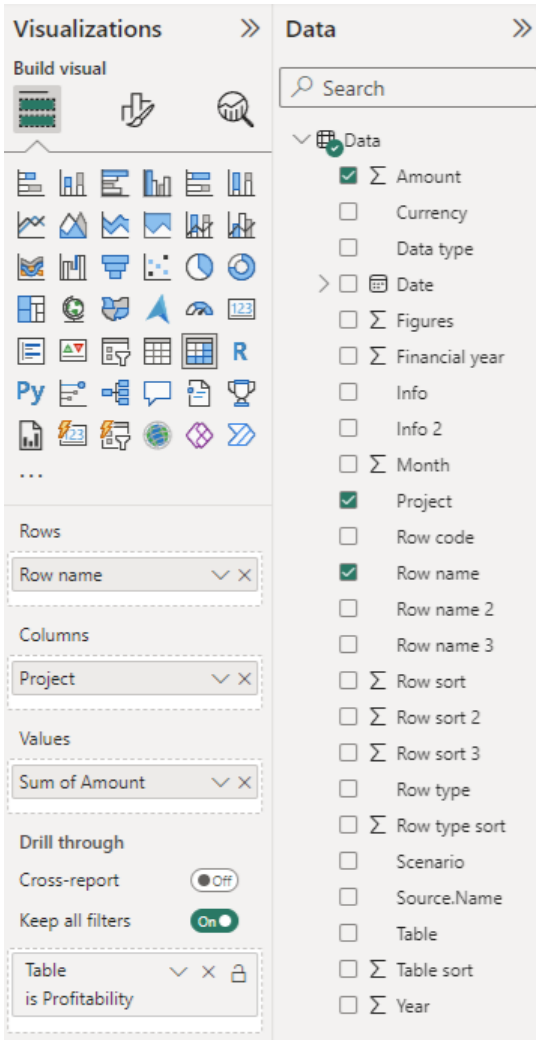
The matrix visualization settings of the example:



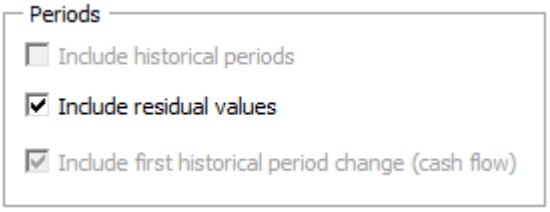
Alternative example of a matrix report in Power BI (Profitability indicators from example files):

Profitability indicators	Alpha Machine 37	Hospital property 37	Wind power plant 1 MW
Nominal value of all investments	2 835 000,0	1 358 500,0	3 610 000,0
Required rate of return, %	8,8	7,8	11,8
Calculation term	5,3	20,0	15,5
PV of operative cash flow	3 602 422,0	1 249 834,0	4 365 523,2
PV of residual value	1 993 831,8	67 894,4	15 090,2
Present value of business cash flows	5 596 253,8	1 317 728,4	4 380 613,3
Total Present Value (PV)	5 596 253,8	1 317 728,4	4 380 613,3
Proposed investments in assets	-2 770 983,8	-1 069 199,2	-3 453 954,3
Investment proposal	-2 770 983,8	-1 069 199,2	-3 453 954,3
Net Present Value (NPV)	2 825 270,0	248 529,2	926 659,1
NPV as a monthly annuity	54 945,0	2 000,3	10 494,2
Internal Rate of Return (IRR), %	24,3	11,2	16,0
Modified Internal Rate of Return (MIRR), %	21,0	9,5	13,5
Profitability Index (PI)	2,0	1,2	1,3
Payback time, years	4,8	14,8	10,6
Return on net assets (RONA), %	41,9	22,7	52,5
Value Added (VA)	821 745,4		229 032,5
Discounted Value Added (DCVA)	2 559 780,8		853 944,5
Internal Rate of Return based on DCVA (IRRd), %			15,4
Modified Internal Rate of Return based on DCVA (MIRRd), %			14,1
Payback time, years, based on DCVA			7,7

The matrix visualization settings of the example:



2.15.1.11 Periods

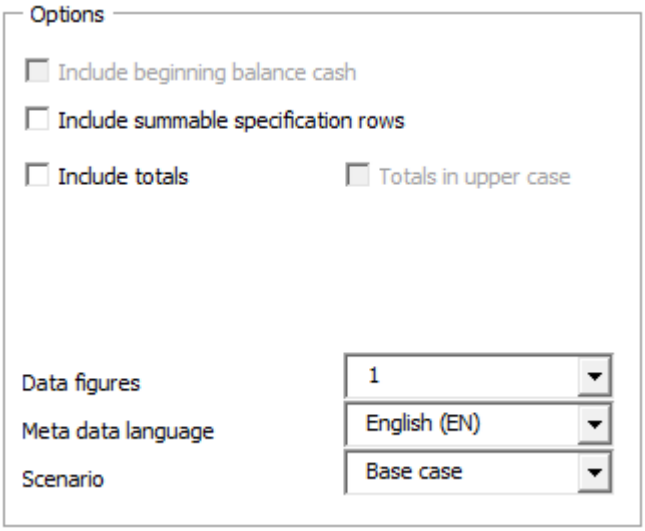


If the calculation file includes historical periods, you can choose to include them.

If the calculation file includes a residual column, you can choose to include its values. Note that any other residual values (perpetuity etc.) are not included.

When you extract historical data in a cash flow table, you can choose to include numbers in the first historical period. This is an option because the change in the first period is rarely a real change in cash.

2.15.1.12 Options



If the calculation includes historical periods, you can choose to **include beginning balance cash** in Cash flow data so that cumulative total cash flow equals Cash and bank in the balance sheet.

You can choose to **include summable specification rows** if available. For specification rows to be summable, operators * and / must not be used.

Example of summable specification rows:

	Income		14 209	21 888	31 854	36 529
+	Europe		14 209	14 132	16 576	17 580
+	Business area 1	5,00 %	14 209	12 898	14 637	15 556
+	Business area 2	5,00 %		1 234	1 283	1 335
+	Business area 3	5,00 %			656	689

Included in data:

Row name	Row sort	Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Income	210000	Europe		Business area 1		Value	14 209,00
Income	210000	Europe		Business area 1		Value	12 898,00
Income	210000	Europe		Business area 1		Value	14 637,00
Income	210000	Europe		Business area 1		Value	15 556,00
Income	210000	Europe		Business area 2		Value	1 234,00
Income	210000	Europe		Business area 2		Value	1 283,00
Income	210000	Europe		Business area 2		Value	1 335,00
Income	210000	Europe		Business area 3		Value	656,00
Income	210000	Europe		Business area 3		Value	689,00

Example of non-summable specification rows (operator * is used):

≡	Passenger traffic		1 400 000	1 513 680	1 631 347	1 753 116
+	Number of passengers		5 000	5 300	5 600	5 900
+	Number of passengers		5 000	5 300	5 600	5 900
	Increase		5 000	300	300	300
	Capacity			8 320	8 320	8 320
	Cabin factor %			64 %	67 %	71 %
*	Average ticket price	2,00 %	280	286	291	297

Included in data:

Row name	Row sort	Row name 2	Row sort 2	Row name 3	Row sort 3	Data type	Amount
Passenger traffic	210000	Passenger traffic		Passenger traffic		Value	1 400 000,00
Passenger traffic	210000	Passenger traffic		Passenger traffic		Value	1 513 680,00
Passenger traffic	210000	Passenger traffic		Passenger traffic		Value	1 631 347,20
Passenger traffic	210000	Passenger traffic		Passenger traffic		Value	1 753 115,62

You can **include totals** (where relevant) and choose to make the **totals upper case**.

Income matrix with totals in upper case:

Income statement	2021	2022	2023	2024	2025
⊟ **Income**					
Passenger traffic	1 400 000	1 513 680	1 631 347	1 753 116	1 879 102
Mail service revenue	200 000	200 000	200 000	200 000	200 000
⊞ **INCOME TOTAL**	**1 600 000**	**1 713 680**	**1 831 347**	**1 953 116**	**2 079 102**
⊟ **Variable costs**					
Fuel costs	-194 760	-201 409	-208 246	-215 277	-222 505
Handling costs	-75 000	-81 090	-87 394	-93 917	-100 666
⊞ **GROSS MARGIN**	**1 330 240**	**1 431 181**	**1 535 707**	**1 643 922**	**1 755 931**
⊟ **Fixed costs**					
Staff costs	-250 000	-255 000	-260 100	-265 302	-270 608
Maintenance costs	-332 500	-339 150	-345 933	-352 852	-359 909
Rents				-52 310	-53 356
⊞ **EBITDA; OPERATING INCOME BEFORE DEPRECIATION**	**747 740**	**837 031**	**929 674**	**973 458**	**1 072 058**
⊞ **Depreciation**	**-518 750**	**-518 750**	**-495 000**	**-495 000**	**-495 000**
⊞ **EBIT; OPERATING INCOME**	**228 990**	**318 281**	**434 674**	**478 458**	**577 058**
⊞ **Financing income and expenses**	**-120 276**	**-180 415**	**-146 050**	**-111 685**	**-77 321**
⊞ **Extraordinary income & expenses**			**451 563**		
⊞ **Income tax**	**-32 614**	**-41 360**	**-222 056**	**-110 032**	**-149 921**
⊞ **NET INCOME FOR THE PERIOD**	**76 100**	**96 506**	**518 131**	**256 741**	**349 816**

Income matrix without totals:

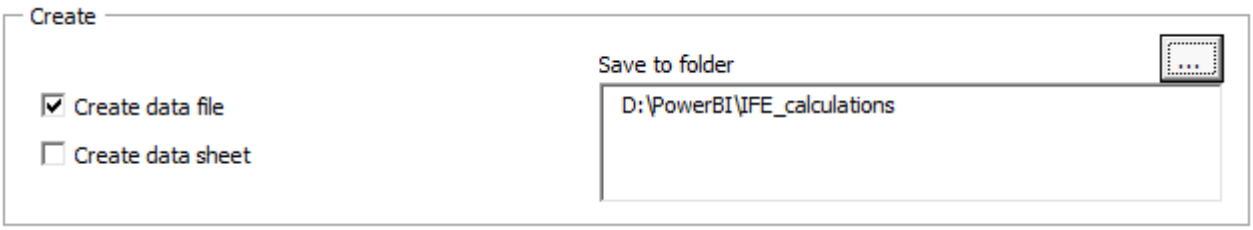
Income statement	2021	2022	2023	2024	2025
⊟ **Income**	**1 600 000**	**1 713 680**	**1 831 347**	**1 953 116**	**2 079 102**
Passenger traffic	1 400 000	1 513 680	1 631 347	1 753 116	1 879 102
Mail service revenue	200 000	200 000	200 000	200 000	200 000
⊟ **Variable costs**	**-269 760**	**-282 499**	**-295 640**	**-309 194**	**-323 171**
Fuel costs	-194 760	-201 409	-208 246	-215 277	-222 505
Handling costs	-75 000	-81 090	-87 394	-93 917	-100 666
⊟ **Fixed costs**	**-582 500**	**-594 150**	**-606 033**	**-670 464**	**-683 873**
Staff costs	-250 000	-255 000	-260 100	-265 302	-270 608
Maintenance costs	-332 500	-339 150	-345 933	-352 852	-359 909
Rents				-52 310	-53 356
⊞ **Depreciation**	**-518 750**	**-518 750**	**-495 000**	**-495 000**	**-495 000**
⊞ **Financing income and expenses**	**-120 276**	**-180 415**	**-146 050**	**-111 685**	**-77 321**
⊞ **Extraordinary income & expenses**			**451 563**		
⊞ **Income tax**	**-32 614**	**-41 360**	**-222 056**	**-110 032**	**-149 921**
Total	**76 100**	**96 506**	**518 131**	**256 741**	**349 816**

For **data figures** you can choose between 1, 1000 and 1000000. Any currency translation must be done separately.

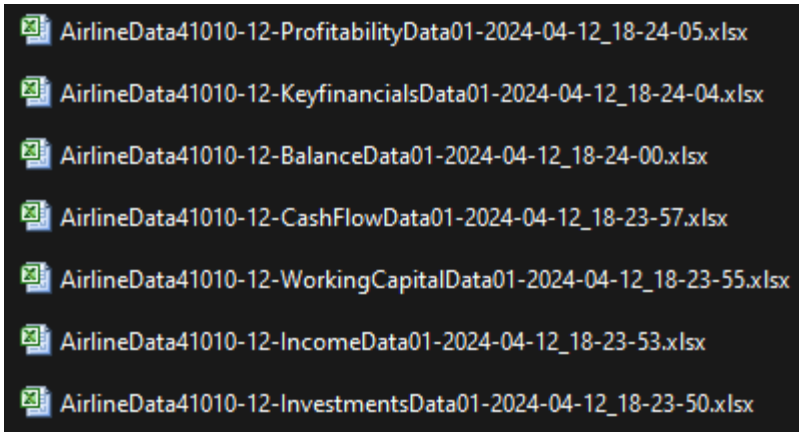
You can choose a **meta data language** separate from the calculation file language. Meta data is headers etc. Note that if you use multiple data files as source for a Power BI report, they should all have the same meta data language.

You can use a **scenario** setting to separate different versions of the same calculation. The default scenarios are Base case, Worst case and Best case but you can also write your own scenario.

2.15.1.13 Create



You can choose to **create data file(s)** and specify to which folder you want to save it. Each type of data is written to its own file. The data files are written in xlsx file format and name includes calculation file name, type of data and date stamp.



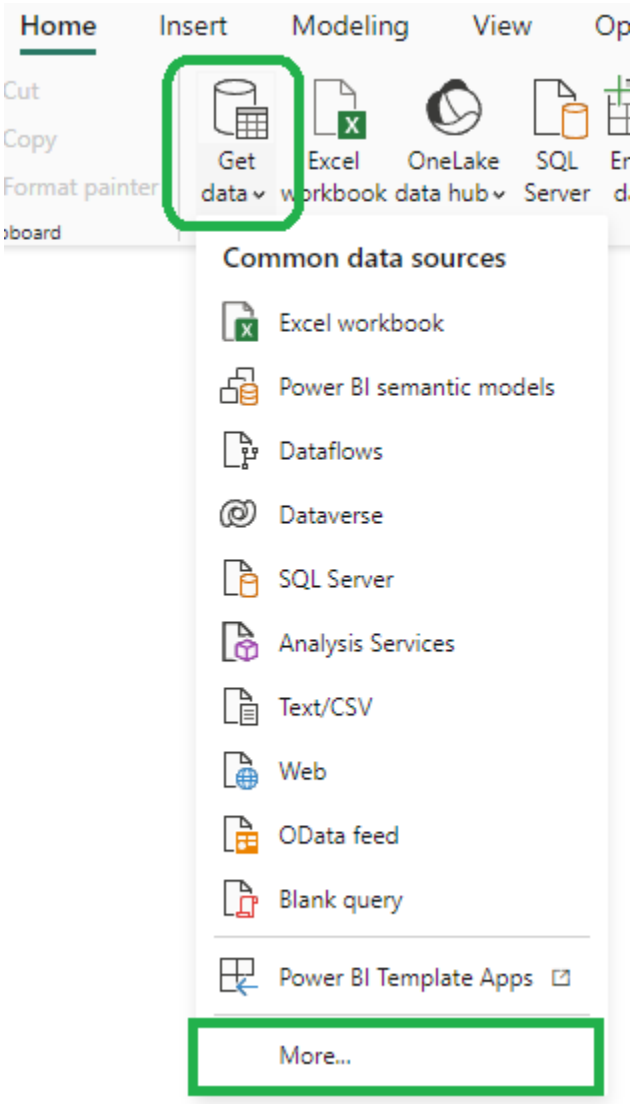
Note that the folder must exist, it won't be created. If the folder does not exist, the data files are written to Excel's current folder.

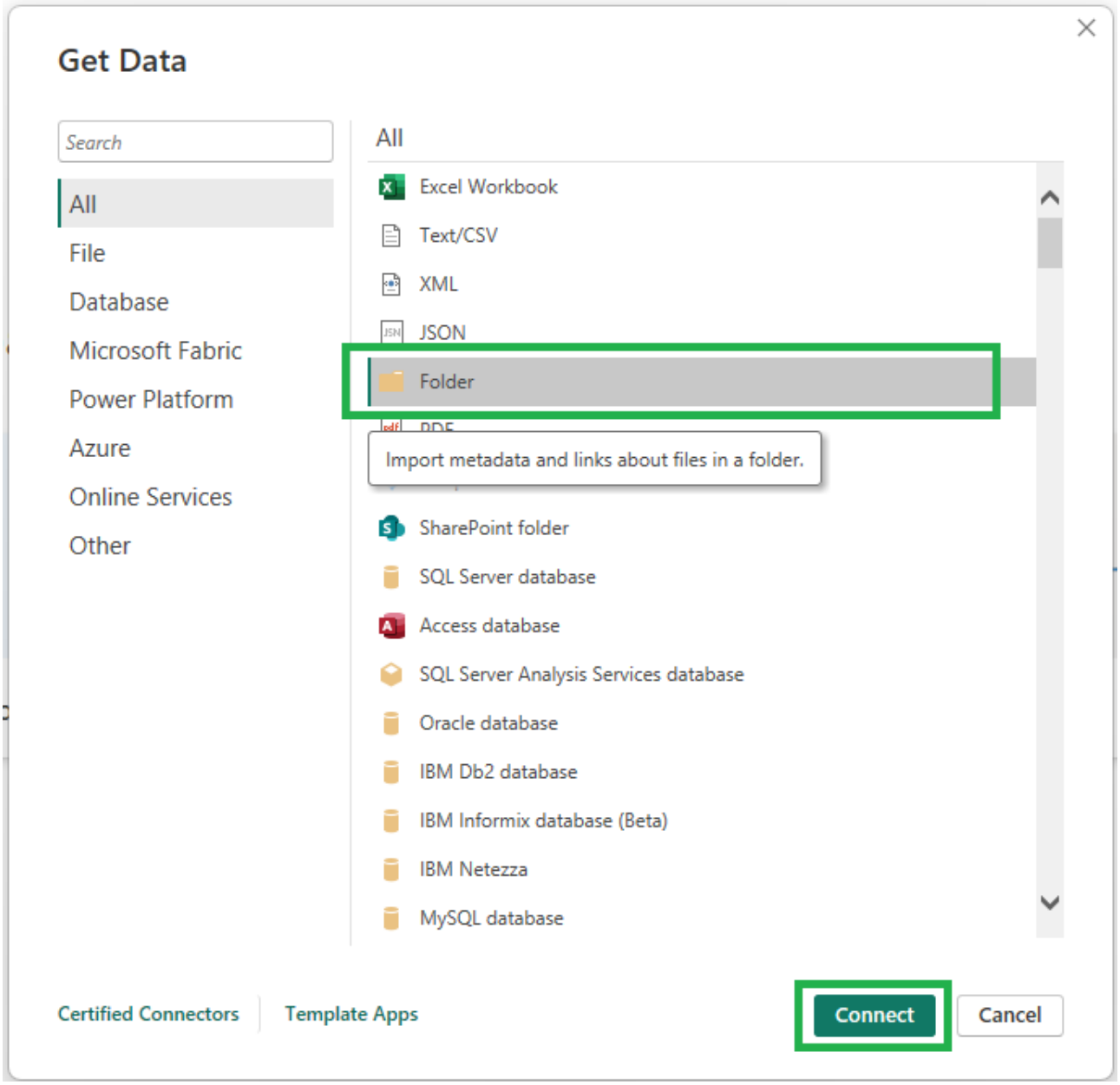
You can also **create a data sheet** in the calculation file. This is useful if you want to use the data in Excel or if you want to edit the data before writing it to a data file. Each type of data is written to its own sheet.

2.15.1.13.1 Using data files in Power BI Desktop

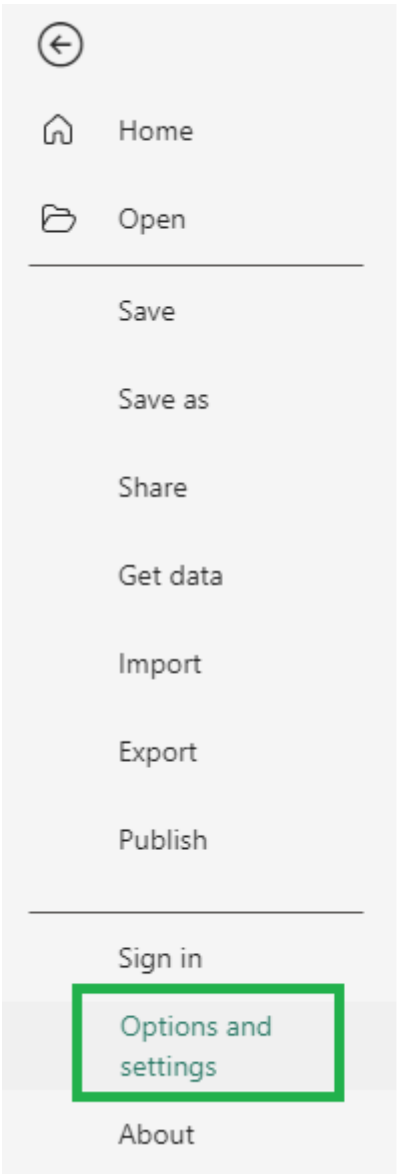
The best way to use the data in Power BI is to connect to the folder in which the data files reside.

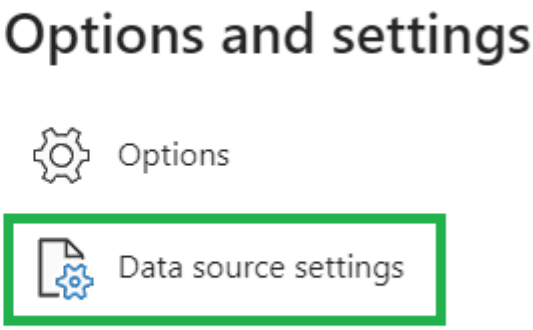
In a new empty Power BI report:

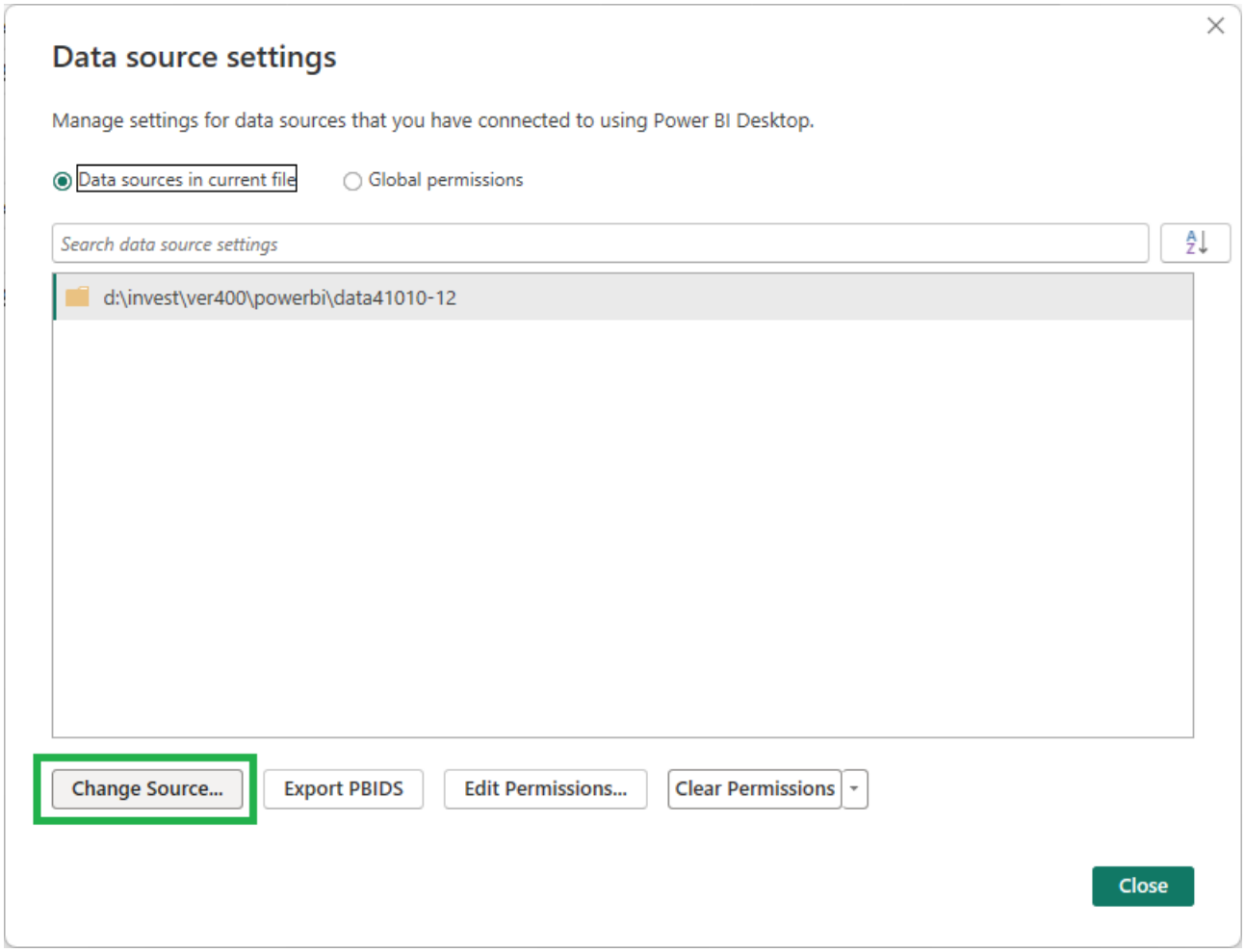




To connect an existing Power BI report to a new folder, choose **File – Options and settings – Data source settings – Change source**.



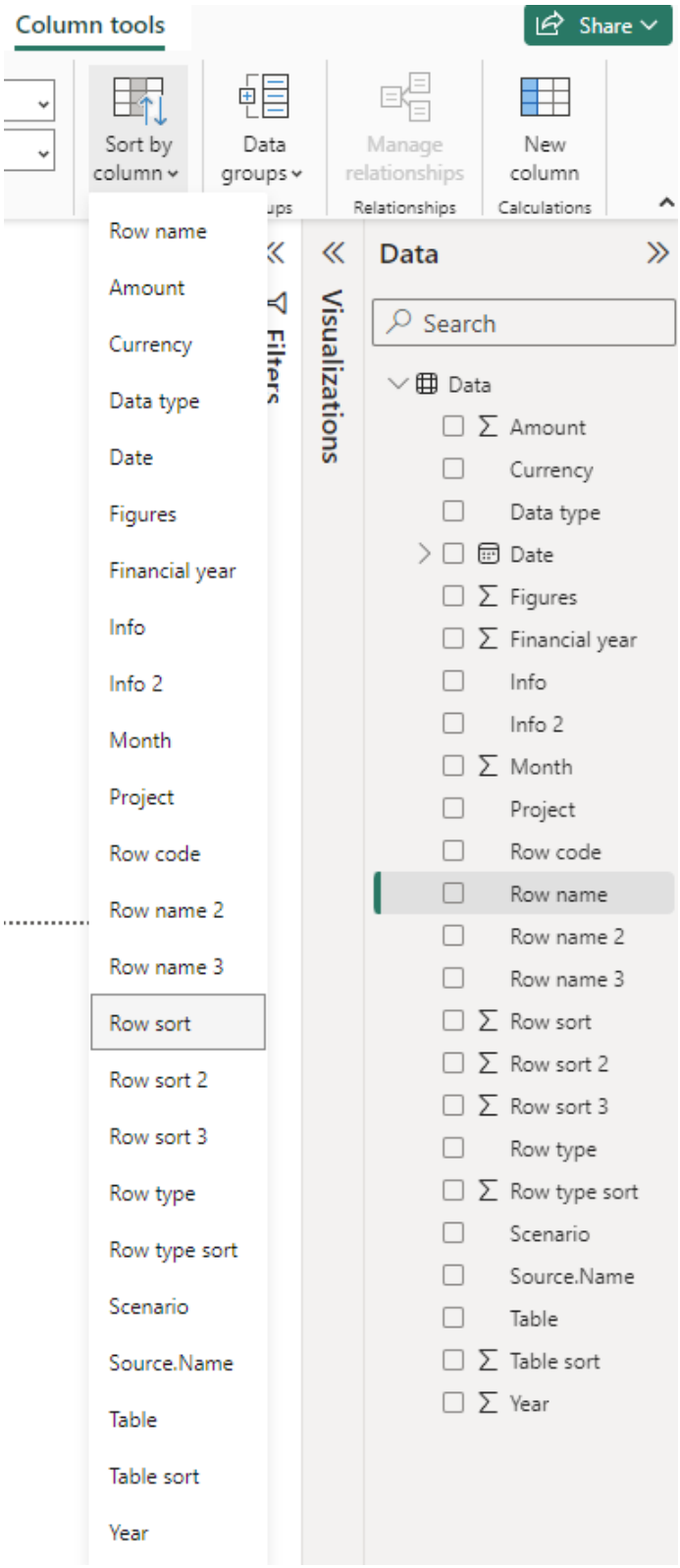




2.15.1.13.2 Sorting in Power BI

The intended use of the sort fields are as follows:

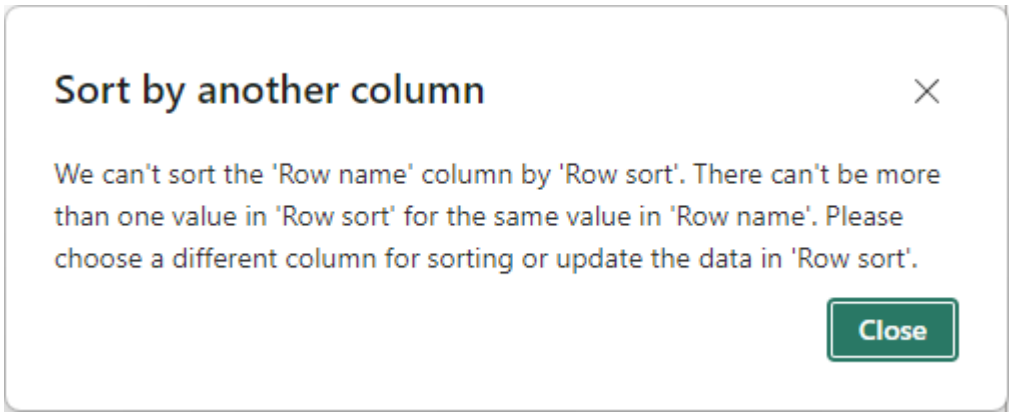
Row name – Row sort (*also Row code – Row sort*):



Row name 2 – Row sort 2
Row name 3 – Row sort 3

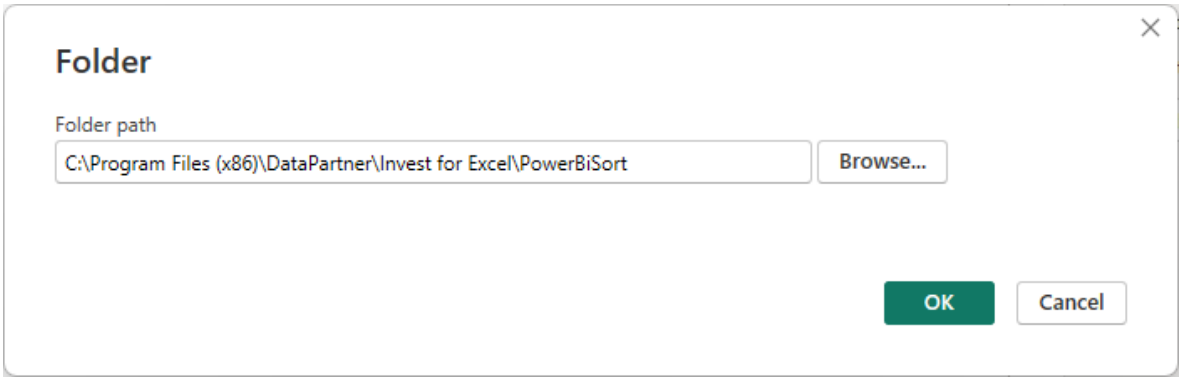
Row type – Row type sort
Table – Table sort

Note that sorting of a field may not be successful if there are multiple values of either field for one value in the other field. This will result in a message like this:



What you can do when this happens is to

1. Temporarily connect to the PowerBiSort folder under the Invest for Excel's program folder (default path: C:\Program Files (x86)\DataPartner\Invest for Excel\PowerBiSort) **File – Options and settings – Data source settings – Change source**

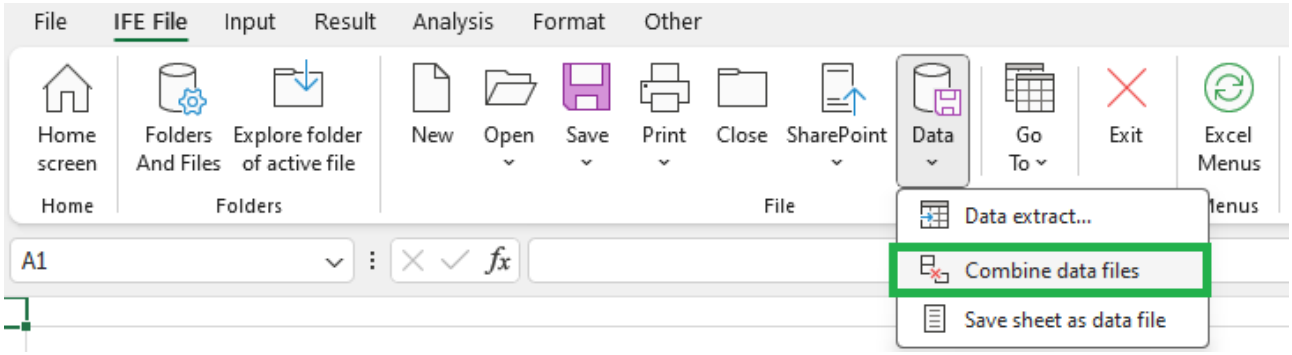
   

   This folder holds the PowerBISortFile.xlsx data file with data that can be sorted.
2. Sort the fields you want to sort.
3. Connect back to your data folder.

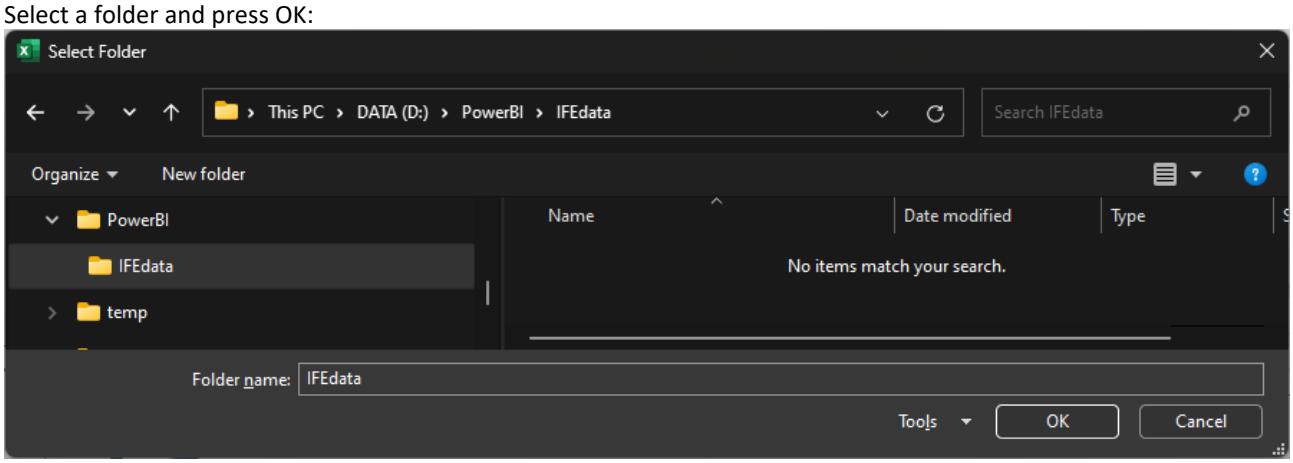
The sorting will now work whenever possible.

2.15.2 Combine data files

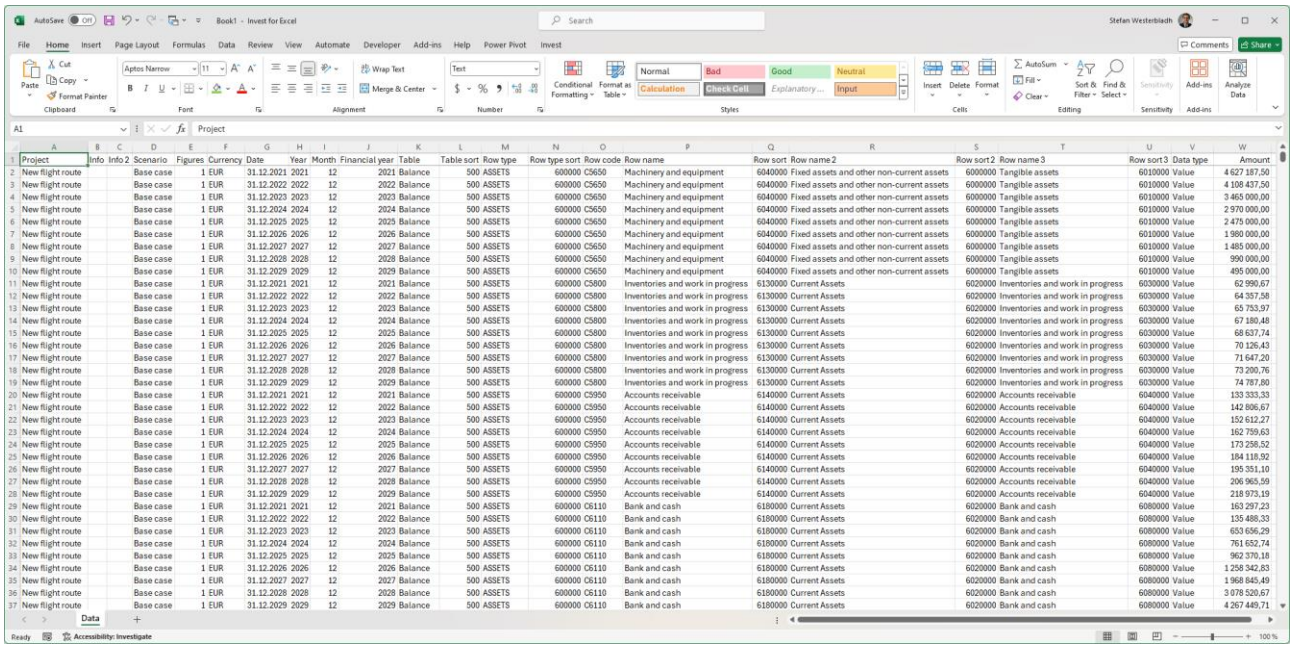
Combine data files will combine all data files in a folder to one big data file. Choose IFE File – Data – Combine data files from the menu.



Select a folder and press OK:



The resulting file is a new workbook open in Excel.

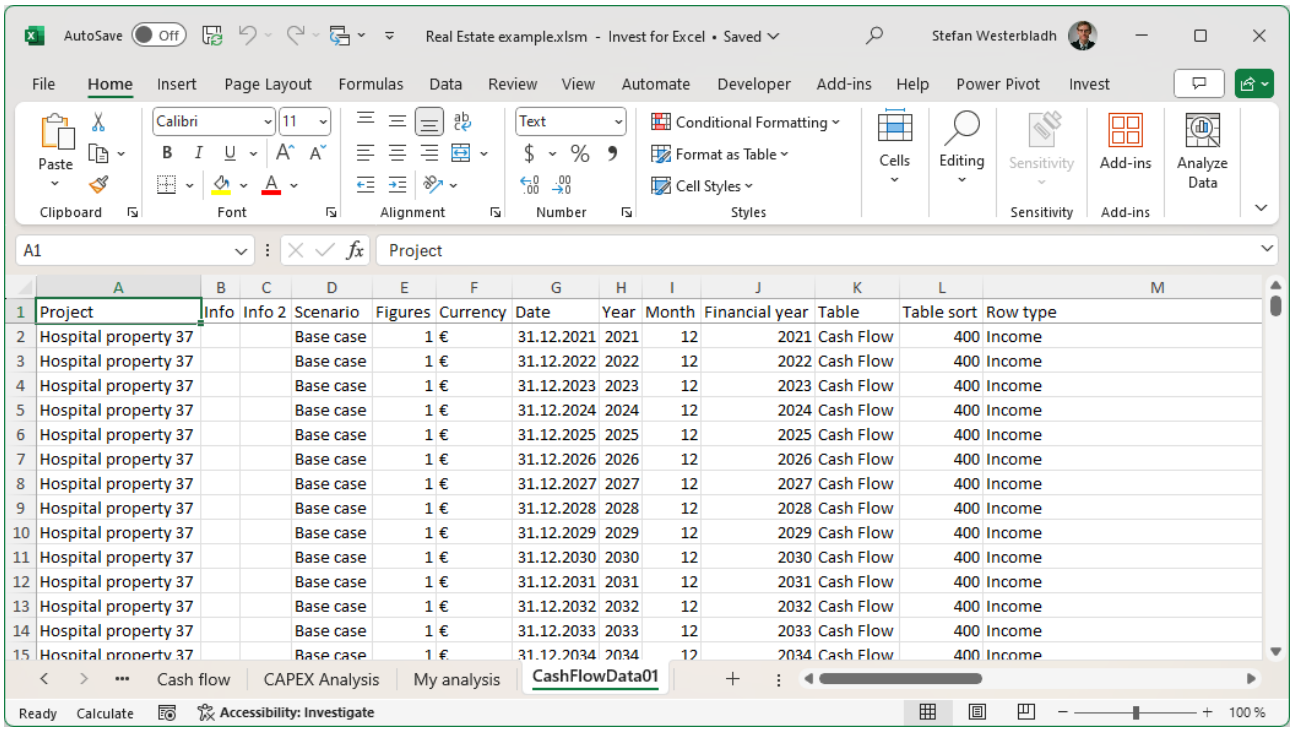


This function is useful if you want to edit the data, or you want to have one data file/sheet to use.

2.15.3 Save Sheet As Data File

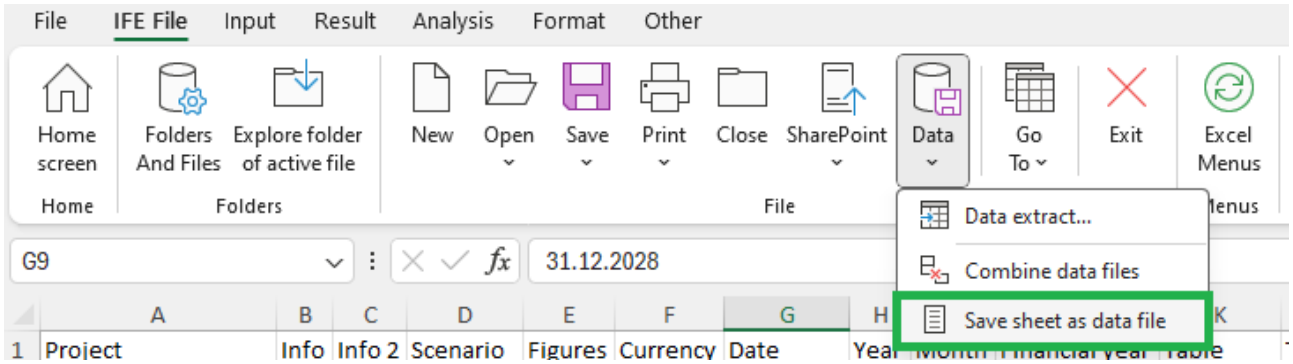
You can use the **Save Sheet As Data File** function to write a data sheet to a data file. This is useful if you want to edit data in a sheet before writing to data file.

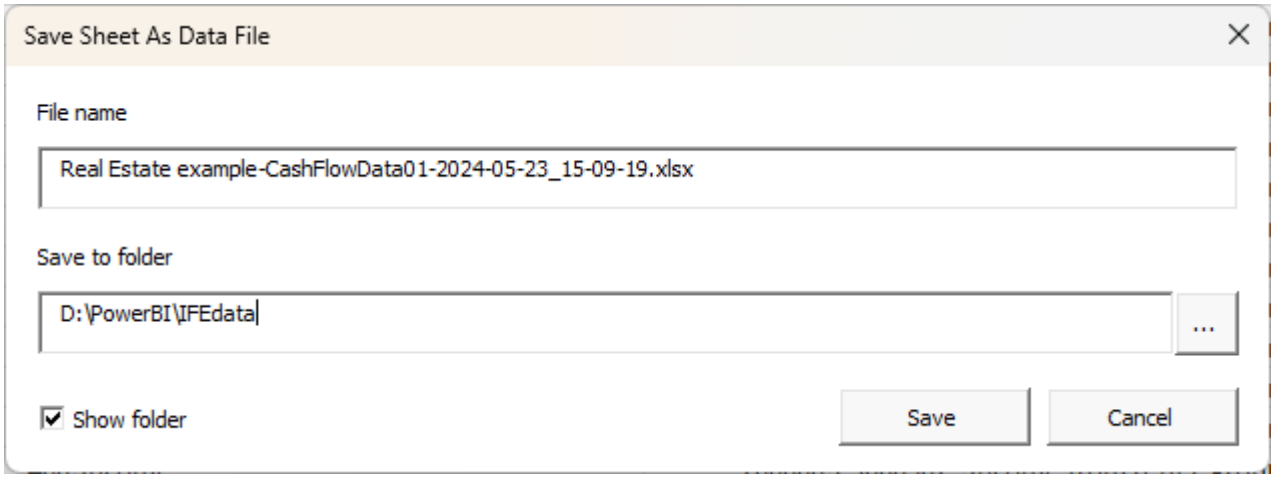
Activate the data sheet you want to save.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Project	Info	Info 2	Scenario	Figures	Currency	Date	Year	Month	Financial year	Table	Table sort	Row type
2	Hospital property 37			Base case	1	€	31.12.2021	2021	12	2021	Cash Flow	400	Income
3	Hospital property 37			Base case	1	€	31.12.2022	2022	12	2022	Cash Flow	400	Income
4	Hospital property 37			Base case	1	€	31.12.2023	2023	12	2023	Cash Flow	400	Income
5	Hospital property 37			Base case	1	€	31.12.2024	2024	12	2024	Cash Flow	400	Income
6	Hospital property 37			Base case	1	€	31.12.2025	2025	12	2025	Cash Flow	400	Income
7	Hospital property 37			Base case	1	€	31.12.2026	2026	12	2026	Cash Flow	400	Income
8	Hospital property 37			Base case	1	€	31.12.2027	2027	12	2027	Cash Flow	400	Income
9	Hospital property 37			Base case	1	€	31.12.2028	2028	12	2028	Cash Flow	400	Income
10	Hospital property 37			Base case	1	€	31.12.2029	2029	12	2029	Cash Flow	400	Income
11	Hospital property 37			Base case	1	€	31.12.2030	2030	12	2030	Cash Flow	400	Income
12	Hospital property 37			Base case	1	€	31.12.2031	2031	12	2031	Cash Flow	400	Income
13	Hospital property 37			Base case	1	€	31.12.2032	2032	12	2032	Cash Flow	400	Income
14	Hospital property 37			Base case	1	€	31.12.2033	2033	12	2033	Cash Flow	400	Income
15	Hospital property 37			Base case	1	€	31.12.2034	2034	12	2034	Cash Flow	400	Income

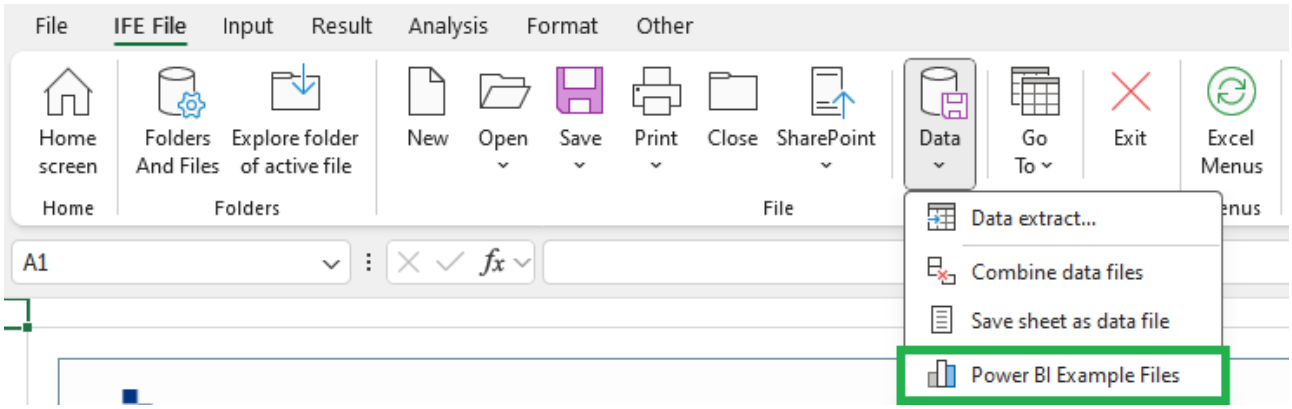
Choose **Save Sheet As Data File** from the IFE File - Data menu.



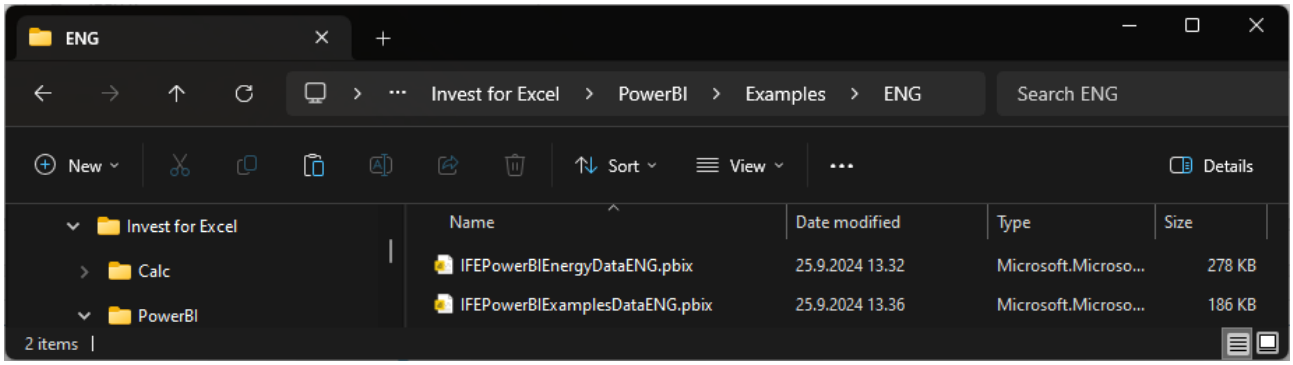


The file name includes calculation file name, type of data and date stamp by default but can be changed. Select the folder where you want to save the file. The data file is written in xlsx file format. If the Show folder options is clicked, the folder where the file is saved is shown when ready.

2.15.4 Power BI Example files



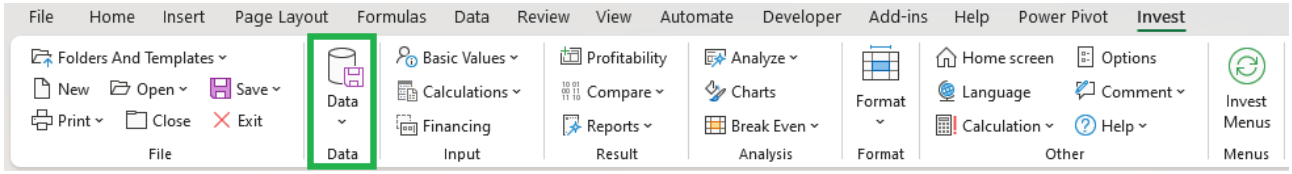
When you choose “Power BI Example Files” from the Data menu, a folder with one or more Power BI example files is opened.

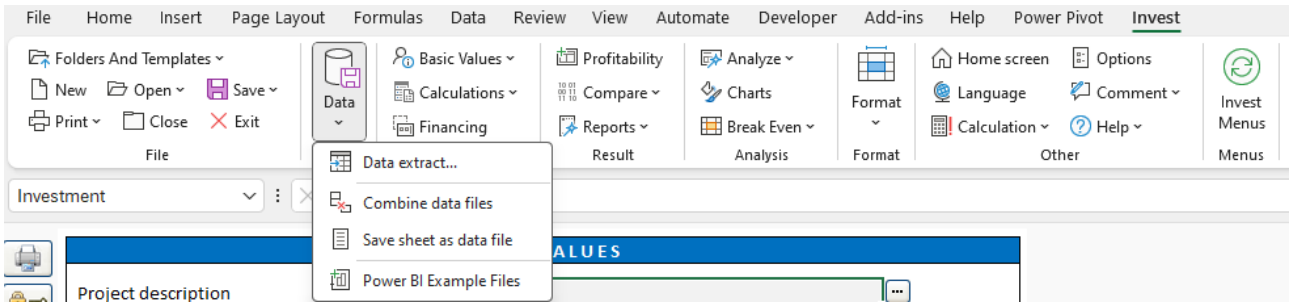


The example files require Microsoft Power BI Desktop and are included as example of how Invest for Excel data can be used in Power BI. The files are unprotected and can be modified freely.

2.15.5 Data functions in Excel menu

When Excel menus are shown, the data functions are found in a Data group after the File group in the Invest menu.

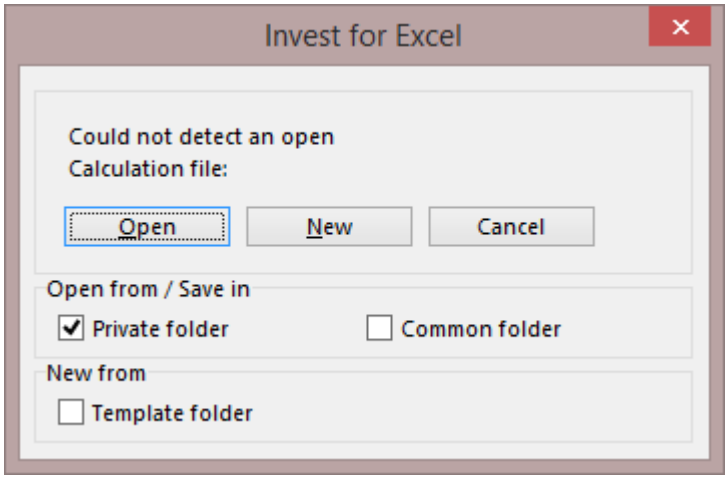




3 Input

3.1 Basic Values sheet

You begin your investment calculation, entering the basic values. Go to the **Input** menu to access the **Basic Values** screen. Alternatively, you can click the **Basic Values** button in the Home Screen. Press **New** if you don't have a calculation file open.



To open a new calculation file, select the command "**New**", or to open a previously saved calculation file, select "**Open...**".

3.1.1 Calculation term

When you start a new calculation file, the **Calculation term** dialog box is automatically shown. You have to select the total time span (term) for your calculation.

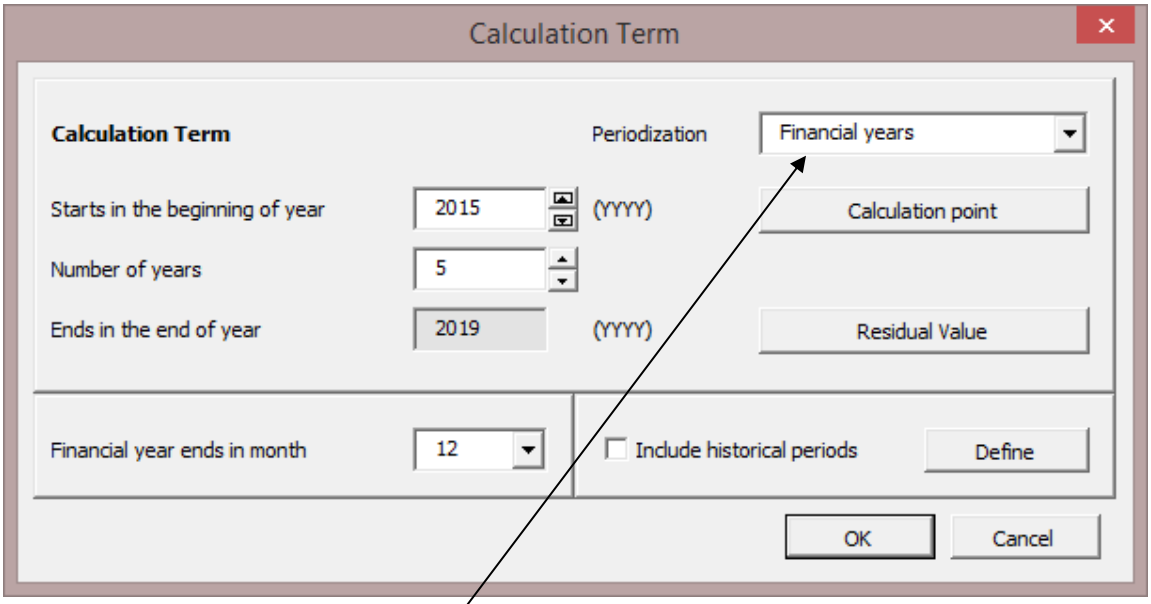
By default, the calculation term is defined on a yearly basis.

A more detailed approach can be selected, where the investment term can be split into two phases, in order to enable calculation intervals of variable lengths. The phases can be divided into intervals ranging from a month for the most detailed, to a year for a rough calculation. The idea is to allow monitoring of the different phases, such as the initial phase (Phase 1), and the actual implementation phase (Phase 2) in more, or alternatively less detail.

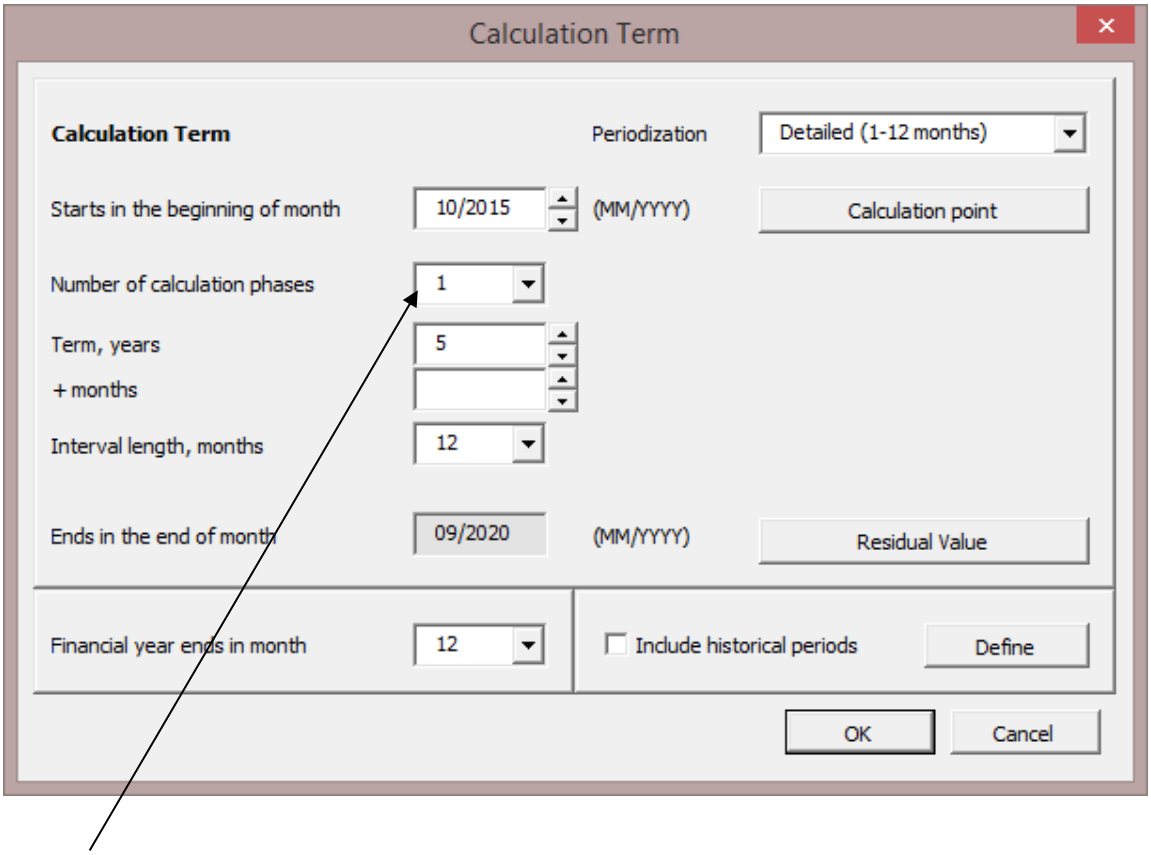
You can open the Investment term dialog by clicking the ... button in the **Basic Values** screen.

The calculations sheet is limited to 16000 columns. It is advisable to use a calculation term that corresponds to the useful life of the investment object. Ideal term would be the *economical life* of the object, or if it is not known, the *technical life* of the object, or if neither is known, the *depreciation period* of the object. A shorter investment term can also be used, as long as residual value of the project is included.

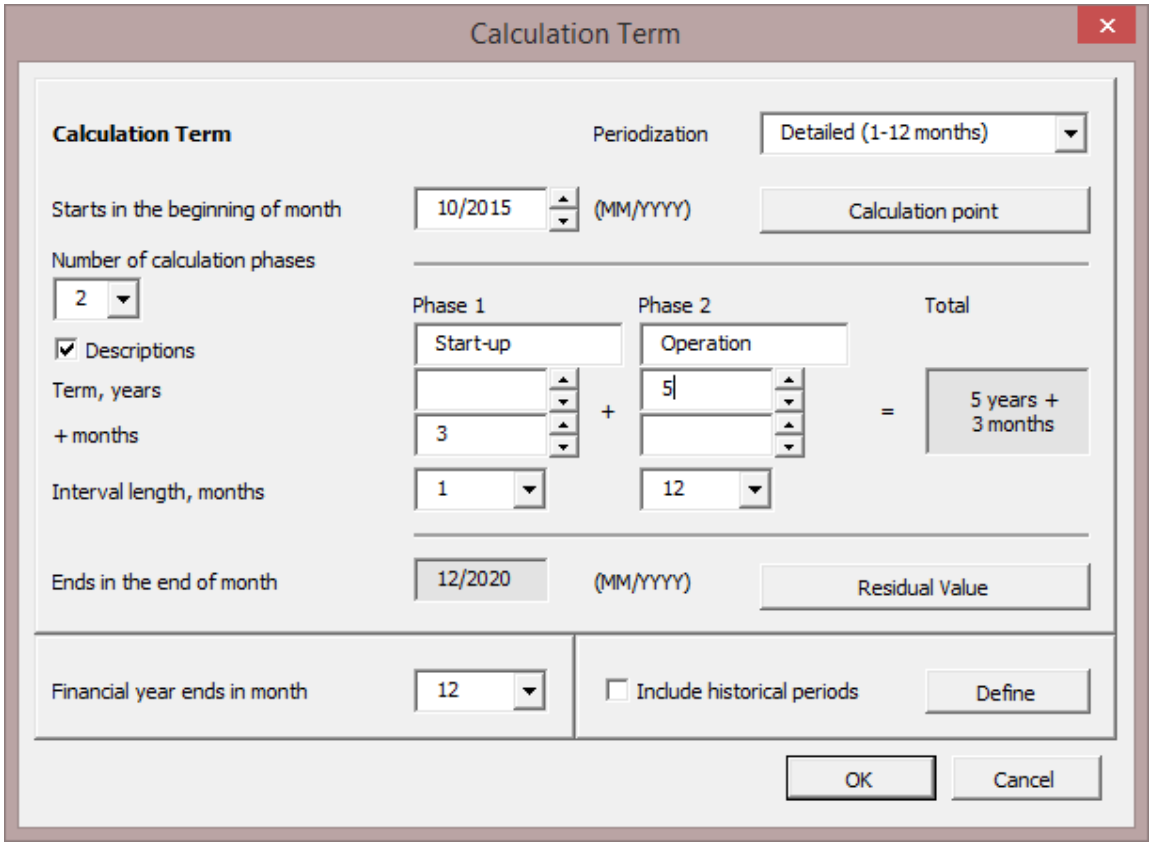
Select the month in which the company's financial year ends (default is December). The program automatically divides the calculation intervals into financial years. This is particularly significant if the financial effect of depreciation and taxation on are taken into account.



You may define the calculation term in financial-year intervals or more detailed. If you are making a calculation on annual basis, just press OK.



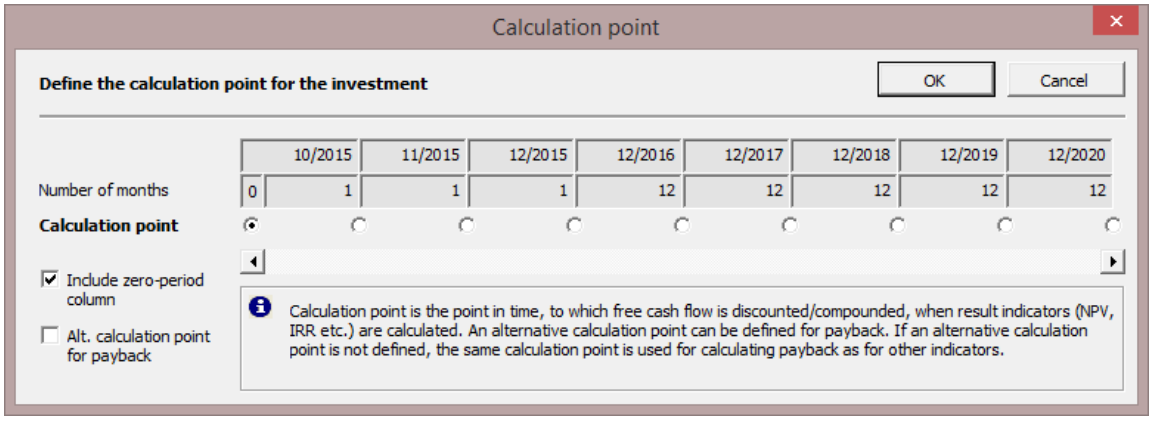
A detailed calculation term may hold one or two phases. The calculation term can be split in two calculation phases with different interval lengths, e.g. phase 1 on quarterly basis and phase 2 on annual basis.



In the example above, the calculation term is 5 years and 3 months, defined as 3 months in a start-up phase on a monthly basis, and a 5-year operational phase on yearly basis.

When the construction phase of the investment lasts several months or even years, it makes sense to divide the calculation into two phases, i.e. 'construction phase' and 'operations'. These two phases follow each other without any gap in the tables, only their intervals might be different. In calculating, this means that the program discounts the data from the end of each consecutive interval (on a monthly basis from the end of each month, and on an annual basis from the end of each year).

3.1.1.1 Calculation point



Normally, the net cash flow of the investment calculation is discounted to the beginning of the calculation term. This is default for a new calculation in Invest for Excel, if no customized calculation template is used.

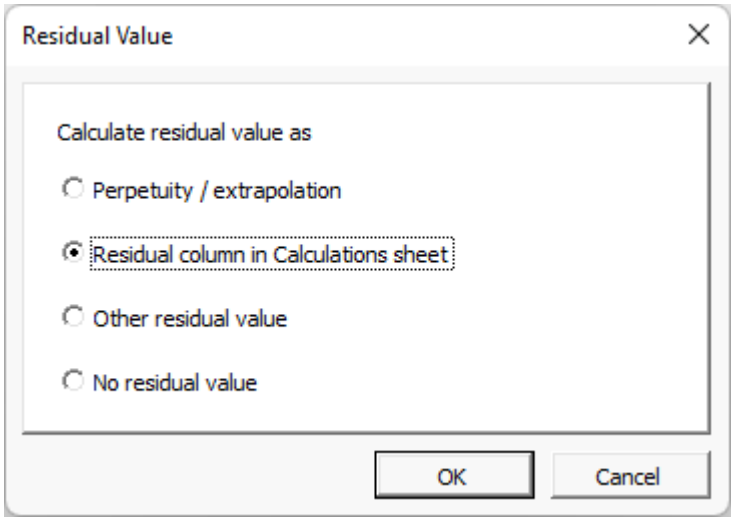
If appropriate, the calculation point can be changed to another point in time, in which case cash flow before the calculation point will be compounded and cash flow after the calculation point will be discounted to the calculation point.

An alternative calculation point can be defined for payback calculation.

Here, you can also choose not to include a zero-period column.

3.1.1.2 Residual value

In the Enterprise edition you can select how the residual value of the investment calculation is calculated.



Perpetuity can be used for "going concern" type of calculation, where the operation is expected to continue for a foreseeable future. In this case, you use a calculation term of, for example, 5 or 10 years and select the last typical financial year as basis for perpetuity.

Extrapolation is useful in long-term projections, e.g. 40 years of operation can be done so that you model 10 years and then extrapolate 30 years with some trend.

The options for perpetuity / extrapolation – are specified in the Profitability Analysis table (details in section 4.1.2).

Other residual value can be entered at end of calculation term.

Present value of business cash flows	Nominal	PV
± PV of operative cash flow		3 602 422
+ PV of residual value	3 118 731	1 993 832
Present value of business cash flows		**5 596 254**

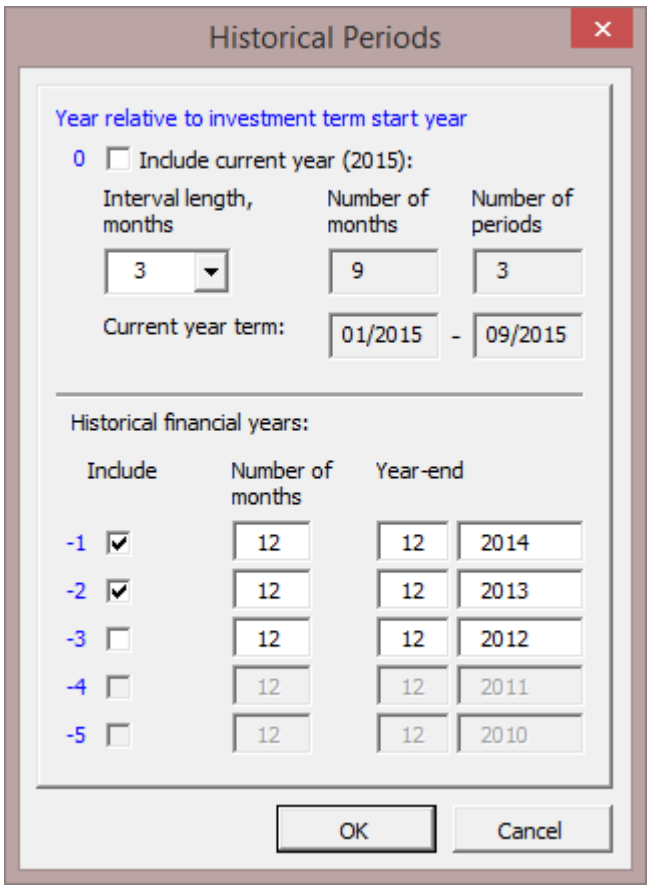
The **Residual column** (which is the only residual value option in all other editions than Enterprise) can be used to freely specify residual cash flow effects of any item in the calculation.

In the Enterprise edition, you can also specify that **no residual value** is to be used for the calculation.

3.1.1.3 Historical periods

You can also include historical financial statements. Tick the years you wish to include and you will get the necessary columns in the following calculation tables.

If the forecast period starts in the middle of the current year, you can include the months that have already passed into the calculations on e.g. a monthly or quarterly level.

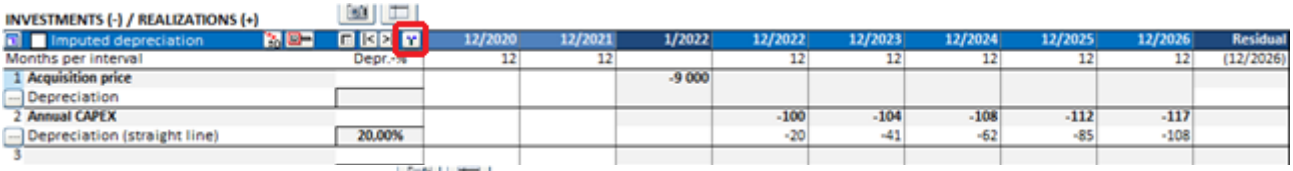


Note that, although historical periods are not included in calculating the result of the calculation, they can affect cash flow. Changes in working capital can be affected by opening balance in Balance Sheet. Also, depreciations of opening balance book values will affect income tax calculation.

The history columns can be hidden if necessary when printing or presenting calculations. Click on in the blue bar at the top of the calculation tables. When you wish to unhide the columns, re-click the same button.

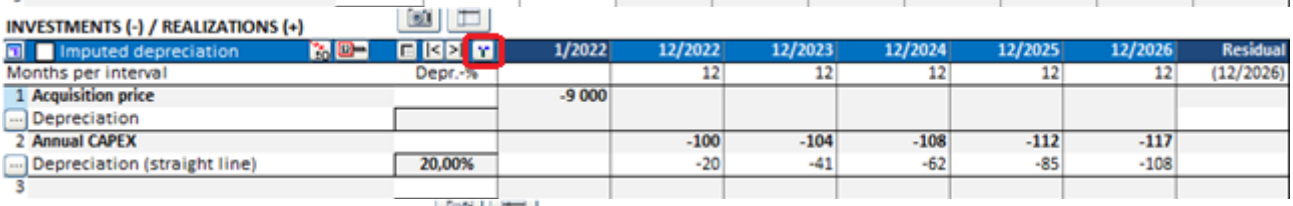
3.1.1.4 Toggle periods

Toggle periods-button on “Calculations” sheet is a multi-toggle button. Pressing the button toggles history periods, zero period, calculation phase 1, calculation phase 2 and residual column.



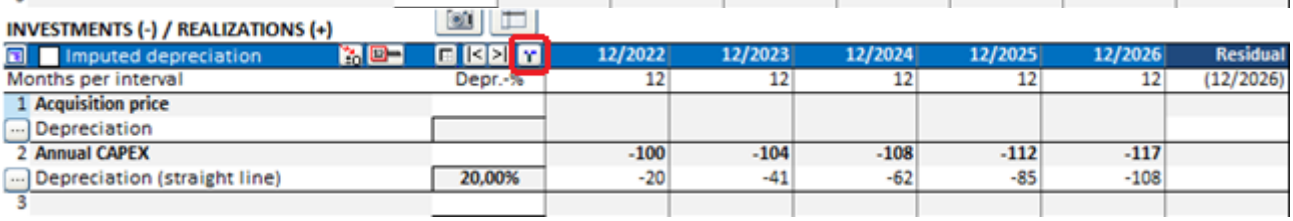
INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		12/2020	12/2021	1/2022	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	Depr.-%	12	12		12	12	12	12	12	(12/2026)
1 Acquisition price				-9 000						
Depreciation										
2 Annual CAPEX					-100	-104	-108	-112	-117	
Depreciation (straight line)	20,00%				-20	-41	-62	-85	-108	
3										



INVESTMENTS (-) / REALIZATIONS (+)

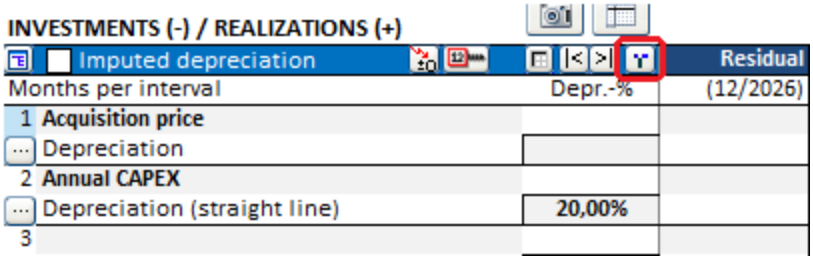
Imputed depreciation		1/2022	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	Depr.-%		12	12	12	12	12	(12/2026)
1 Acquisition price		-9 000						
Depreciation								
2 Annual CAPEX			-100	-104	-108	-112	-117	
Depreciation (straight line)	20,00%		-20	-41	-62	-85	-108	
3								



INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	Depr.-%	12	12	12	12	12	(12/2026)
1 Acquisition price							
Depreciation							
2 Annual CAPEX		-100	-104	-108	-112	-117	
Depreciation (straight line)	20,00%	-20	-41	-62	-85	-108	
3							

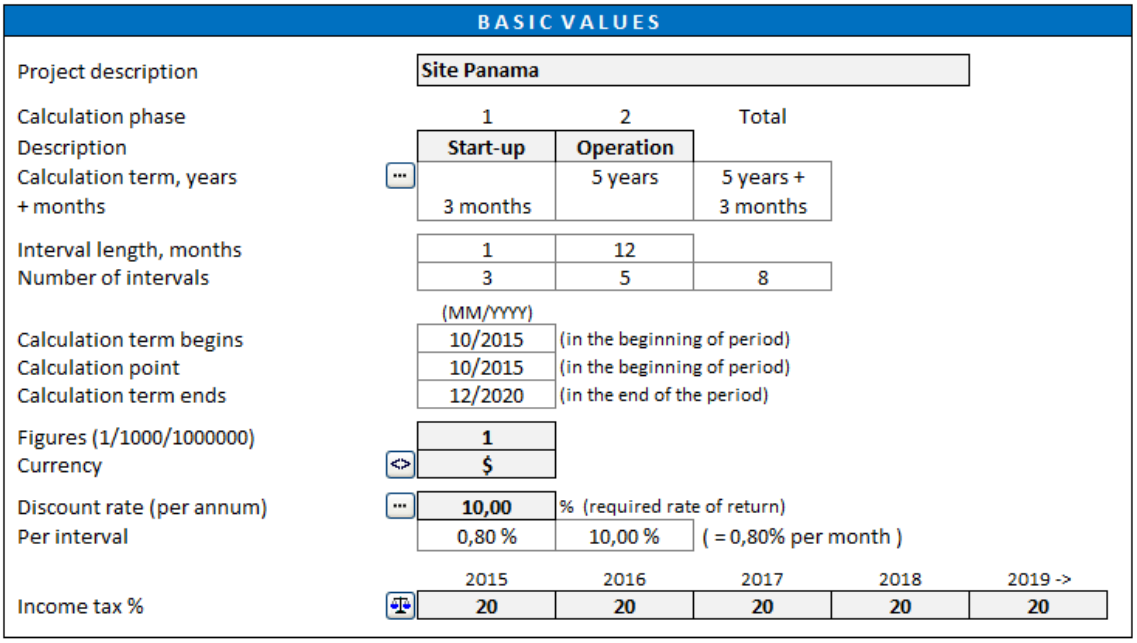
If the calculation term is divided in two phases, the phases are also toggled.



INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		Residual
Months per interval	Depr.-%	(12/2026)
1 Acquisition price		
Depreciation		
2 Annual CAPEX		
Depreciation (straight line)	20,00%	
3		

3.1.2 Basic Values



Enter the following data:

Project description: An informative text, shown as an identifier in Invest for Excel's input screens, reports and printouts.

Calculation phase Description: Informative text: Description texts are showing if you have selected two phases and chosen to use phase descriptions.

Figures (1/1000/...): Unit (1, 1000, 1000000). Specifies the accuracy of amounts. In the case of a large investment, it is practical to enter sums in thousands or even larger units. When using thousands as accuracy level, enter 1000 in this cell. The unit used is shown as an informative text in the calculations.

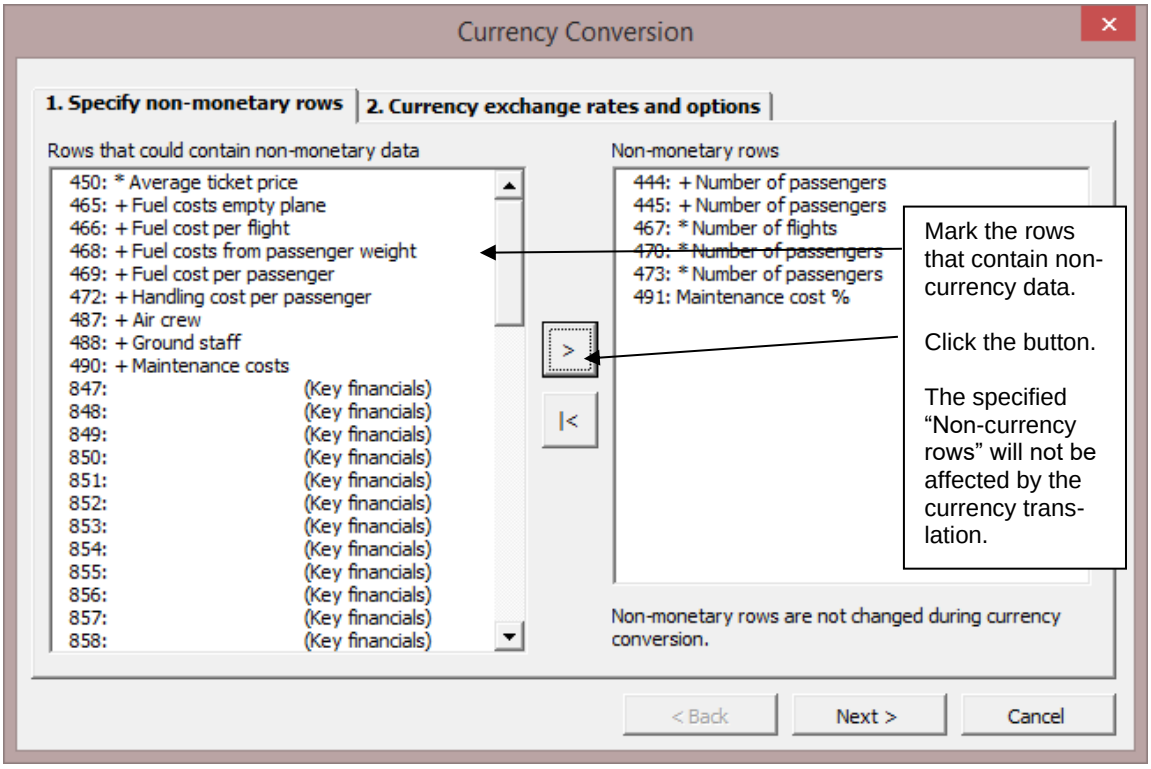
Currency: Informative text: The currency unit used in the calculation.
Type in currency unit, e.g. USD.

3.1.2.1 Currency conversion

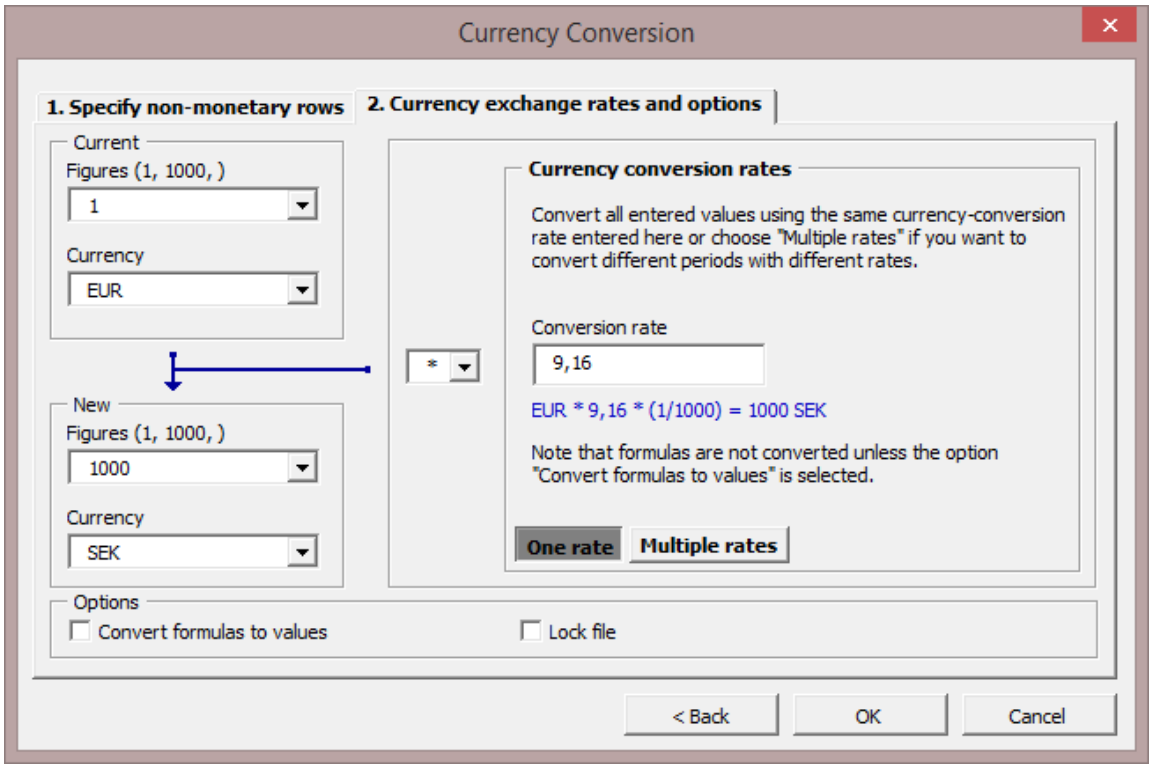
Currency conversion is valid only for Pro and Enterprise edition. Note! This function is used only to convert a readymade calculation from one currency to another.

Use the <> button to open the Currency conversion dialog box.

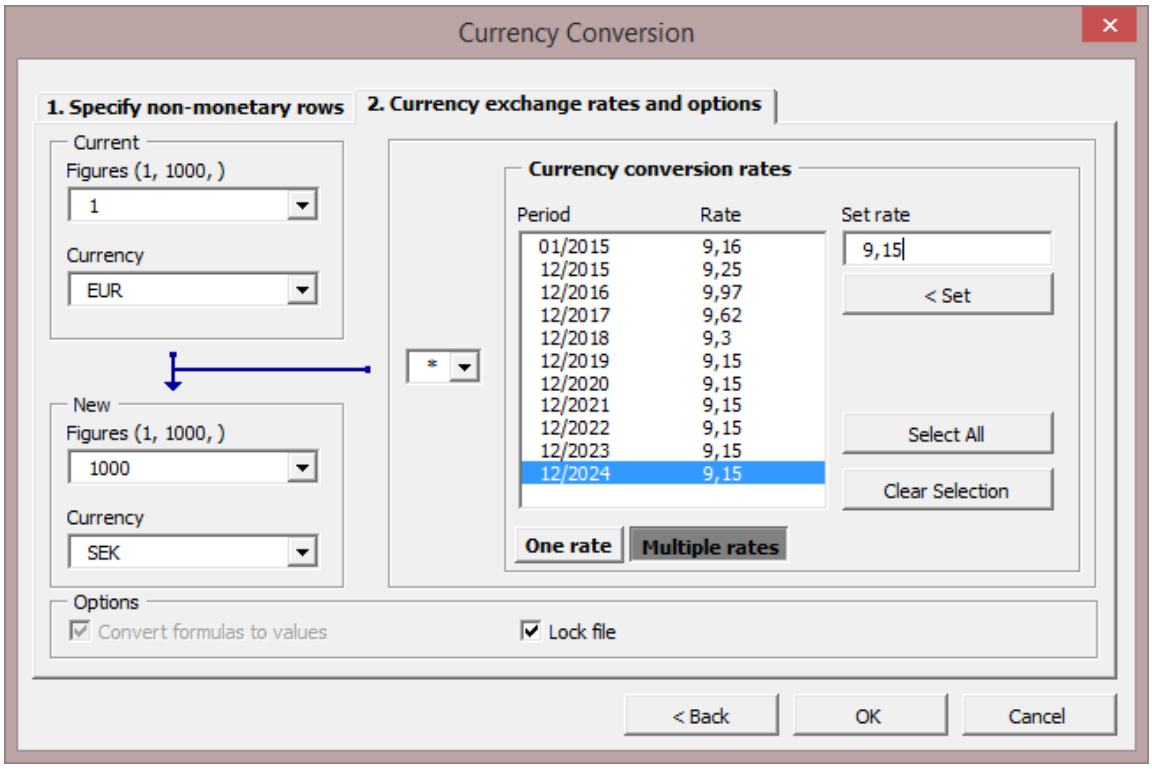
In the first page of the dialog box you can specify any non-monetary rows (that should not be included when the currency conversion is done):



In the second page you specify the conversion rate to use and if you want to convert formulas to values and lock the file.

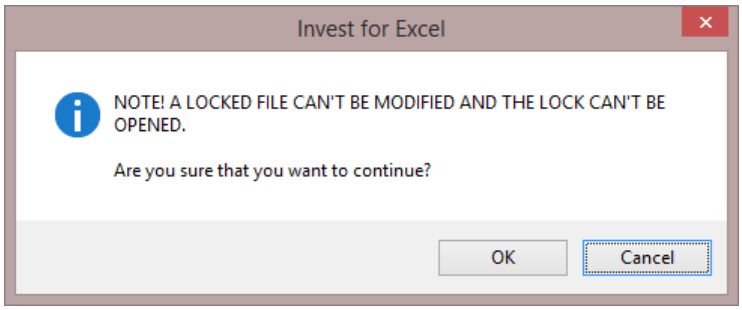


Note that in a currency conversion, only value cells are converted and fomulas remain unchanged. As a result, a formula like "=13000+5500+27000" will remain unchanged. This could lead to erroneous results, unless the option 'Convert formulas to values' is used. Multiple conversion rates can be specified, if needed:

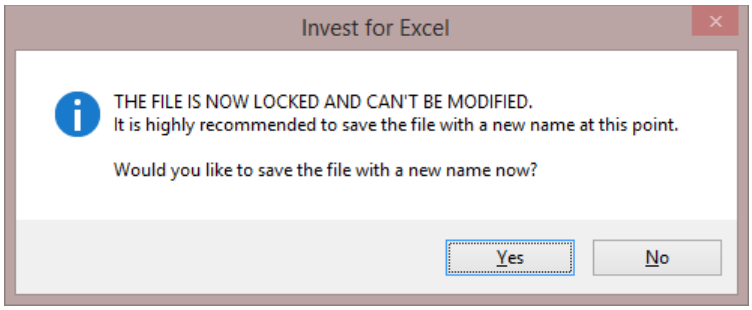


Note that when multiple rates are used, formulas are always converted to values.

Lock file option will give this warning:



If you press OK it will show this message after currency conversion:



We recommend pressing Yes. When saving Invest for Excel automatically adds to the offered file name the ending “_LOCKED”. Now the saved file can’t be changed.

3.1.2.2 Discount rate (per annum)

The Discount rate (annual *Discount Factor*) refers here to the **required rate of return** on the investment capital. This corresponds to the annual yield required of investments of similar type. It can also be seen as the cost of capital.

Invest for Excel® applies the discount rate to calculating net present values and to defining the payback term. In other words, the cash flows are discounted to the calculation point with the discount rate. The calculation point is by default the start of calculation. The discount rate works as the time factor of money. For example, 1 million USD received after one year is worth 909,090 million USD in today's money (present value), if the required rate of return is 10%.

When specifying the discount rate, you are looking for an answer to the question 'what returns would some other investment in the same risk category yield'? The higher the risk is, the higher the yield expectation. The level of the imputed interest rate depends also on the company's line of business, the returns expected by the owners, the liquidity of the company, etc. The criteria for the required returns on investment are therefore usually specified individually for each company and each case. Companies often have a specific overall rate of return requirement on their capital investments. The minimum rate of return is equal to financing costs. The financing costs consist of costs for both debt and equity (see WACC definition in next chapter).

In practice, the required rate of return is often determined step-by-step depending on the kind of investments undertaken. The step-by-step approach to required returns on different types of investments makes it possible to delegate investment decisions on the one hand, and to manage investment activity according to the chosen investment policy on the other hand.

CLASSIFICATION OF INVESTMENTS:

Investments can be classified and the required returns can be staggered, for example:

Class	Investment motive	Required rate of return
1.	Imperative reasons	None
2.	To safeguard market shares	For example: 6%
3.	To substitute present investments	For example: 12%
4.	To cut costs	For example: 15%
5.	To get higher returns	For example: 20%
6.	To enter new markets	For example: 25%

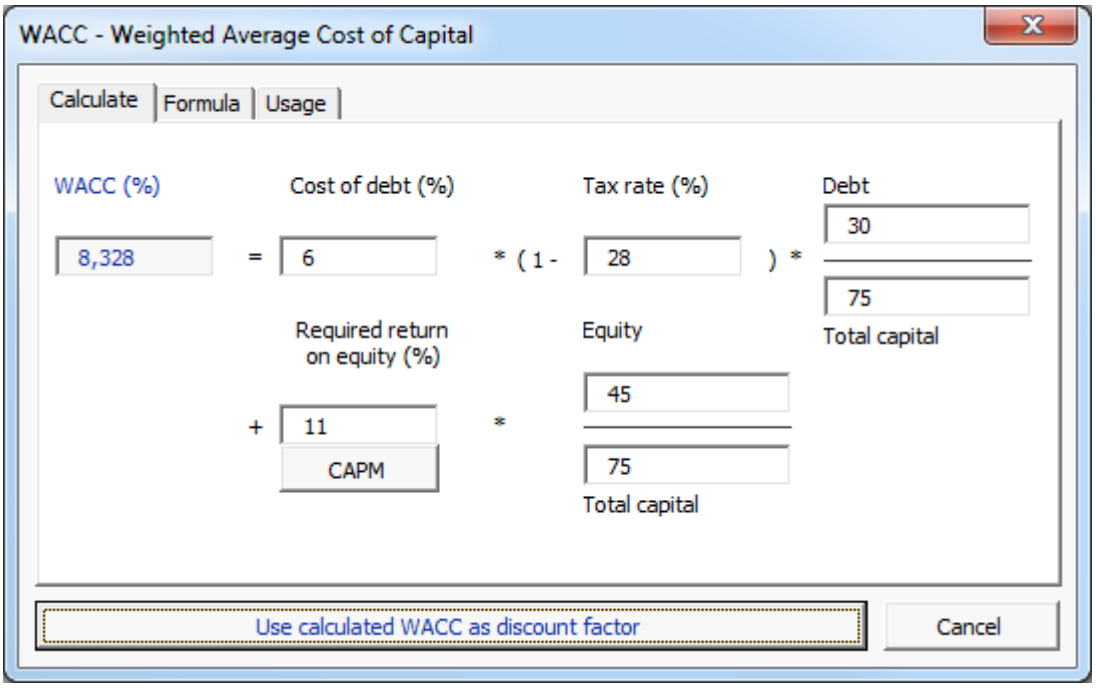
Source: Honko 1979.

The program converts the annual discount rate per interval and month. Please, note that there is a difference between the required rate of return before and after taxes. Please note also that if the input values are not inflated, the discount rate should not include inflation.

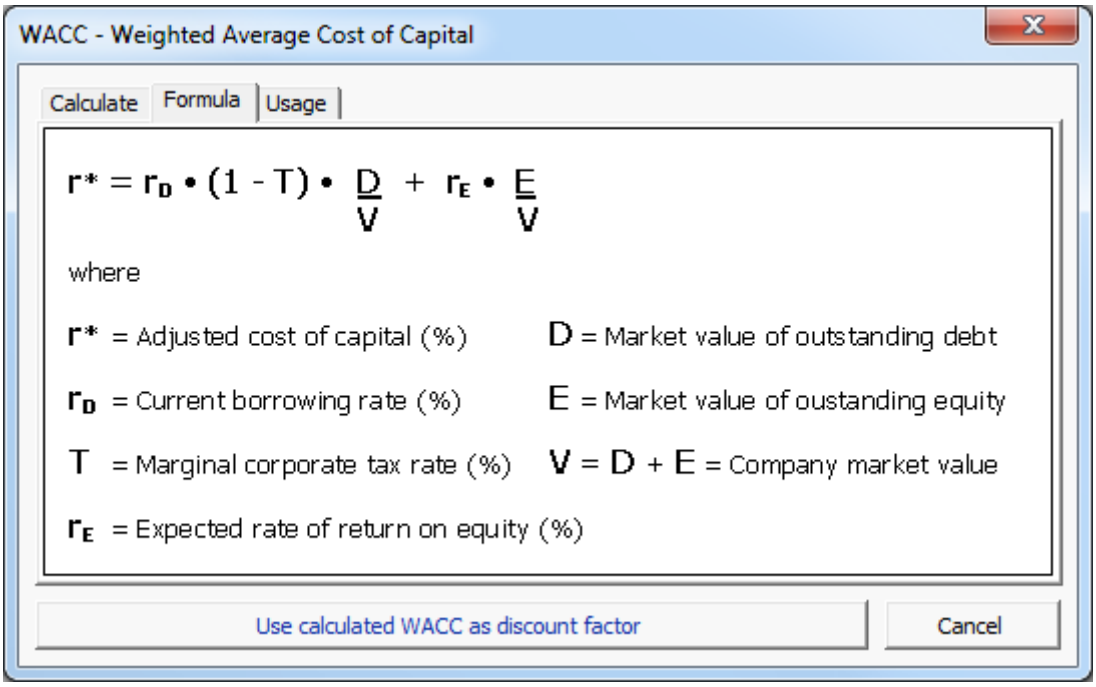
3.1.2.2.1 WACC

When specifying the discount rate, you may draw on your knowledge about the company's required rate of return on its equity, and its equity to liabilities ratio.

Click the [...] button beside the discount rate and then "WACC..." and enter the necessary data. The WACC dialog box has separate tabs for formulas (Formula) and definitions (Usage). If you select "Use calculated WACC as discount factor", WACC will be used as discount rate.

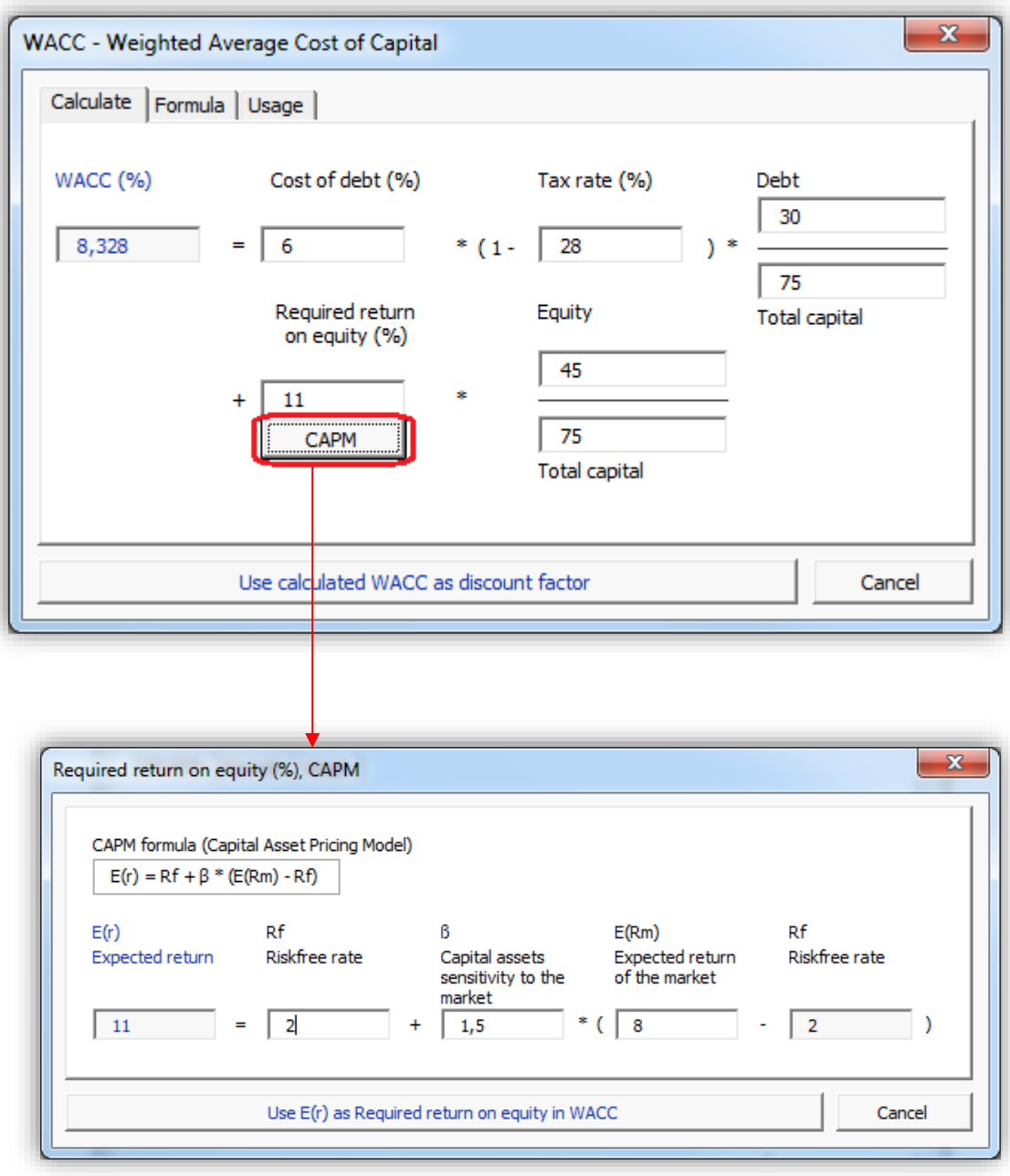


In the above example, we have used 6% as the average borrowing rate for debt, 11% for the required rate of return on equity; the company's income tax rate is 28%. Equity is about 30,000, while its liabilities amount to 45,000 €. When you click on the **Use calculated WACC as discount factor** button, the program copies the calculated WACC rate to the input field for imputed interest rate. The WACC formula:



Enter percentages as numbers, for example, enter 6% as the figure 6. The program converts the figures automatically to percentages.

CAPM calculation for return on equity is available in the WACC calculation.

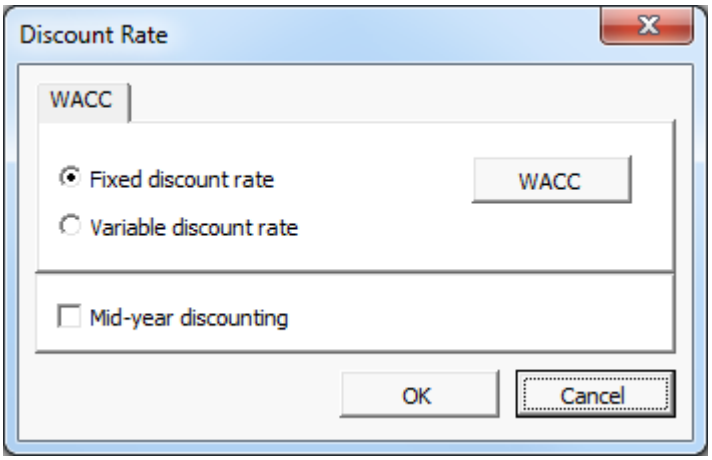


3.1.2.2.2 Variable discount rates

The Free cash flow of each period (column) can be discounted/compounded to the calculation point using variable discount rates.

Specify that you want to use variable discount rates by clicking the ... button beside the Discount rate in Basic values:

Select "Variable discount rate" in the "Discount Rate" dialog box:



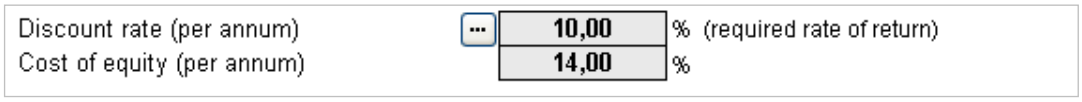
When you press OK you are taken to the Cash flow statement on the Calculations sheet, where you can specify a discount rate for each cash flow:

Free cash flow (FCF)	**-50 000**	**3 797**	**4 638**	**4 667**
Discounted free cash flow (DFCF)	-50 000	3 516	3 958	3 693
Cumulative discounted free cash flow	-50 000	-46 484	-42 526	-38 833
Discount rate (per annum)	**8,00%**	**8,00%**	**8,25%**	**8,12%**

Note that each columns 'Free cash flow (FCF)' is discounted/compounded to the calculation point using the discount rate specified for the column. Enter annual discount rates even if the columns period is shorter than 12 months.

3.1.2.2.3 Cost of equity

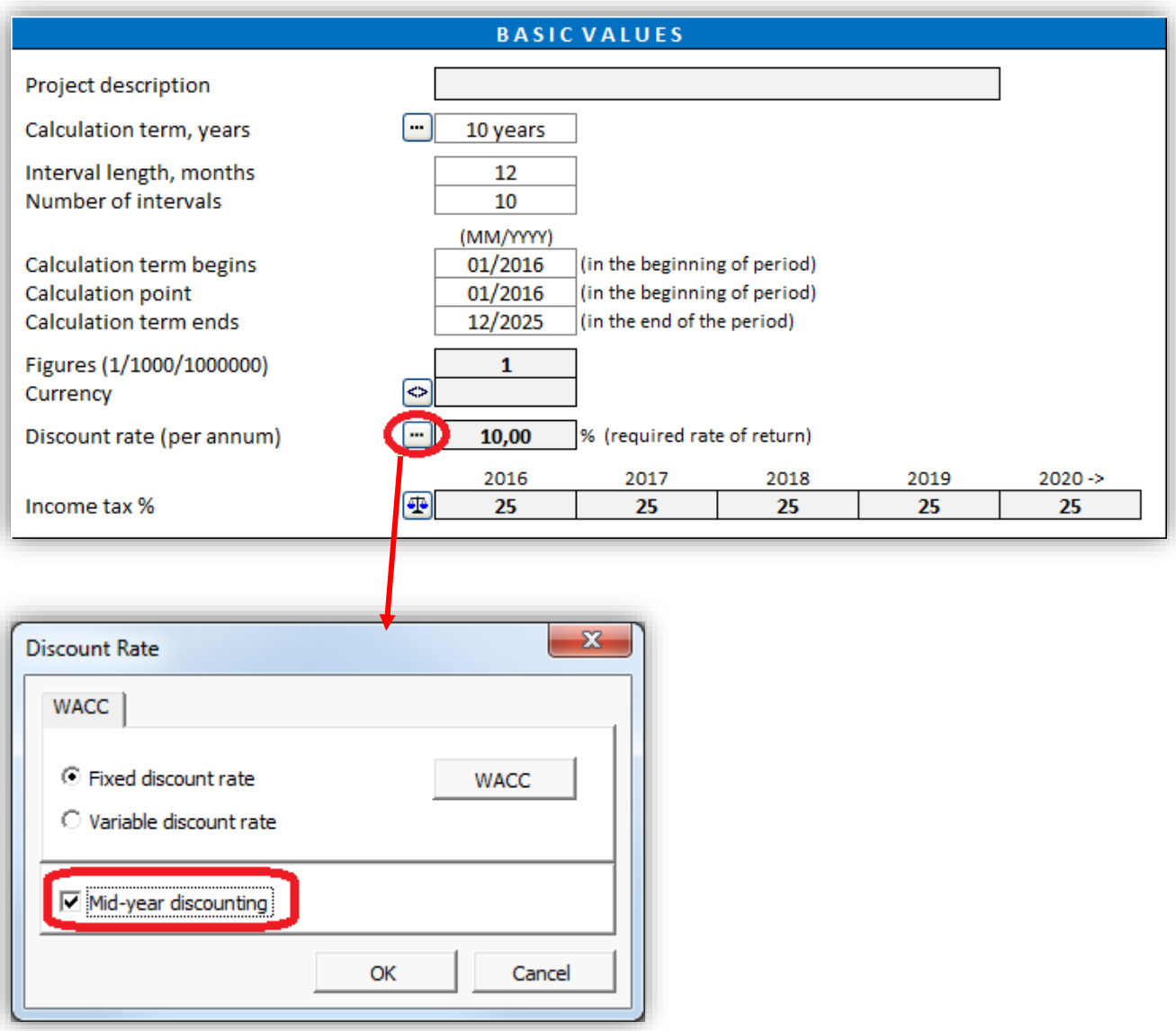
Only in *Enterprise* edition: Cost of equity is added to the Basic values table, when FCFE calculation is selected to be included in the file. FCFE can be included from the Options dialog box (Invest menus).



Enter the required after-tax rate of return on equity. Note that Invest for Excel doesn't make a distinction between Preferred stock and common stock. Cost of equity should be return on all equity.

3.1.2.3 Mid-year discounting

As an alternative to standard end-of-year discounting, mid-year discounting can be used. To turn on mid-year discounting, open the "Discount Rate" dialog box from the "Basic Values" table of the calculation file and check "Mid-year discounting" in the dialog box.



Formula:

$$\text{Discount factor (mid-year)} = \frac{1}{(1 + \text{Discount rate})^{(n - 0.5)}}$$

$$\text{Discount factor (end-of-year)} = \frac{1}{(1 + \text{Discount rate})^{n}}$$

Where:

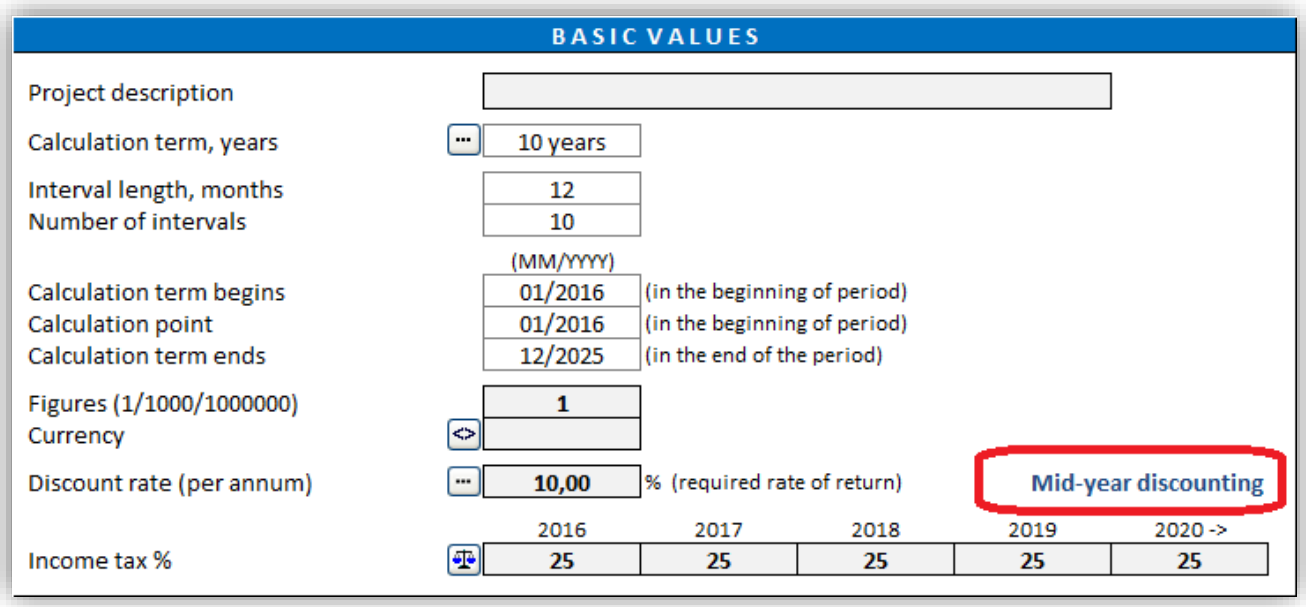
n = year in the projection period
0.5 = is subtracted from n in when mid-year discounting is used.

Zero-period and Residual value are unaffected and are calculated the same way in mid-year discounting and end-of-year discounting.

Extrapolated residual value is calculated as end-of-year cash flows in both mid-year discounting and end-of-year discounting.

Also, when shorter periods than year are used, these periods are always discounted from the end of the period. Mid-year discounting only affects full-year periods.

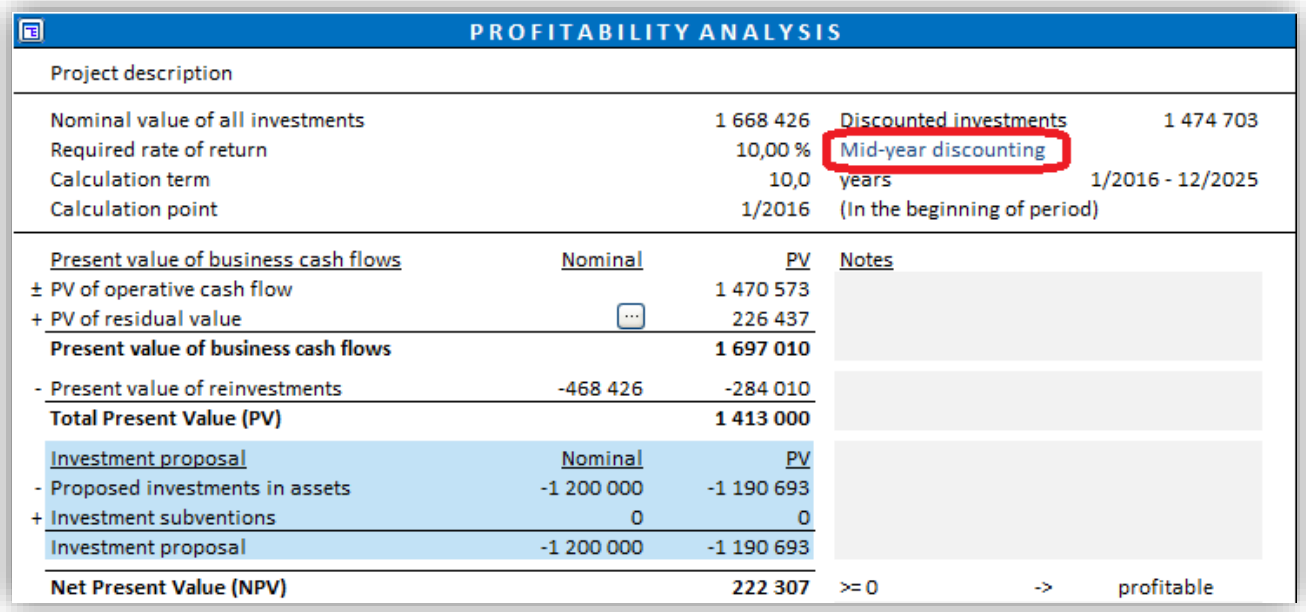
When mid-year discounting is used, information of this is shown in the Basic Values and



BASIC VALUES

Project description			
Calculation term, years	10 years		
Interval length, months	12		
Number of intervals	10		
	(MM/YYYY)		
Calculation term begins	01/2016	(in the beginning of period)	
Calculation point	01/2016	(in the beginning of period)	
Calculation term ends	12/2025	(in the end of the period)	
Figures (1/1000/1000000)	1		
Currency			
Discount rate (per annum)	10,00	% (required rate of return)	Mid-year discounting

Income tax %	2016	2017	2018	2019	2020 ->
	25	25	25	25	25



PROFITABILITY ANALYSIS

Project description

Nominal value of all investments		1 668 426	Discounted investments	1 474 703
Required rate of return		10,00 %	Mid-year discounting	
Calculation term		10,0	years	1/2016 - 12/2025
Calculation point		1/2016	(In the beginning of period)	

Present value of business cash flows	Nominal	PV	Notes
± PV of operative cash flow		1 470 573	
+ PV of residual value		226 437	
Present value of business cash flows		**1 697 010**	
- Present value of reinvestments	-468 426	-284 010	
Total Present Value (PV)		**1 413 000**	

Investment proposal	Nominal	PV
- Proposed investments in assets	-1 200 000	-1 190 693
+ Investment subventions	0	0
Investment proposal	-1 200 000	-1 190 693

Net Present Value (NPV)	**222 307**	>= 0	-> profitable

Example of mid-year discounting vs. end-of-year discounting (discount rate is 10%):

Mid-year discounting:

CASH FLOW STATEMENT

	1/2016	12/2016	12/2017	12/2018	12/2019	12/2020	Residual
Months per interval		12	12	12	12	12	(12/2020)
Income	0	-175 000	420 000	428 400	436 968	445 707	0
Income tax	0	0	-83 250	-84 845	-86 477	-88 147	0
Cash flow from operations	**0**	**-175 000**	**336 750**	**343 555**	**350 491**	**357 561**	**0**
Asset investments and realizations	-1 000 000	-200 000	-20 000	-20 200	-20 402	-20 606	836 007
Free cash flow (FCF)	**-1 000 000**	**-375 000**	**316 750**	**323 355**	**330 089**	**336 955**	**836 007**
Discounted free cash flow (DFCF)	-1 000 000	-357 548	274 554	254 799	236 459	219 434	519 095
Cumulative discounted free cash flow	-1 000 000	-1 357 548	-1 082 995	-828 195	-591 736	-372 302	**146 793**

NPV = 146 793

End-of-year discounting:

CASH FLOW STATEMENT

	1/2016	12/2016	12/2017	12/2018	12/2019	12/2020	Residual
Months per interval		12	12	12	12	12	(12/2020)
Income	0	-175 000	420 000	428 400	436 968	445 707	0
Income tax	0	0	-83 250	-84 845	-86 477	-88 147	0
Cash flow from operations	**0**	**-175 000**	**336 750**	**343 555**	**350 491**	**357 561**	**0**
Asset investments and realizations	-1 000 000	-200 000	-20 000	-20 200	-20 402	-20 606	836 007
Free cash flow (FCF)	**-1 000 000**	**-375 000**	**316 750**	**323 355**	**330 089**	**336 955**	**836 007**
Discounted free cash flow (DFCF)	-1 000 000	-340 909	261 777	242 941	225 455	209 222	519 095
Cumulative discounted free cash flow	-1 000 000	-1 340 909	-1 079 132	-836 191	-610 736	-401 513	**117 581**

NPV = 117 581

3.1.2.4 Income tax rate

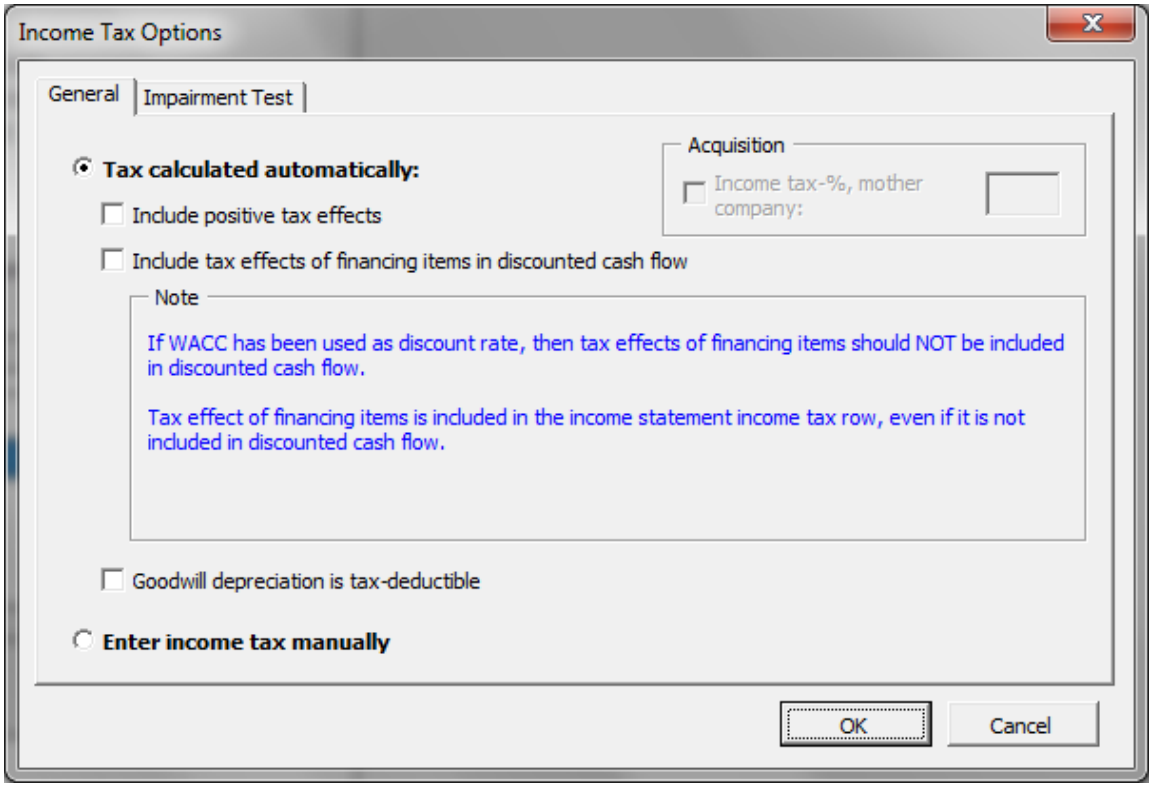
Enter the company's income tax rate for each of the first five years. The rate applicable in the fifth year is presumed to remain unchanged for the rest of the investment calculation term. This feature enables you to take into account changing tax rates in your calculation.

If the organisation is exempted from taxation, or if tax effects are for some other reason not taken into consideration, enter 0 (zero) for each year. Taxes are often ignored completely in investment calculations. In that case, the discount rate should also be defined before taxes.

When the tax rate has been specified, the effect of taxation on income in the investment calculation equals the tax rate. Depreciation affects the result by reducing the amount of tax paid (outward cash flow).

3.1.2.5 Income tax options

Press this button to open the income tax options dialog box.



Income tax can be calculated automatically or entered manually.

3.1.2.5.1 Tax calculated automatically

3.1.2.5.1.1 Include positive tax effects

The result of the investment is calculated on discounted cash flows after tax. The effect of tax is usually a decrease in profit and cash. By default, only this negative tax effect is taken into account when evaluating an investment.

Checking this box however means that tax benefits are also taken into account, when the investment (usually in the beginning) produces negative cash flows. If the company is generally profitable and if its future financial statements are presumed to be critical, the investment will have positive tax effects (a reduction in taxable income on a company level), which can be taken into account in the calculation by choosing this option.

3.1.2.5.1.2 Include tax effects of financing items in discounted cash flow

By default (this option is off), if any financing items have been included in Income statement, the income tax effect of the financing items is included in the Income statement, but not in the discounted cash flow.

When this option is activated, the income tax effects of financing items are also included in discounted free cash flow and therefore affect NPV. This is an alternative to taking financial structure into account in the discount factor. This option should NOT be activated when WACC is used as discount factor.

3.1.2.5.1.3 Goodwill depreciation is tax-deductible

When this option is activated, goodwill deprecation is tax deductible.

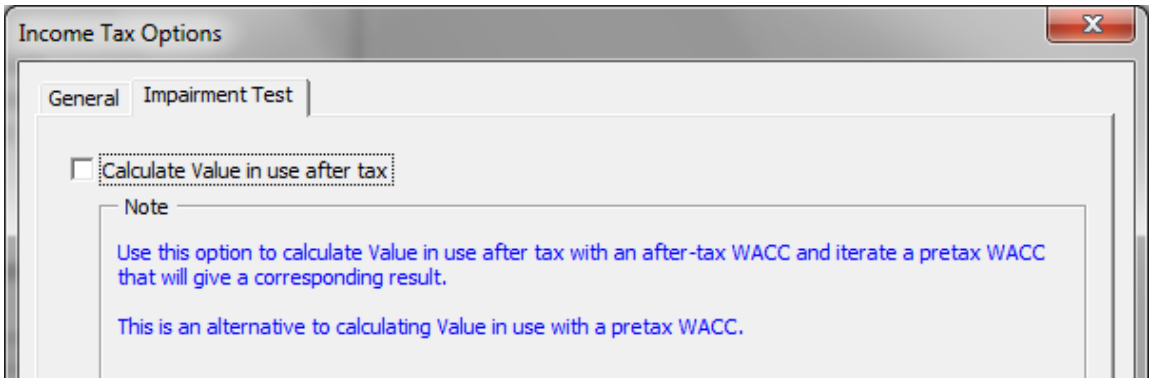
3.1.2.5.2 Enter income tax manually

When this option is activated, income tax is entered manually. The income tax row cells are unlocked and formulas are cleared.

The Income tax row in the cash flow statement by default holds a reference to the income tax row in the Income statement.

3.1.2.5.3 Impairment test and income tax

IFRS recommends that an impairment test should be done before tax with a pre-tax discount factor. This is default in Invest for Excel (option Calculate Value in use after tax is off):

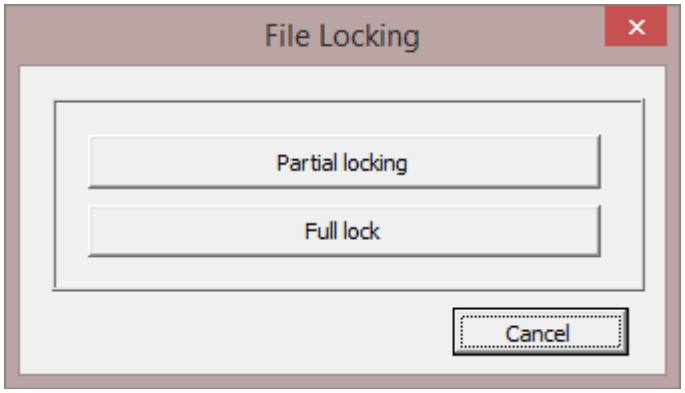


Sometimes it is easier or more accurate to do an impairment test after tax with an after-tax WACC and then iterate a pre-tax WACC that will give a corresponding result. This can be done by activating this option.

3.1.2.6 File locking

(This function is only available in *Pro* and *Enterprise* editions.)

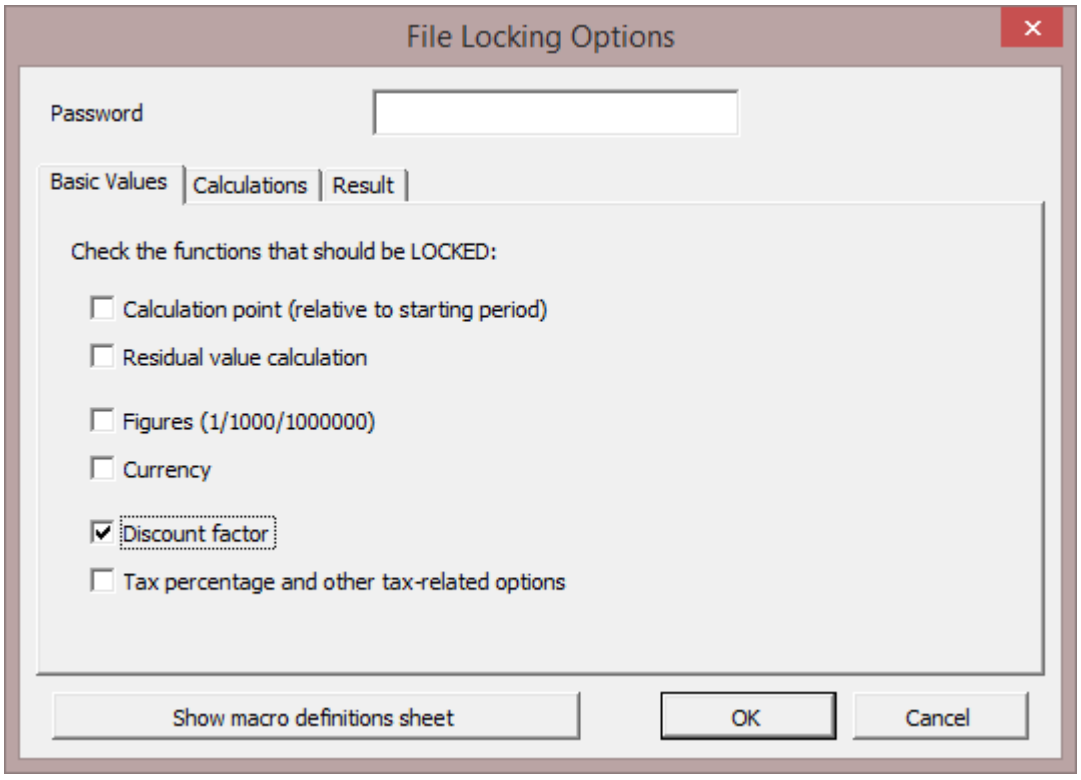
You can protect the calculation file from being altered by pressing the “lock” button. You can choose if you want to lock the whole file or some parts of it.



3.1.2.6.1 Partial locking

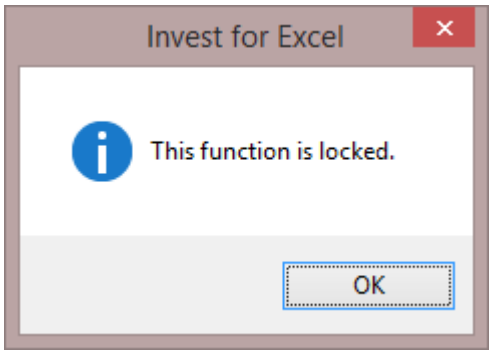
When you choose ‘Partial locking’ you can choose the parameters that should be locked. This is useful when you use a template with pre-entered data and/ or settings that should not be altered.

A password can be applied for the Partial locking options. NOTE! The password is case sensitive.

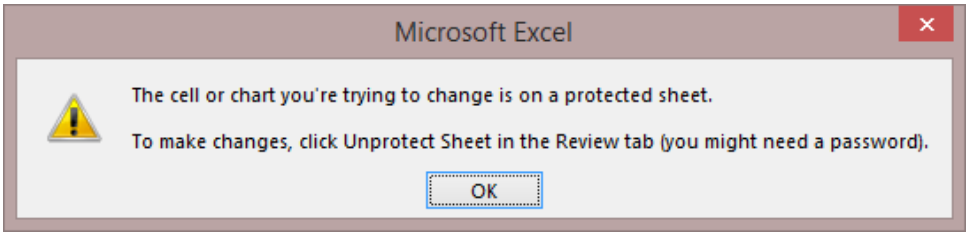


If you enter a password the program asks you to confirm it.

If you try to use a protected function, the following message is shown:



Or if you try to enter a value in a locked cell:

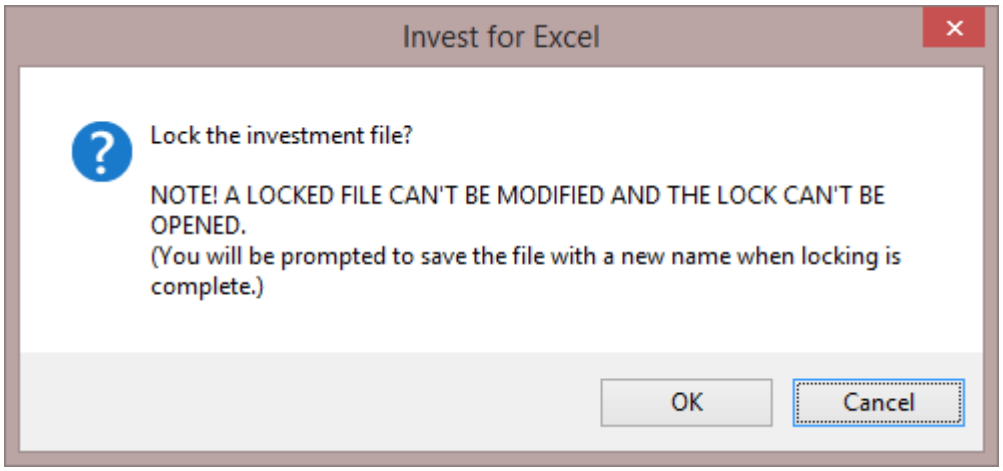


3.1.2.6.2 Full lock

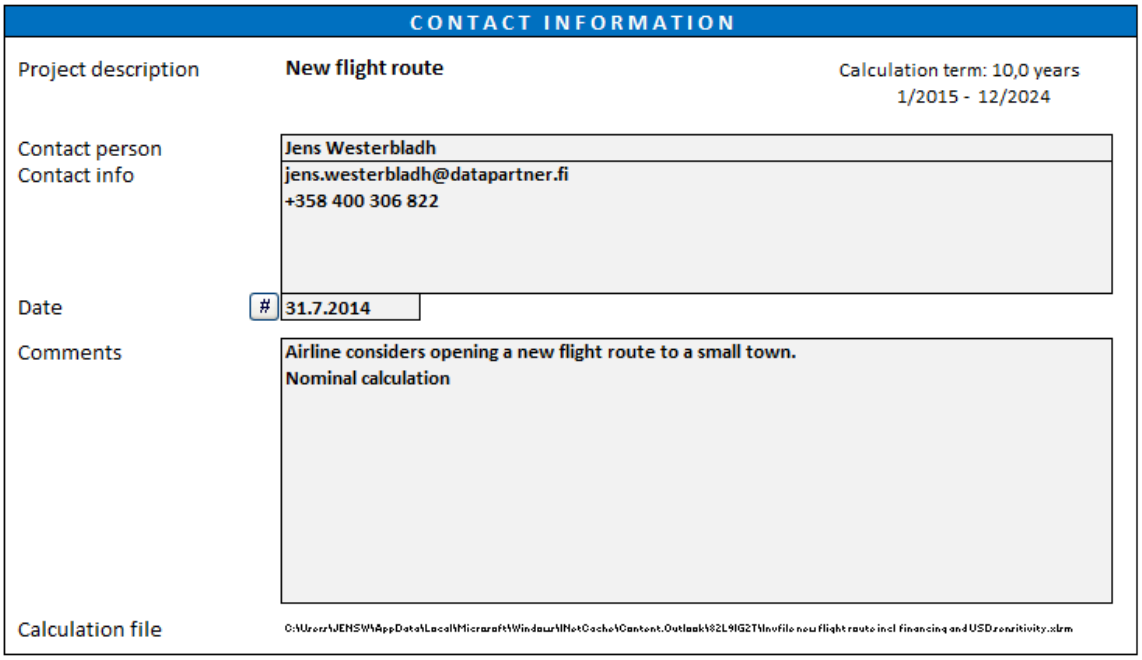
“Full lock” means you can’t edit any data in the file, but you can still navigate and print on the calculation after locking the file. Use this option when you want to ensure that no changes are made to the file.

NOTE! Full lock can't be opened once it has been applied.

The program asks you to confirm that you want to lock the file and prompts you to save the file with a new name:



3.1.3 Contact Information



Use this input screen to enter contact information and other comments useful for yourself or your colleagues.

Project description: Link to the **Basic Values** screen.

Contact person: Name of the person who made the calculation.
Contact info: How to contact her / him.

Date: The date when the calculation was made or last updated.

<- Click this button to update the date.

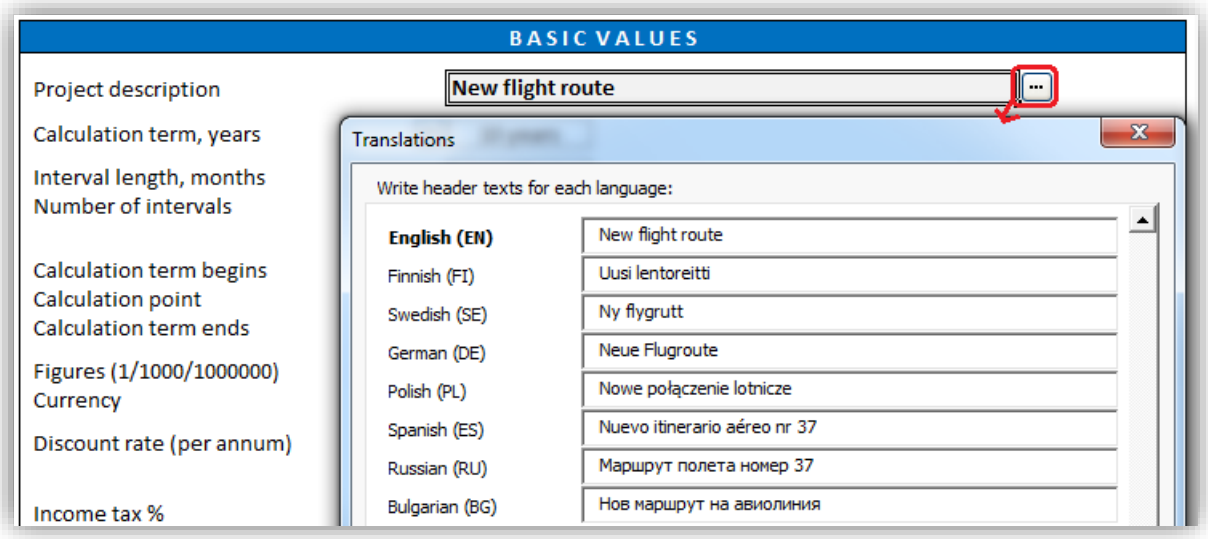
Comments: Text field for comments. Enter here the basic assumptions in the calculation, any explanatory notes or comments, and cross-references or links to other calculations, reports etc.

Calculation file: Name of the calculation file and the path to its folder. Useful information, if you should forget in which folder the file was saved. The path will be updated the next time you save it.

For explanations on buttons, see chapter 1.11.

3.1.4 Basic values sheet texts in multiple languages

Basic values sheet texts can be entered in multiple languages.

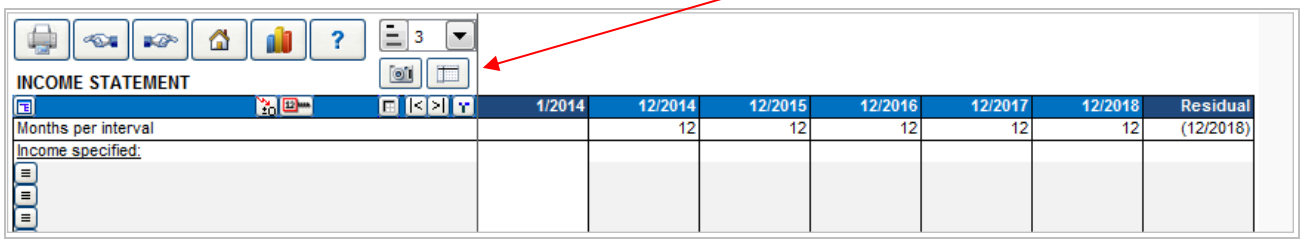


3.2 Calculations sheet

The result indicating the feasibility of the investment is calculated on the basis of the data input into the following spreadsheet tables. Together with the calculated return, this data forms the core of the calculation. The tables show information both entered by user and calculated by the program.

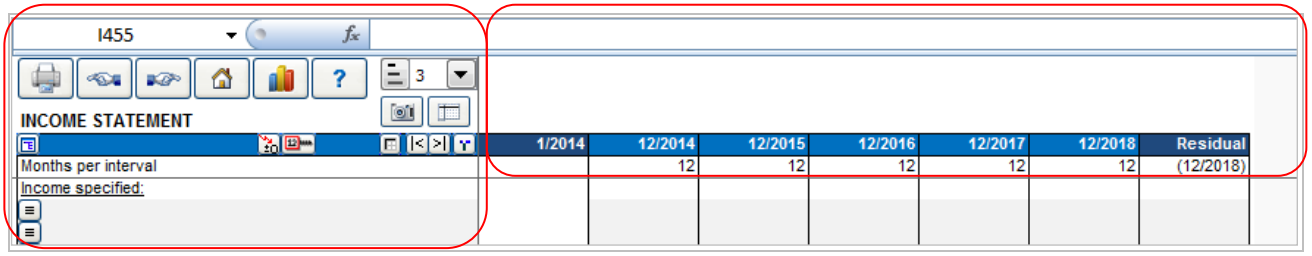
3.2.1 Unfreeze/freeze column headers (Calculation sheet)

You can unfreeze and freeze column headers by pressing the following button on the Calculations sheet: 



When you **unfreeze** column headers, only the row texts columns to the left are locked when you scroll right. When you scroll up or down, no rows are locked. This is useful when you create formulas that reference rows above the current table.

When you **freeze** column headers, both the row text columns to the left and the Header rows are locked when scrolling.



3.2.2 Buttons in Calculations sheet

Hiding/ un-hiding rows and grouping rows into categories. See 3.2.3.

Flip buttons for sub-rows. You can toggle (hide/unhide) sub-rows for the row with the Flip button by clicking it.

Running the Cell Break-Even function.

You can analyse for **any input variable** what value returns NPV=0. Move the cursor to the cell to be changed, before running the Break-Even function. For more information, refer to the **Analysis** chapter.

Copy/ distribute value or formula to the next columns. See 3.2.10.

This button shows/ hides row and column indexing (R1C1/ A1), like in Excel.

This button takes you to the last column of the table. It is very handy, when there are a lot of columns and you want to have a quick look at the status of the last column. You may also need this function when entering the residual value of the investment object as a positive (+) figure in the last column (**Residual**).

Go to the first column of the spreadsheet with this button.

If the calculation includes historical data columns you can hide or unhide them by clicking this button on the right.

See 1.9 General buttons for more information on buttons.

3.2.3 Row outlining

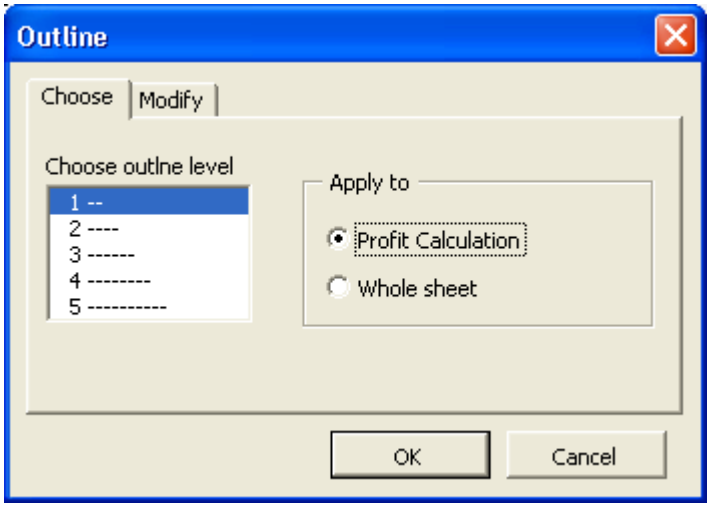
Row outlining in the Calculations sheet is available from Standard edition of Invest for Excel. Modifying outline levels is available from Pro edition.

Each table/statement in the Calculations sheet of a calculation file has two controls for outlining:

The dropdown list is for selecting outline level:

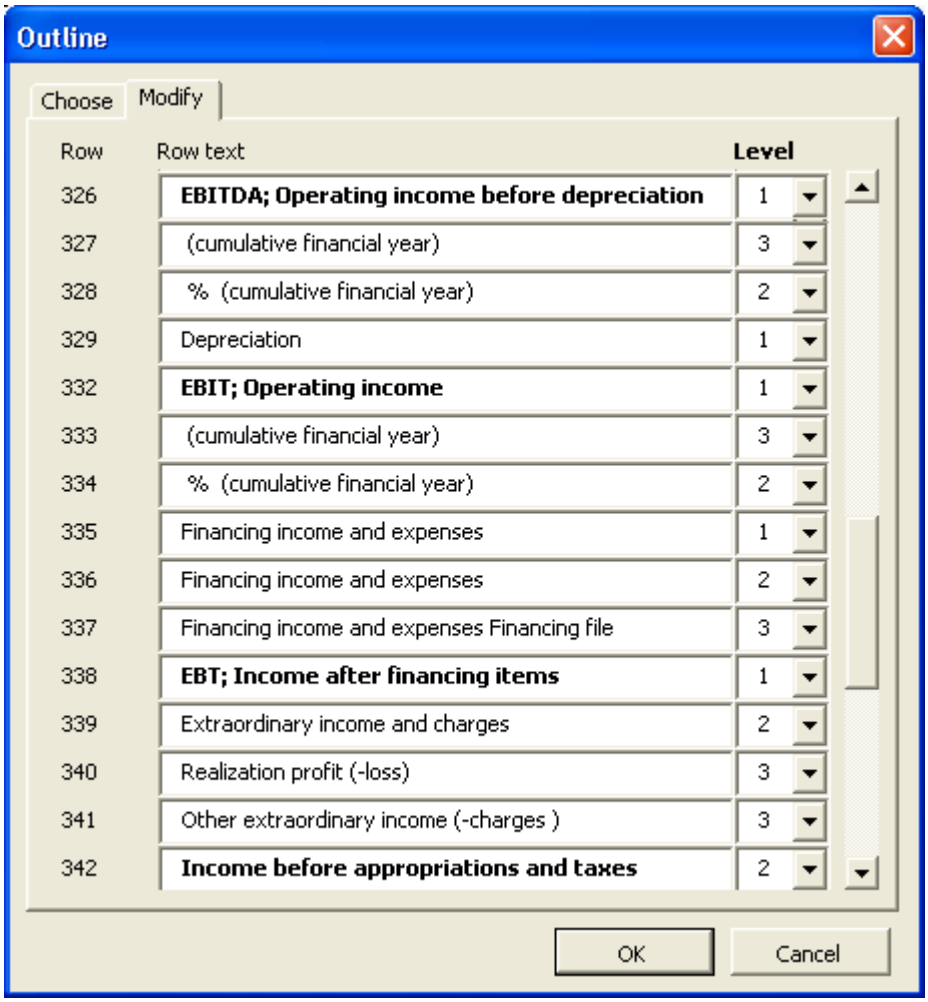
Five levels have been reserved for outlining:

The last item in the list ('...'), as well as the  button, opens the 'Outline' dialog:

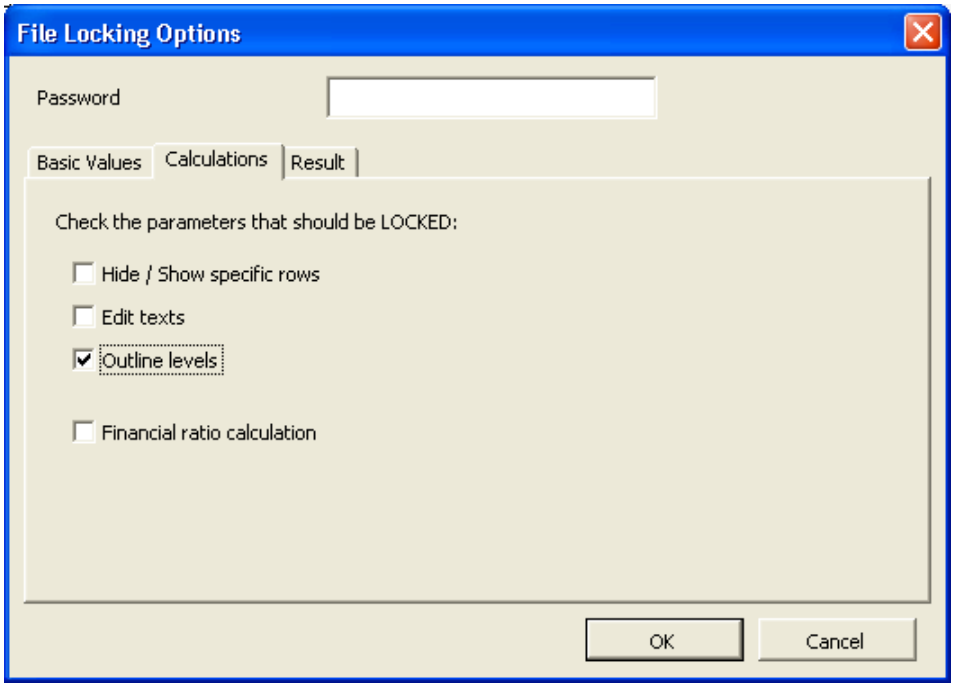


In the 'Choose' tab, you can select if the outline level selection applies to the current table/statement, or the whole sheet.

In the 'Modify' tab you can modify the outline level for each row in the current table/statement:



Modifying outline levels is available from Pro edition. A locking option for outline levels have been added in the 'File locking Options' dialog:

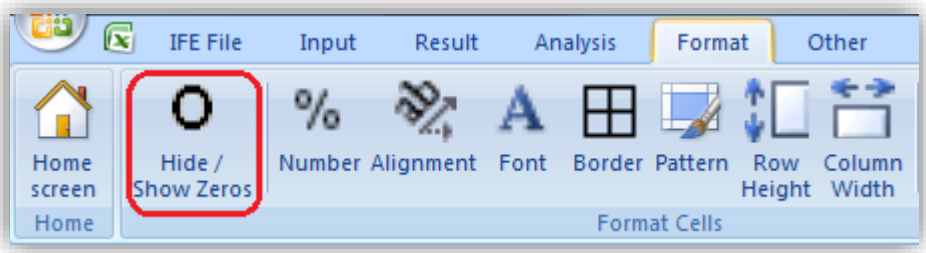


3.2.4 Hide / show zero values

Tables can be made look much cleaner by hiding zero values.

BALANCE SHEET

EUR	1/2019	12/2019	12/2020	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	12/2027	12/2028
Months per interval		12	12	12	12	12	12	12	12	12	12
ASSETS											
Fixed assets and other non-current assets											
Intangible assets	0	0	0	0	0	0	0	0	0	0	0
Tangible assets	5 193 438	4 674 688	4 155 938	3 465 000	2 970 000	2 475 000	1 980 000	1 485 000	990 000	495 000	0
Investments	0	0	0	0	0	0	0	0	0	0	0
Total fixed assets and other non-current assets	5 193 438	4 674 688	4 155 938	3 465 000	2 970 000	2 475 000	1 980 000	1 485 000	990 000	495 000	0
Current Assets											
Inventories and work in progress	0	62 991	64 358	65 754	67 180	68 638	70 126	71 647	73 201	74 788	76 409
Accounts receivable	0	133 333	142 807	152 612	162 760	173 259	184 119	195 351	206 966	218 973	231 385
Other receivables	0	0	0	0	0	0	0	0	0	0	0
Bank and cash	37 500	163 297	135 488	667 906	775 903	976 620	1 272 593	1 983 095	3 092 771	4 281 700	5 552 724
Total Current Assets	37 500	359 621	342 653	886 273	1 005 843	1 218 516	1 526 838	2 250 094	3 372 937	4 575 461	5 860 518
ASSETS	**5 230 938**	**5 034 309**	**4 498 590**	**4 351 273**	**3 975 843**	**3 693 516**	**3 506 838**	**3 735 094**	**4 362 937**	**5 070 461**	**5 860 518**
SHAREHOLDERS' EQUITY AND LIABILITIES											
Shareholders' equity											
Share capital	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500
Share issue premium	0	0	0	0	0	0	0	0	0	0	0
Other restricted equity	0	0	0	0	0	0	0	0	0	0	0
Retained earnings	0	0	76 100	172 606	657 487	914 228	1 264 044	1 709 480	2 253 154	2 879 719	3 585 933
Profit (loss) for the period	0	76 100	96 506	484 881	256 741	349 816	445 436	543 674	626 565	706 214	788 717
Total shareholders' equity	1 187 500	1 263 600	1 360 106	1 844 987	2 101 728	2 451 544	2 896 980	3 440 654	4 067 219	4 773 433	5 562 150
Appropriations	0	0	0	0	0	0	0	0	0	0	0
Provisions	0	0	0	0	0	0	0	0	0	0	0
Minority interest	0	0	0	0	0	0	0	0	0	0	0
Liabilities											
Long-term liabilities	3 483 333	2 850 000	2 216 667	1 583 333	950 000	316 667	0	0	0	0	0
Short-term liabilities	316 667	677 272	678 380	679 515	680 677	681 868	366 420	51 002	52 281	53 590	54 930
Total liabilities	3 800 000	3 527 272	2 895 047	2 262 848	1 630 677	998 534	366 420	51 002	52 281	53 590	54 930
SHAREHOLDERS' EQUITY AND LIABILITIES	**4 987 500**	**4 790 871**	**4 255 153**	**4 107 835**	**3 732 405**	**3 450 079**	**3 263 401**	**3 491 656**	**4 119 500**	**4 827 023**	**5 617 081**



BALANCE SHEET

EUR	1/2019	12/2019	12/2020	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	12/2027	12/2028
Months per interval		12	12	12	12	12	12	12	12	12	12
ASSETS											
Fixed assets and other non-current assets											
Intangible assets											
Tangible assets	5 193 438	4 674 688	4 155 938	3 465 000	2 970 000	2 475 000	1 980 000	1 485 000	990 000	495 000	
Investments											
Total fixed assets and other non-current assets	5 193 438	4 674 688	4 155 938	3 465 000	2 970 000	2 475 000	1 980 000	1 485 000	990 000	495 000	
Current Assets											
Inventories and work in progress		62 991	64 358	65 754	67 180	68 638	70 126	71 647	73 201	74 788	76 409
Accounts receivable		133 333	142 807	152 612	162 760	173 259	184 119	195 351	206 966	218 973	231 385
Other receivables											
Bank and cash	37 500	163 297	135 488	667 906	775 903	976 620	1 272 593	1 983 095	3 092 771	4 281 700	5 552 724
Total Current Assets	37 500	359 621	342 653	886 273	1 005 843	1 218 516	1 526 838	2 250 094	3 372 937	4 575 461	5 860 518
ASSETS	**5 230 938**	**5 034 309**	**4 498 590**	**4 351 273**	**3 975 843**	**3 693 516**	**3 506 838**	**3 735 094**	**4 362 937**	**5 070 461**	**5 860 518**
SHAREHOLDERS' EQUITY AND LIABILITIES											
Shareholders' equity											
Share capital	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500
Share issue premium											
Other restricted equity											
Retained earnings			76 100	172 606	657 487	914 228	1 264 044	1 709 480	2 253 154	2 879 719	3 585 933
Profit (loss) for the period		76 100	96 506	484 881	256 741	349 816	445 436	543 674	626 565	706 214	788 717
Total shareholders' equity	1 187 500	1 263 600	1 360 106	1 844 987	2 101 728	2 451 544	2 896 980	3 440 654	4 067 219	4 773 433	5 562 150
Appropriations											
Provisions											
Minority interest											
Liabilities											
Long-term liabilities	3 483 333	2 850 000	2 216 667	1 583 333	950 000	316 667		0	0	0	0
Short-term liabilities	316 667	677 272	678 380	679 515	680 677	681 868	366 420	51 002	52 281	53 590	54 930
Total liabilities	3 800 000	3 527 272	2 895 047	2 262 848	1 630 677	998 534	366 420	51 002	52 281	53 590	54 930
SHAREHOLDERS' EQUITY AND LIABILITIES	**4 987 500**	**4 790 871**	**4 255 153**	**4 107 835**	**3 732 405**	**3 450 079**	**3 263 401**	**3 491 656**	**4 119 500**	**4 827 023**	**5 617 081**

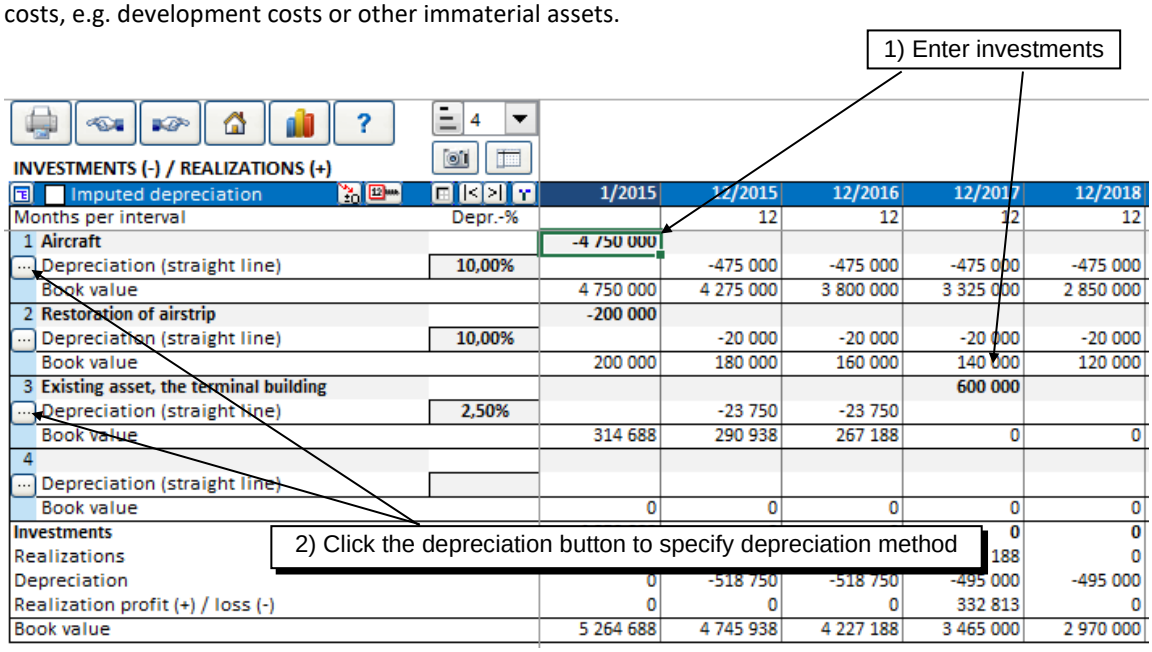
3.2.5 Investments / Realizations

The 'Investments/ Realizations' table is used for input of capital expenditures and defining depreciation plans. Also realizations and residuals are entered/ calculated here.

Enter each investment in its row in a time period when it will have an effect on the company's cash flow. You can also enter realizations (sales of assets) in this table.

Remember to enter the investments as **negative** values, and realization (selling price) as positive values.

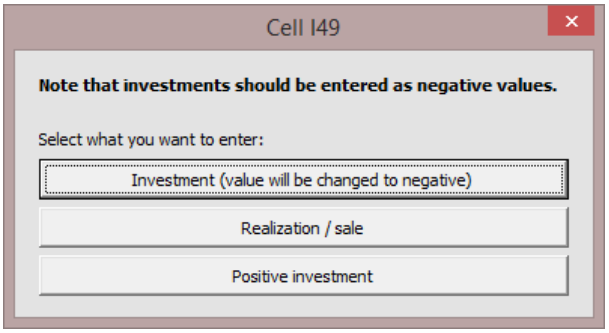
The most common investments (Capital Expenditures) are fixed assets, but they can just as well be activated costs, e.g. development costs or other immaterial assets.



INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		1/2015	12/2015	12/2016	12/2017	12/2018
Months per interval	Depr.-%		12	12	12	12
1 **Aircraft**		-4 750 000				
Depreciation (straight line)	10,00%		-475 000	-475 000	-475 000	-475 000
Book value		4 750 000	4 275 000	3 800 000	3 325 000	2 850 000
2 **Restoration of airstrip**		-200 000				
Depreciation (straight line)	10,00%		-20 000	-20 000	-20 000	-20 000
Book value		200 000	180 000	160 000	140 000	120 000
3 **Existing asset, the terminal building**					600 000	
Depreciation (straight line)	2,50%		-23 750	-23 750		
Book value		314 688	290 938	267 188	0	0
4						
Depreciation (straight line)						
Book value		0	0	0	0	0
Investments					0	0
Realizations					188	0
Depreciation		0	-518 750	-518 750	-495 000	-495 000
Realization profit (+) / loss (-)		0	0	0	332 813	0
Book value		5 264 688	4 745 938	4 227 188	3 465 000	2 970 000

Positive investments are also supported. When you enter a positive value, a popup dialog is displayed, asking you to confirm type of entry. The same will happen when a negative value is entered on row that has been confirmed as a positive investment.



In the investment table you can specify up to 30 different investment components (partial investments with individual depreciation methods and depreciation percentages). Bear in mind that the calculation should only include assets for one investment project. Separate investment projects should be evaluated in separate calculation files.

You can enter several investments in the same row, provided that their depreciation method is the same. This way, it is easy to calculate investment projects with more than one start-up period. Note that a realization applies to an investment row as a whole. Part of an investment cannot be realized if the investment is not split in more than one row.

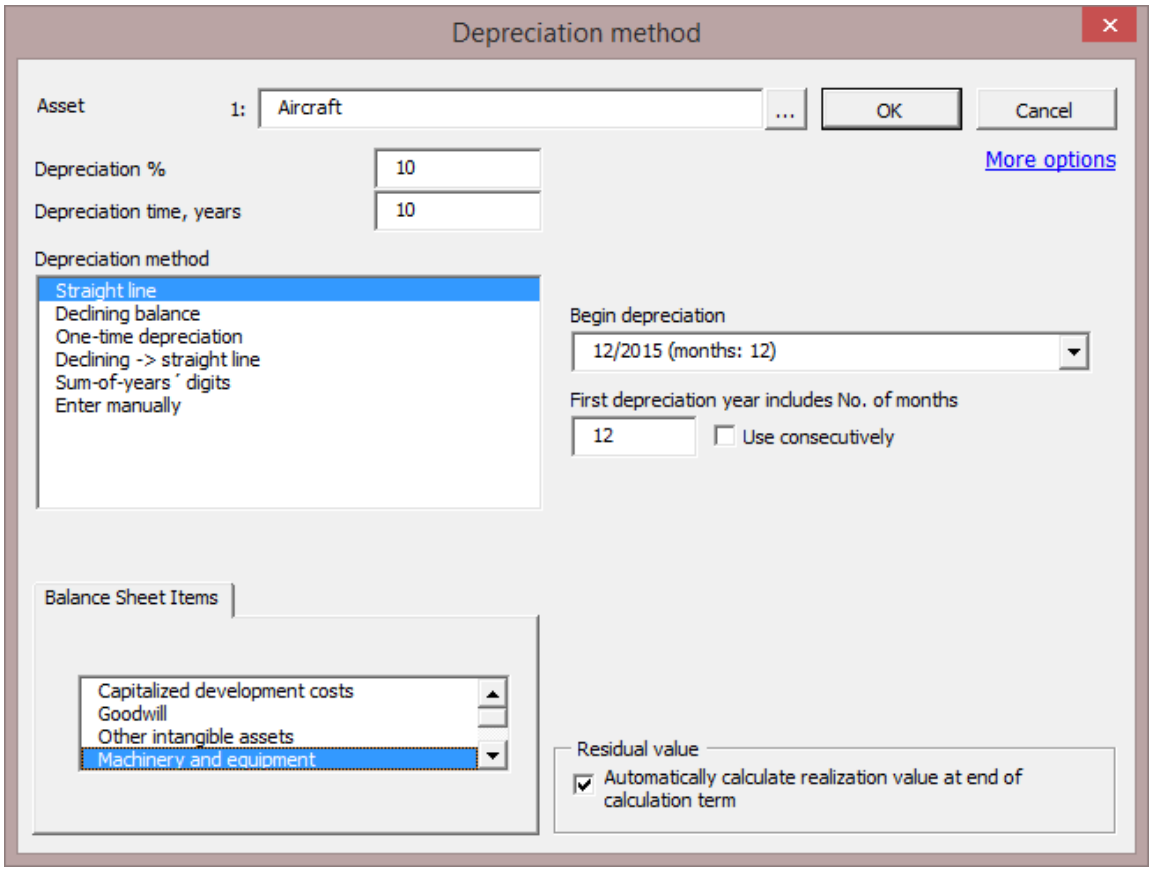
A name or short description of the investment can be entered in the first column. The default description of the first row is the description of the investment project, but you are welcome to type over.

The “Residual” column at the end of the calculation term is reserved for entering residual value. In the "Depreciation method" dialog, you can choose if you want an ending book value to be automatically realized at the end of the calculation term, or not. Automatic realization is default. In the Enterprise edition of Invest for Excel, the residual column can be left out of the calculation. In this case, the automatic realization option is not available.

12/2013	12/2014	Residual
12	12	(12/2014)
		100 000
-200 000	-200 000	
250 000	50 000	0
		10 000
-40 000	-40 000	
50 000	10 000	0
0	**0**	**60 000**
-240 000	-240 000	
0	0	50 000
300 000	60 000	0

3.2.5.1 Depreciation method

Select the depreciation method (… button) and specify calculation options in the Depreciation Method dialog box:



The available depreciation methods are:

1. Straight-line depreciation
2. Declining balance depreciation
3. One-time depreciation
4. Changing from declining balance to straight-line depreciation (applicable in Germany).

5. Sum-of-years´ digits (applicable in Switzerland and Spain).
6. Depreciation can be entered manually by selecting **Enter manually.**

You can also define the percentage of the investment that declining, straight line or sum-of-years´ digits depreciation is based on (the default value is 100%). That way you can calculate depreciation of a part of the investment only, for instance when the residual value has been set, and depreciation concerns the difference between purchase price and residual value.

Straight-line Enter either the depreciation percentage or expected economic lifetime of the object (depreciation time). Invest for Excel automatically calculates the other. The depreciation is calculated from the initial investment (purchase price).

Declining balance Enter the depreciation percent. The depreciation is calculated from the ending balance of each financial year. Ending balance is the same as book value at the end of previous year + new investments during ongoing financial year.

One-time depreciation

The asset is depreciated 100% in the specified "first depreciation" period.

Declining -> Straight line

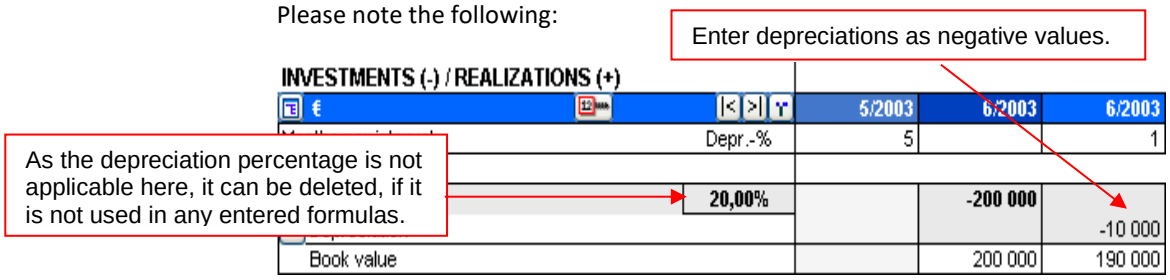
The higher of declining balance or straight-line depreciation, is used. This method, which ensures maximum depreciation, is used in Germany. Specify the depreciation percentage and the economic lifetime of the investment object.

Sum-of-years´ digits

This depreciation method uses the sum of years left to depreciate, when calculating the depreciation. The sum of the years' digits is a form of accelerated depreciation. Example, A 3-year depreciation plan: the digits in the years of the asset's useful life are summed: 1 + 2 + 3 = 6. 1st year depreciation is 3/6* book value. 2nd year 2/6 and 3rd year 1/6 * book value.

Enter manually Enter each depreciation manually in the investment table.

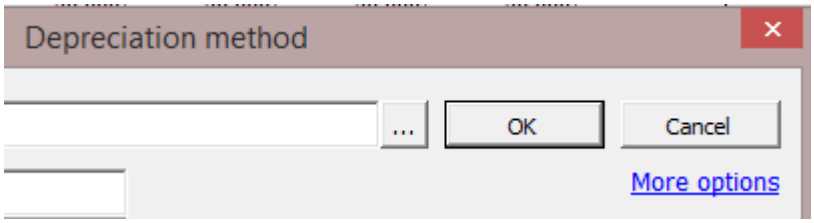
Please note the following:



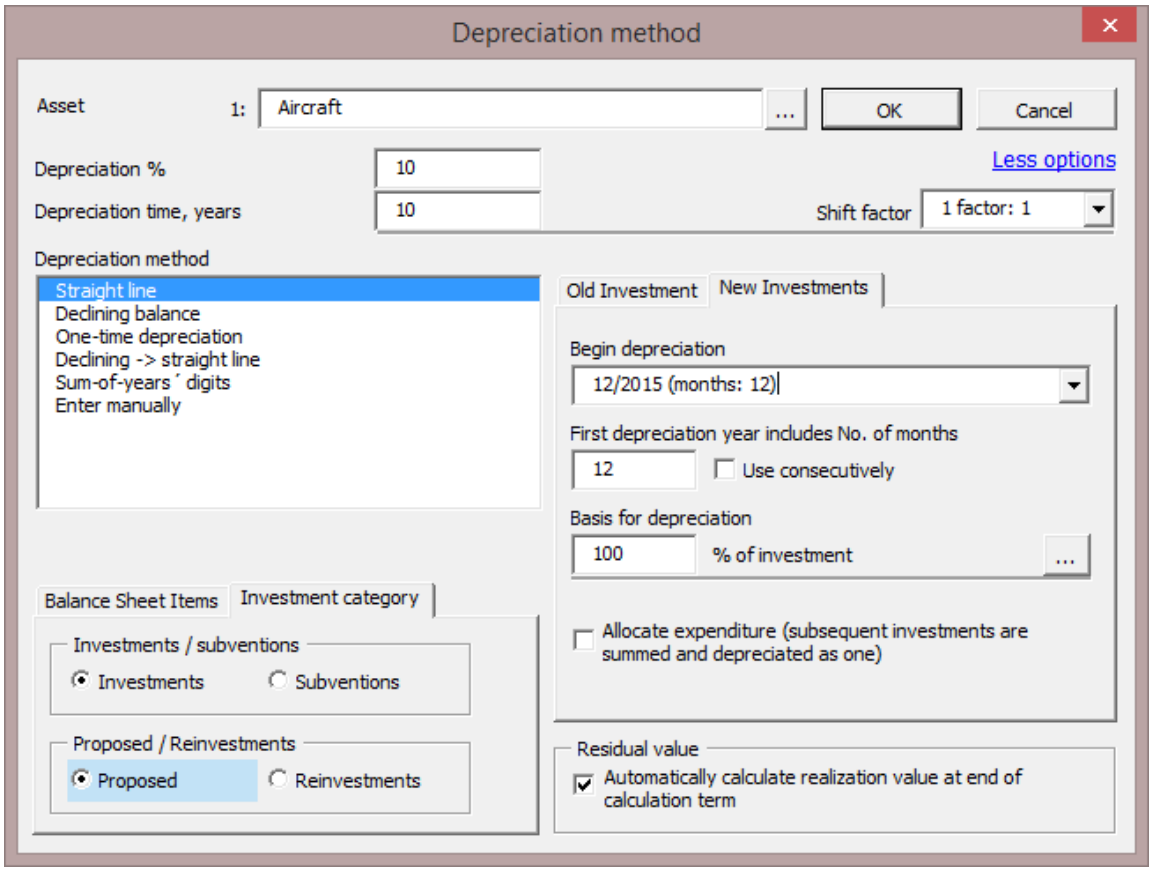
Depreciations affect the result of the calculation through tax effects. If taxes are excluded, depreciations will have no effect on the Investment profitability ratios (NPV, IRR, Payback etc.).

3.2.5.2 Depreciation options

Press More options (top-right) to show more depreciation options:



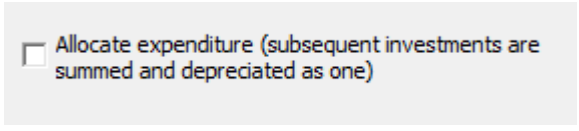
More functions will be available in the Depreciation method dialog box:



A shift factor of 1, 1.25 or 1.5 can be used to consider wearing of the asset in shift use. These factors are used in Germany. When shift factor 1 is used, the depreciation is not altered.

3.2.5.2.1 Investment expenditure allocated

Subsequent investment expenditures can be depreciated as one investment using the Allocate expenditure option:



Example of a 2,000,000 € investment depreciated starting 12/2005 in a traditional straight-line matter and allocated as one investment expenditure:

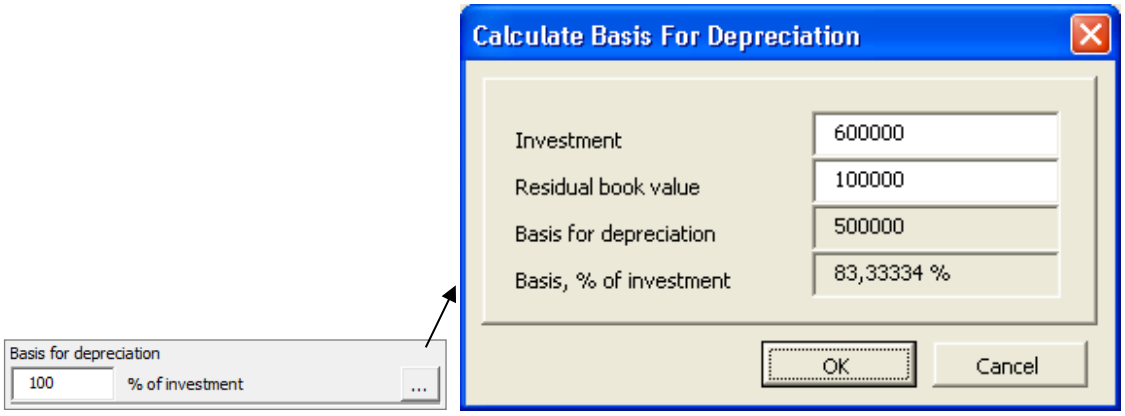
INVESTMENTS (-) / REALIZATIONS (+)

€		1/2005	12/2005	12/2006	12/2007
Months per interval	Depr.-%		12	12	12
1 **Straight line**	**10,00%**	**-100 000**	**-300 000**	**-500 000**	**-1 100 000**
Depreciation (straight line)			-40 000	-90 000	-200 000
Book value		100 000	360 000	770 000	1 670 000
2 **Straight line allocated**	**10,00%**	**-100 000**	**-300 000**	**-500 000**	**-1 100 000**
Depreciation (straight line)			-200 000	-200 000	-200 000
Book value		100 000	1 800 000	1 600 000	1 400 000

The allocated investment expenditures (2) are depreciated as a whole from the first depreciation, whereas traditional investment expenditures (1) depreciations accrue with the book value.

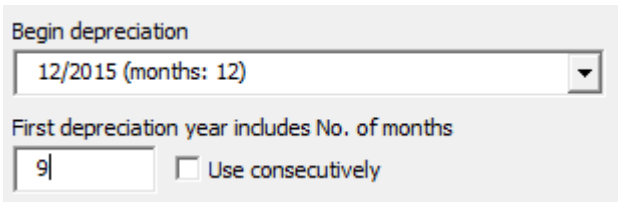
3.2.5.2.2 Basis for depreciation

In most cases, the basis for depreciation is 100% of the purchase price. In some cases, however, the basis is not 100%. An example of this is an asset with a known salvage cost at the end of the economic lifetime. The basis can be entered or calculated using a calculation dialog box (opened from the Depreciations dialog box):



3.2.5.2.3 Begin depreciation

Select the period when depreciation begins. Then select how many months should be depreciated that period. E.g. If your calculation is on annual basis and operations start 1st of April 2015; for Straight line depreciation select 'Begin depreciation' 12/2015, and then select 'First depreciation year includes' 9 months (April-Dec.).



3.2.5.2.4 First depreciation

Enter the number of months on which to base the calculation of depreciation for the first interval. You can enter the actual number of months, or if local legislation allows it, you can use a simplified method, according to which depreciation is calculated over 12 months, although the investment was made near the end of the financial year. Default value is 12 months.

3.2.5.2.5 Use consecutively

The ‘Use consecutively’ –option is useful when investments continue during many years of operation. Typical use: If you want each year’s new investments to be depreciated for a half year, enter 6 months and select the ‘Use consecutively’ –option.

3.2.5.2.6 Old investment

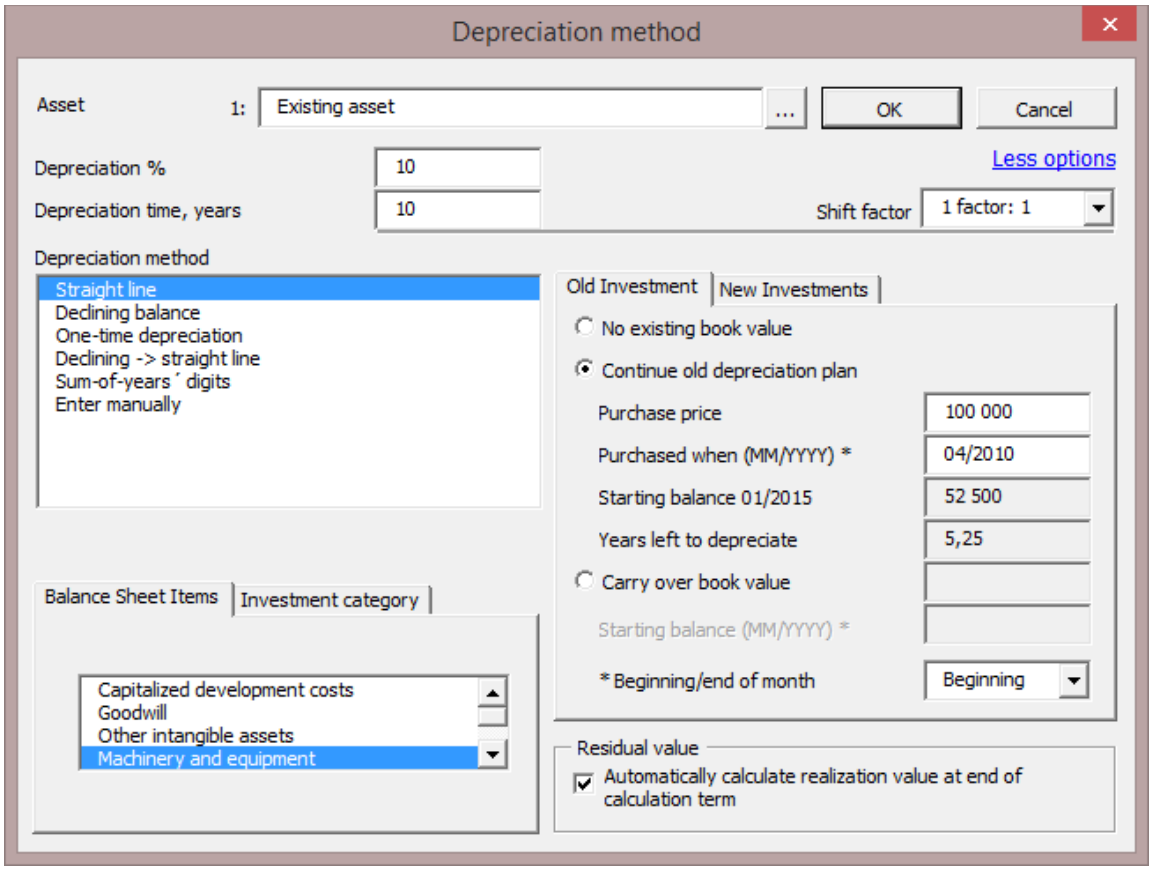
It is possible to include depreciation of an existing asset in the calculation. The book value (and depreciation method) of an existing asset can be specified in the "Old investment" page. For the best quality calculation, find out the purchase price of the asset, when it was purchased, how it is depreciated and use the "Continue old depreciation plan" option.

Note that including an old investment in the investment table is an alternative to including (and depreciating) book values in the balance sheet.

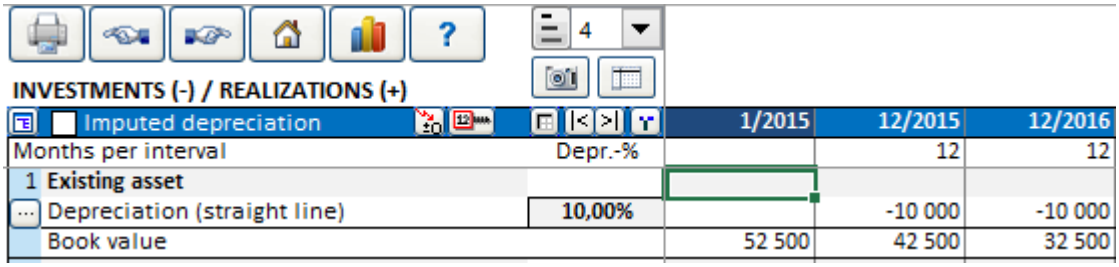
In chapter 3.1.1.3 the use of historical periods was explained. Including an old investment in the investment table does not require including historical periods in the calculation. However, if historical periods are not used and no opening balance sheet items have been entered, there will be a difference in the balance sheet.

3.2.5.2.7 Continue old depreciation plan

Enter purchase price and time. Depreciation will be calculated using these parameters. It is not necessary to include historical periods in the calculation for this. However, if a complete starting balance is not entered in a historical period, there will be an unaddressed difference in the balance sheet.



The old depreciation plan will continue in the calculation term of the file.

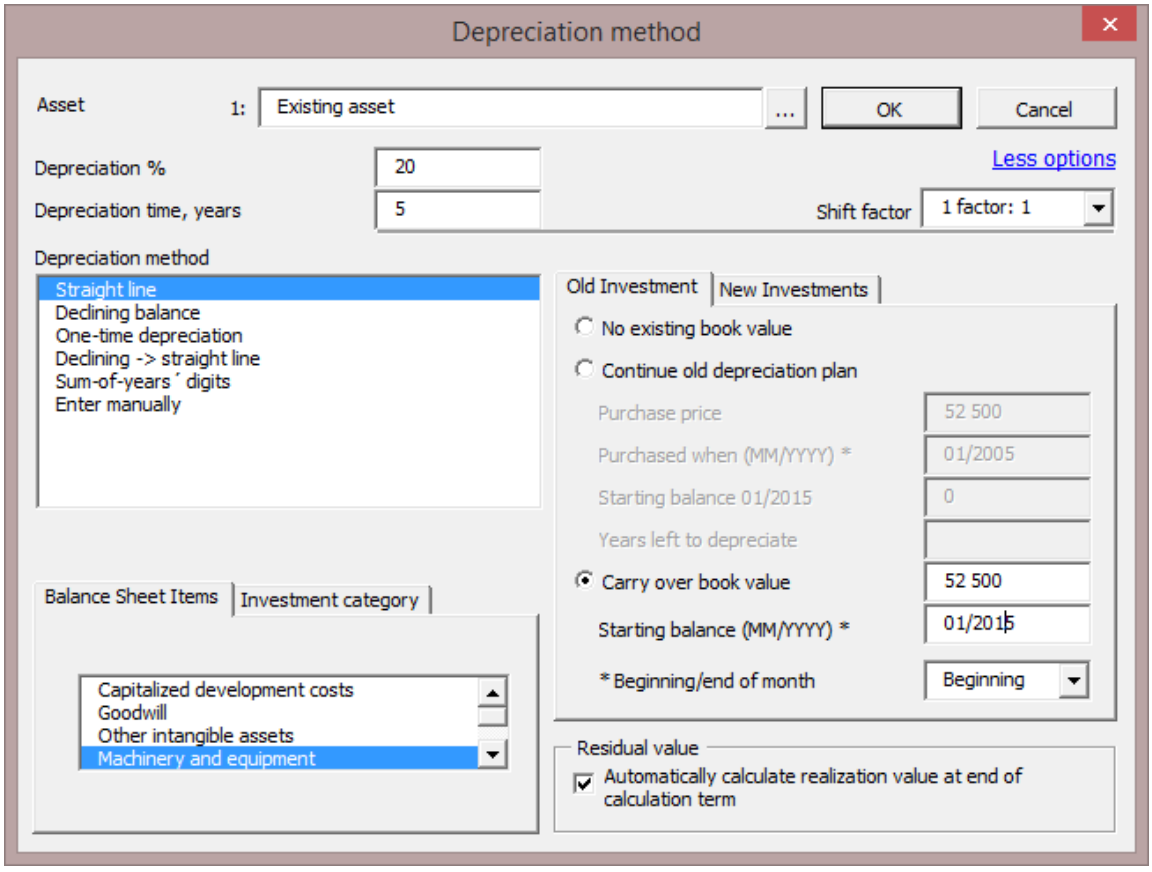


INVESTMENTS (-) / REALIZATIONS (+)

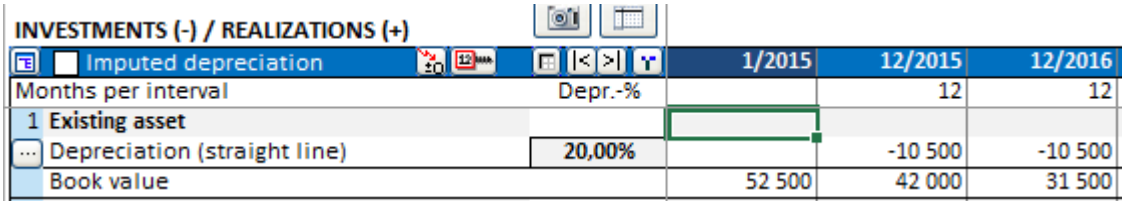
Imputed depreciation	Depr.-%	1/2015	12/2015	12/2016
Months per interval			12	12
1 **Existing asset**				
Depreciation (straight line)	10,00%		-10 000	-10 000
Book value		52 500	42 500	32 500

3.2.5.2.8 Carry over book value

The book value of an existing asset can be carried over to a chosen point-of-time in the investment table and depreciated with a new depreciation plan using the Carry over book value option:



There is no initial cash-flow effect so the only effect is the tax effects of the depreciations and a possible realization/residual value.



INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation	Depr.-%	1/2015	12/2015	12/2016
Months per interval			12	12
1 **Existing asset**				
Depreciation (straight line)	20,00%		-10 500	-10 500
Book value		52 500	42 000	31 500

Note that since this introduces a new asset to the calculation without any cash flow, there will be an in balance in the balance sheet:

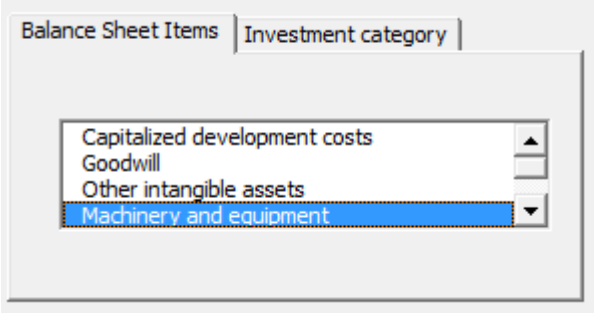
BALANCE SHEET

	1/2015	12/2015	12/2016	12/2017	Residual
ASSETS					
Fixed assets and other non-current assets					
Total fixed assets and other non-current assets	52 500	42 000	31 500	21 000	0
Total Current Assets	0	0	0	0	21 000
ASSETS	**52 500**	**42 000**	**31 500**	**21 000**	**21 000**
SHAREHOLDERS' EQUITY AND LIABILITIES					
Total shareholders' equity	0	-10 500	-21 000	-31 500	-31 500
Liabilities					
Total liabilities	0	0	0	0	0
SHAREHOLDERS' EQUITY AND LIABILITIES	**0**	**-10 500**	**-21 000**	**-31 500**	**-31 500**
Check: Equity and liabilities - Assets	-52 500	-52 500	-52 500	-52 500	-52 500

NOTE! The depreciation of the old investments will affect taxes in the same way that depreciation of new investments will. The result of the calculation will be altered. This option can be used in combination with the "Marginal effect" function.

3.2.5.2.9 Balance sheet items

Define whether the investment concerns **Tangible assets** (fixed property), **Intangible assets** (e.g. software) or **Investments** (securities).

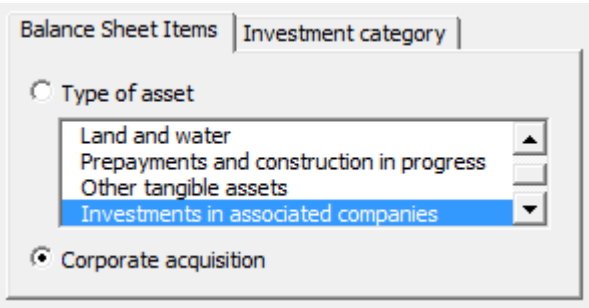


The only effect of the ”Type of asset” –selection is the correct grouping of assets in Balance sheet. It does not affect result in any way.

3.2.5.2.10 Corporate acquisition

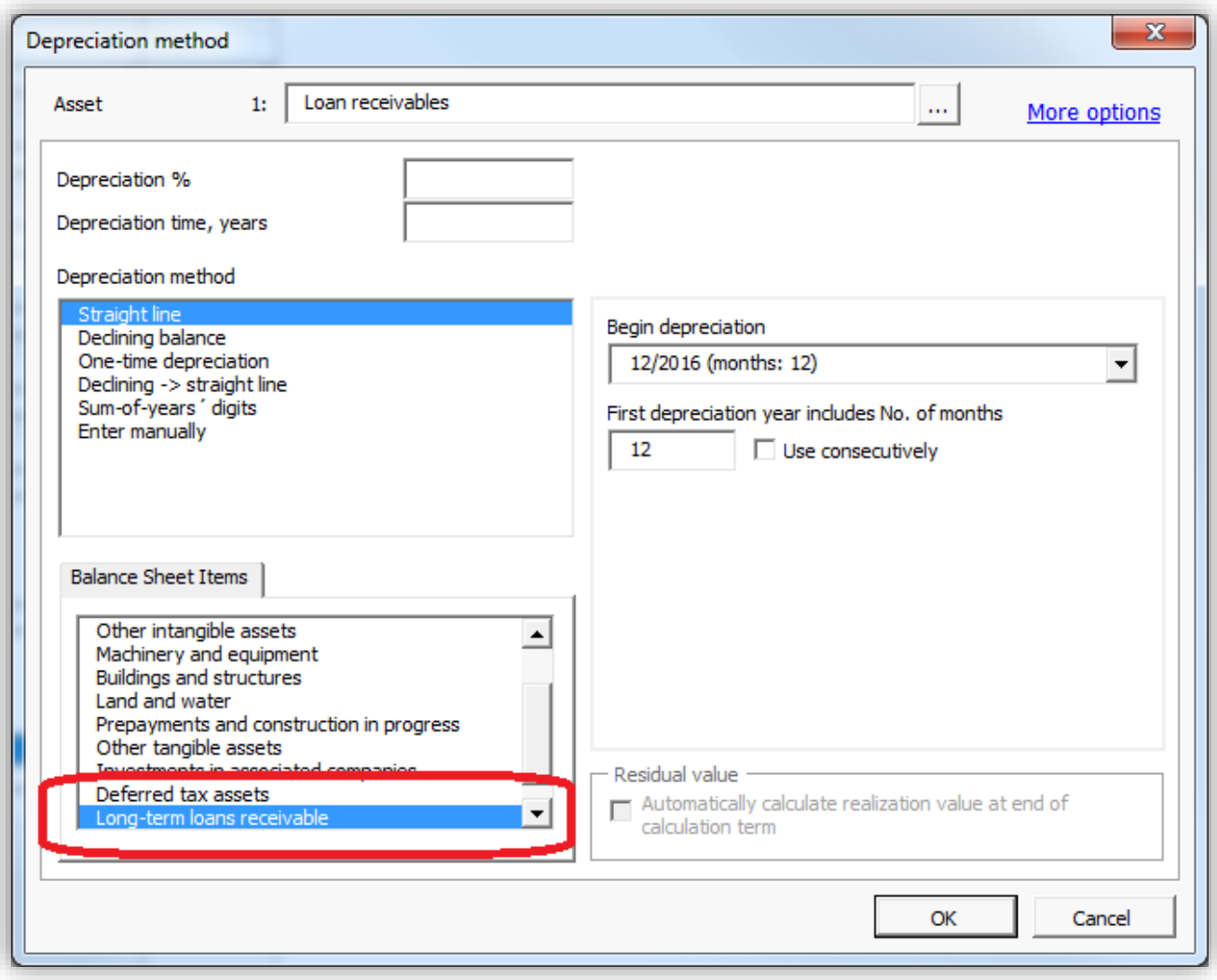
(available only in the ‘corporate acquisition / valuation’ template in Enterprise edition)

Select this option only when you are entering the purchase price of an acquisition. This item will not be included in the balance. The cost of the acquisition will be included in the cash flow of the investment, in order to ensure that the profitability analysis of the acquisition is correct.



3.2.5.2.11 Long-term loans receivables

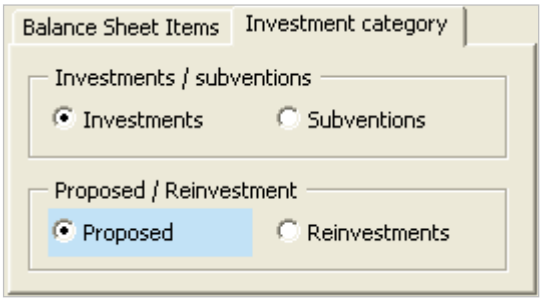
When you choose “Long-term loans receivables” from the “Balance Sheet Items” list in the “Depreciation method” dialog box, you can make capital changes to the asset without generating realisation profit or loss.



INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation	Depr.-%	12/2016	12/2017	12/2018	12/2019	12/2020
Months per interval		12	12	12	12	12
1 **Loan receivables**		**-250 000**		**100 000**		**150 000**
Depreciation (straight line)						
Book value		250 000	250 000	150 000	150 000	0
Investments		**-250 000**	**0**	**100 000**	**0**	**150 000**
Realizations		0	0	0	0	0
Depreciation		0	0	0	0	0
Realization profit (+) / loss (-)		0	0	0	0	0
Book value		250 000	250 000	150 000	150 000	0

3.2.5.2.12 Investment category



Investment category is used for directing investments to different categories in the profitability analysis on the result sheet.

3.2.5.2.13 Investments / Subventions

Select "Investment" for a normal investment. Select "Subventions" if you want to separate the subvention part from an investment. Subvention = subsidy or grant. Note that the investment should be entered as a (negative) gross amount and the subvention as a positive amount. Use the same depreciation method and percent for investment and subvention:

1	**Project XY gross investment**		**-250 000**		
⋯	Depreciation (straight line)	**10,00%**		-25 000	-25 000
2	**Project XY subvention**		**25 000**		
⋯	Depreciation (straight line)	**10,00%**		2 500	2 500
	Investments		**-225 000**	**0**	**0**
	Realizations		0	0	0
	Depreciation		0	-22 500	-22 500
	Realization profit (+) / loss (-)		0	0	0
	Book value		225 000	202 500	180 000

Investments and subventions are separated in the Profitability analysis:

Investment proposal	Nominal	PV
Proposed investments in assets	-250 000	-250 000
Investment subventions	25 000	25 000
Investment proposal	-225 000	-225 000

3.2.5.2.14 Proposed / Reinvestments

This categorisation can be used to separate initial proposed investments from reinvestments. A normal use of this category: proposed investments require funding whereas reinvestments are covered by operative cash flow. Reinvestments are typically maintenance investments. Proposed investments are shown with blue background.

Investment table:

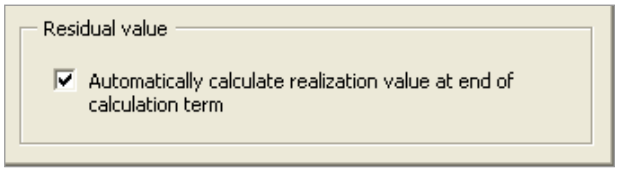
1	**New investments**		**-254 300**	**-68 345**			
⋯	Depreciation (straight line)	**20,00%**		-64 529	-64 529	-64 529	-64 529
	Book value		254 300	258 116	193 587	129 058	64 529
2	**Subsidy**		**50 860**				
⋯	Depreciation (straight line)	**20,00%**		10 172	10 172	10 172	10 172
	Book value		-50 860	-40 688	-30 516	-20 344	-10 172
3	**Reinvestments**				**-50 000**		**-60 000**
⋯	Depreciation (straight line)	**20,00%**			-10 000	-10 000	-22 000
	Book value		0	0	40 000	30 000	68 000

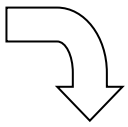
Profitability analysis (Result sheet):

-	Present value of reinvestments	-110 000	-110 000
	Total Present Value (PV)		**456 404**
	Investment proposal	Nominal	PV
-	Proposed investments in assets	-322 645	-322 645
+	Investment subventions	50 860	50 860
	Investment proposal	-271 785	-271 785
	Net Present Value (NPV)		**184 619**

3.2.5.2.15 Residual value

Book value at the end of the calculation term is automatically realized (sold) when automatic residual calculation is checked. This gives a cash flow effect of the Residual book value of asset. This option is only available if the residual column is used.

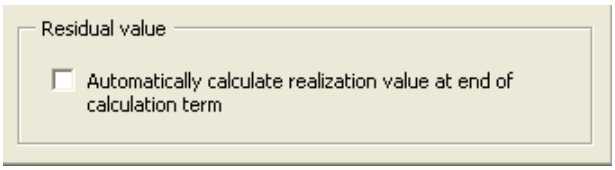


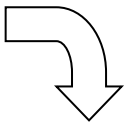


INVESTMENTS (-) / REALIZATIONS (+)

			1/2005	12/2005	Residual
Months per interval		Depr.-%		12	(12/2005)
1		**20,00%**	**-100**		**80**
···	Depreciation (straight line)			-20	
	Book value		100	80	0

Now the object is liquidated at book value. If you remove the tick (unchecked):





INVESTMENTS (-) / REALIZATIONS (+)

			1/2005	12/2005	Residual
Months per interval		Depr.-%		12	(12/2005)
1		**20,00%**	**-100**		
···	Depreciation (straight line)			-20	
	Book value		100	80	80

Now the asset is not liquidated (no residual effect on cash flow). You may always enter the residual value of the object:

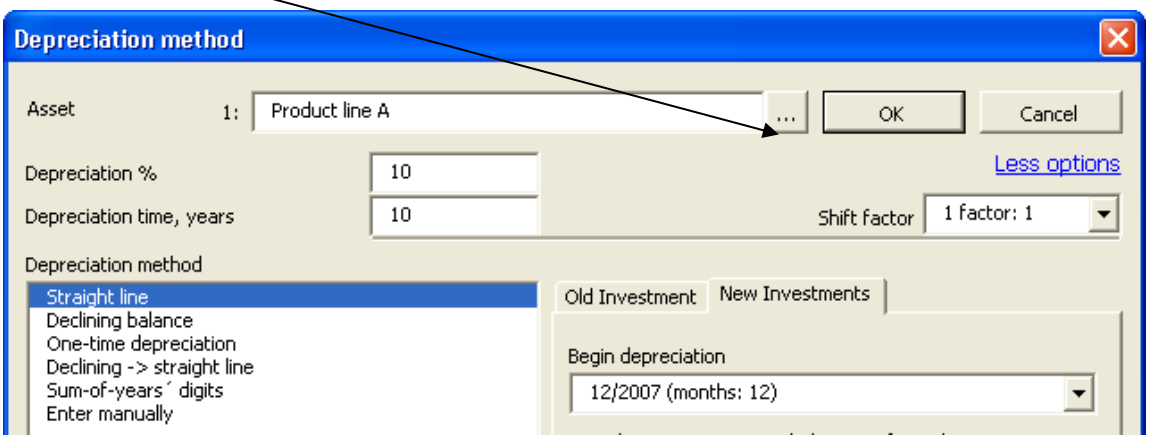
INVESTMENTS (-) / REALIZATIONS (+)

			1/2005	12/2005	Residual
Months per interval		Depr.-%		12	(12/2005)
1		**20,00%**	**-100**		**30**
···	Depreciation (straight line)			-20	
	Book value		100	80	0

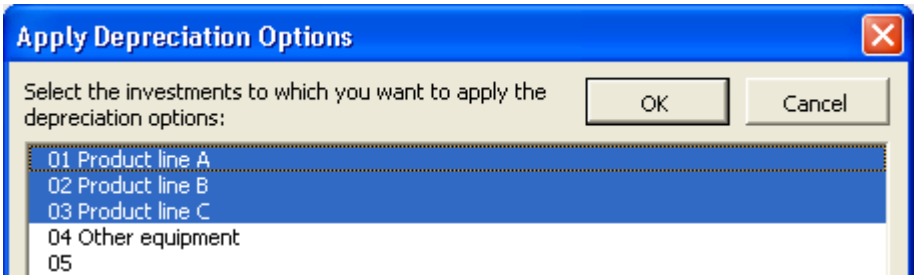
3.2.5.2.16 Apply depreciation options to multiple investments

Depreciation options defined for one asset can easily be applied to multiple investments. This will save time if you have many assets using the same or similar depreciation options.

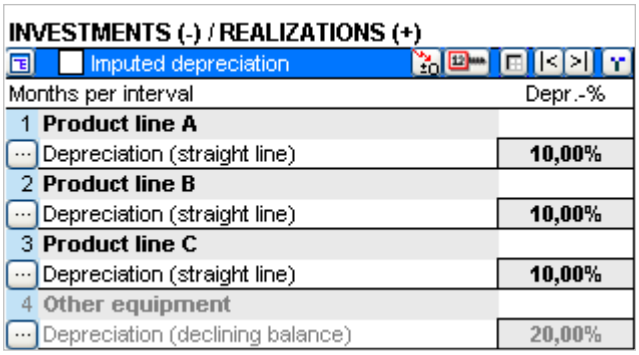
Press the ... button beside the asset name to open the "Apply Depreciation Options" dialog box.



Select the investment rows you want to apply the depreciation options to.



With the exception of old investment options, all depreciation options are applied to the selected assets.

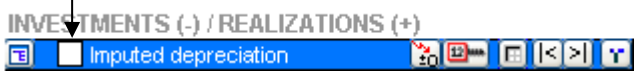


Any investments depreciation options can be altered separately afterwards if there are some options that are not the same for each asset.

3.2.5.3 Imputed depreciation

Investments in the Investment table can be depreciated using two separate depreciation schedules, one for income tax effects and an imputed depreciation schedule for internal profit effects.

Activate imputed depreciation in the header bar of the investment table:

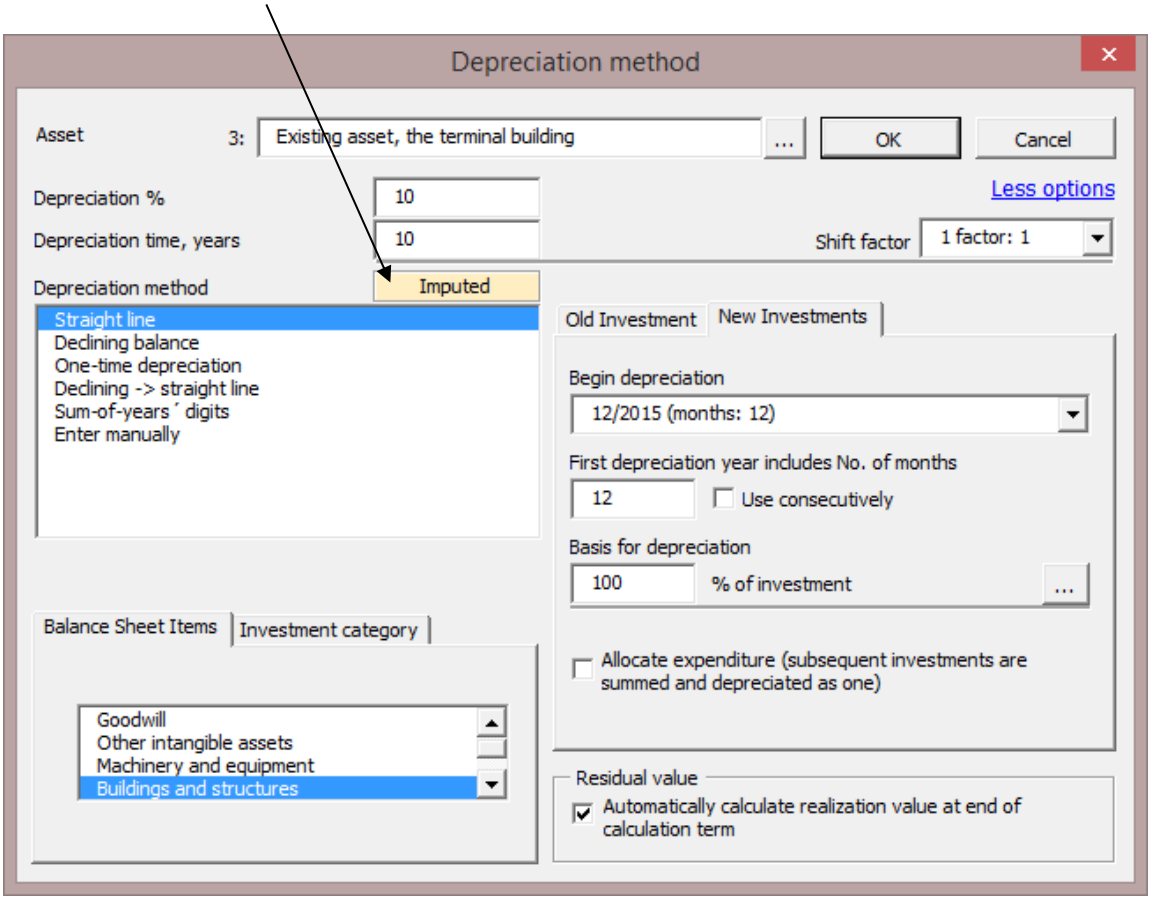


Imputed depreciation rows are shown with yellow background:

INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		1/2007	12/2007	12/2008	12/2009	12/2010	12/2011	Residual
Months per interval	Depr.-%		12	12	12	12	12	(12/2011)
1								0
Depreciation (straight line)								
Imputed depreciation (straight line)								
2								0
Depreciation (straight line)								
Imputed depreciation (straight line)								
3								0
Depreciation (straight line)								
Imputed depreciation (straight line)								
4								0
Depreciation (straight line)								
Imputed depreciation (straight line)								
Investments		**0**	**0**	**0**	**0**	**0**	**0**	
Realizations		0	0	0	0	0	0	0
Depreciation		0	0	0	0	0	0	
Realization profit (+) / loss (-)		0	0	0	0	0	0	0
Book value		0	0	0	0	0	0	0
Internal								
Realizations		0	0	0	0	0	0	0
Imputed depreciation		0	0	0	0	0	0	
Realization profit (+) / loss (-)		0	0	0	0	0	0	0
Imputed book value		0	0	0	0	0	0	0

In the "Depreciation method" dialog box, imputed depreciation is separated with a yellow "Imputed" box:



Independent from tax deprecation, imputed depreciation can be calculated using any depreciation method:

1	**New investment X**		**-10 000**			
⋯	Depreciation (declining balance)	**30,00%**		-3 000	-2 100	-1 470
	Book value		10 000	7 000	4 900	3 430
⋯	Imputed depreciation (straight line)	**20,00%**		-2 000	-2 000	-2 000
	Imputed book value		10 000	8 000	6 000	4 000

In the Income statement, imputed depreciation is shown before EBIT. The difference between imputed depreciation and tax depreciation is shown on "Depreciation in excess of (-) / under (+) imputed" row before taxes:

EBITDA; Operating income before depreciation		**4 351**	**4 395**	**4 438**	**4 483**
Depreciation	0	-2 000	-2 000	-2 000	-2 000
EBIT; Operating income	**0**	**2 351**	**2 395**	**2 438**	**2 483**
Financing income and expenses					
≡ Financing income and expenses					
! Financing income and expenses Financing file					
EBT; Income after financing items	**0**	**2 351**	**2 395**	**2 438**	**2 483**
Extraordinary income and charges					
Realization profit (-loss)	0	0	0	0	0
≡ Other extraordinary income (-charges)					
Income before appropriations and taxes	**0**	**2 351**	**2 395**	**2 438**	**2 483**
Change in appropriations					
Depreciation in excess of (-) / under (+) imputed	0	-1 000	-100	530	971
Other appropriations, increase (-) / decrease (+)					
Income tax	0	-378	-642	-831	-967
Minority interest					
Net income for the period	**0**	**973**	**1 652**	**2 137**	**2 487**

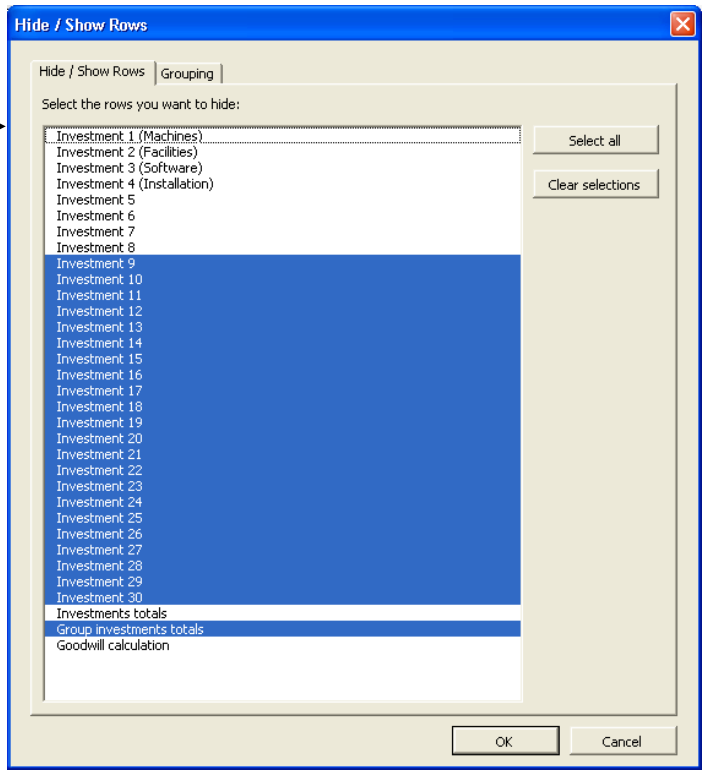
In the Balance sheet, fixed assets book values are calculated using imputed depreciation. The difference between imputed and total depreciation (i.e. cumulative Depreciation in excess of (-) / under (+) imputed) is included in "Accumulated appropriations".

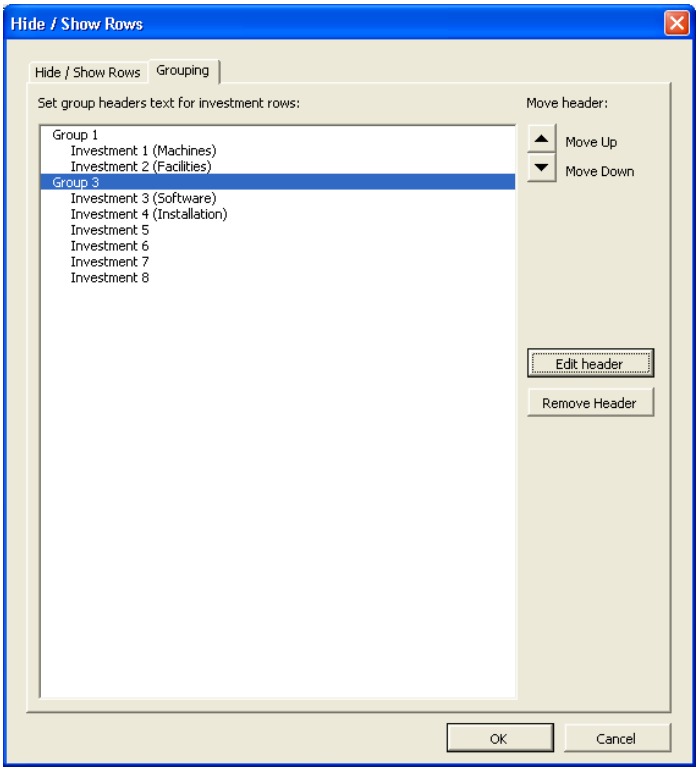
BALANCE SHEET

	1/2006	12/2006	12/2007	12/2008	12/2009
Months per interval		12	12	12	12
ASSETS					
Fixed assets and other non-current assets					
Intangible assets	0	0	0	0	0
Tangible assets	10 000	8 000	6 000	4 000	2 000
Investments	0	0	0	0	0
Total fixed assets and other non-current assets	10 000	8 000	6 000	4 000	2 000
Current Assets					
Inventories and work in progress	0	0	0	0	0
Accounts receivable	0	0	0	0	0
Other receivables	0	0	0	0	0
Bank and cash	-10 000	-6 027	-2 275	1 332	4 848
Total Current Assets	-10 000	-6 027	-2 275	1 332	4 848
ASSETS	**0**	**1 973**	**3 725**	**5 332**	**6 848**
SHAREHOLDERS' EQUITY AND LIABILITIES					
Shareholders' equity					
Share capital	0	0	0	0	0
Share issue premium	0	0	0	0	0
Other restricted equity	0	0	0	0	0
Retained earnings	0	0	973	2 625	4 762
Profit (loss) for the period	0	973	1 652	2 137	2 487
Total shareholders' equity	0	973	2 625	4 762	7 249
Accumulated appropriations	0	1 000	1 100	570	-401
Minority interest	0	0	0	0	0
Liabilities					
Long-term liabilities	0	0	0	0	0
Short-term liabilities	0	0	0	0	0
Total liabilities	0	0	0	0	0
SHAREHOLDERS' EQUITY AND LIABILITIES	**0**	**1 973**	**3 725**	**5 332**	**6 848**

3.2.5.4 Hiding rows and grouping investments

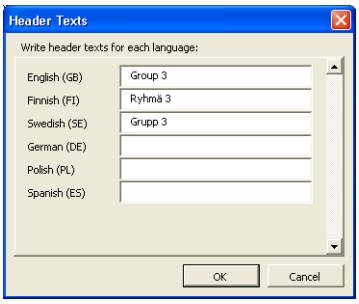
By clicking the button on the left of the blue bar you can add investment rows to the screen or hide unnecessary rows.





You can add group headers for investments of similar kind. Headers can be edited, moved or removed at any time. Group headers are informative and don't affect calculation.

Headers can be defined in each language by clicking the 'Edit header' -button (*Only Editions Pro & Enterprise)*:



3.2.6 Income statement

Use the **Income statement** table to input all incomes and expenses estimated to arise from the implementation of this investment. Consider the Income statement as a **Profit/ loss account** of planned project/ investment/ business. The Income statement is one of the financial statements. It displays the revenues recognized for a specific period, and the cost and expenses charged against these revenues, including depreciations of various assets and taxes. The purpose of the income statement is to show you whether the project/ investment/ business made or lost money during each period.

One important thing to remember about an income statement is that it represents a period of time like the cash flow statement. This contrasts with the balance sheet, which represents a single moment in time.

You may want to do preliminary calculations in other Excel worksheets to get the values you want to enter in this Invest for Excel table. You can make links to the results of Excel tables and show them here, or to a separate workbook conveniently linked to the Invest for Excel table. You can also create additional worksheets from the Invest for Excel menu item **Format**.

You may use Excel's functions and features quite freely. For instance, you can copy data from your own calculation tables, create new formulas to calculate figures in the income and cost rows, etc. You can personally name all row headings in the shaded areas.

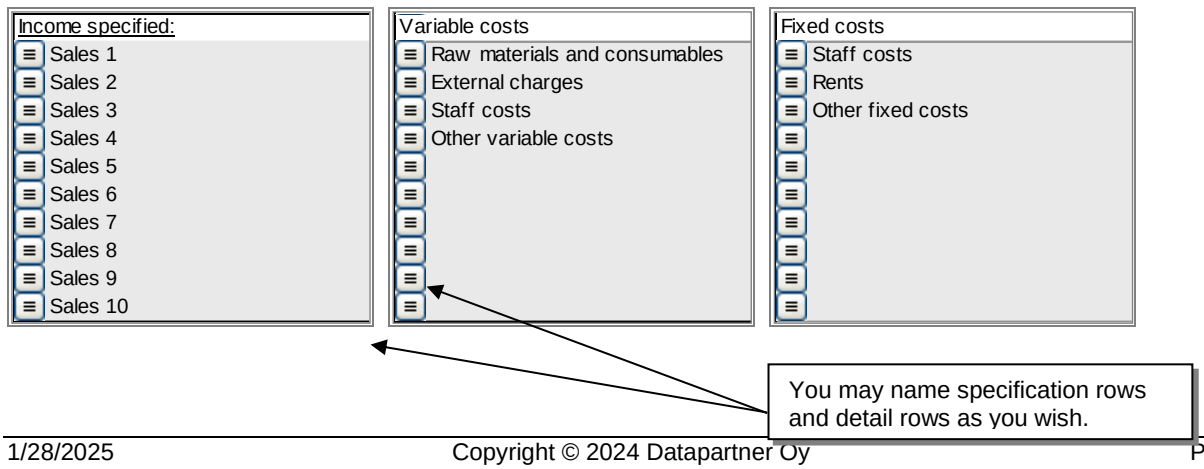
The blue bar at the top of the **Income statement** table shows the investment calculation term entered under **Basic Values**. It is divided into intervals specified by you, and their length in months is shown below each heading.

INCOME STATEMENT

	1/2015	12/2015	12/2016	12/2017	Residual
Months per interval		12	12	12	(12/2017)
Income specified:					
Income	**0**	**0**	**0**	**0**	**0**
Other operating income					
Variable costs	0	0	0	0	0
Raw materials and consumables					
External charges					
Staff costs					
Other variable costs					
Gross margin	**0**	**0**	**0**	**0**	**0**
Fixed costs	0	0	0	0	0
Staff costs					
Rents					
Other fixed costs					
Provisions, increase (-) / decrease (+)					
EBITDA; Operating income before depreciation	**0**	**0**	**0**	**0**	**0**
Depreciation	0	0	0	0	0
EBIT; Operating income	**0**	**0**	**0**	**0**	**0**
Financing income and expenses	0	0	0	0	0
Financing income and expenses					
Financing income and expenses Financing file					
EBT; Income after financing items	**0**	**0**	**0**	**0**	**0**
Extraordinary income and charges	0	0	0	0	0
Realization profit (-loss)	0	0	0	0	0
Other extraordinary income (-charges)					
Income before appropriations and taxes	**0**	**0**	**0**	**0**	**0**
Change in appropriations					
Appropriations, increase (-) / decrease (+)					
Income tax	0	0	0	0	0
Deferred tax					
Minority interest					
Net income for the period	**0**	**0**	**0**	**0**	**0**
Return on net assets (RONA), %		**0,0%**	**0,0%**	**0,0%**	**0,0%**
Economic Value Added (EVA)		**0**	**0**	**0**	**0**

The first calculation column reflects the beginning of the investment (the zero point in time), and is not used in the Income statement. The first input/ calculation interval is in the next column. Its duration might depend on the end of the financial year: If detailed periodization has been selected and if the interval has been defined as 12 months long, the investment term starts at the e.g. in the beginning of March and the financial year ends on December 31st, the second column covers 10 months. As default the columns are on annual basis (full year).

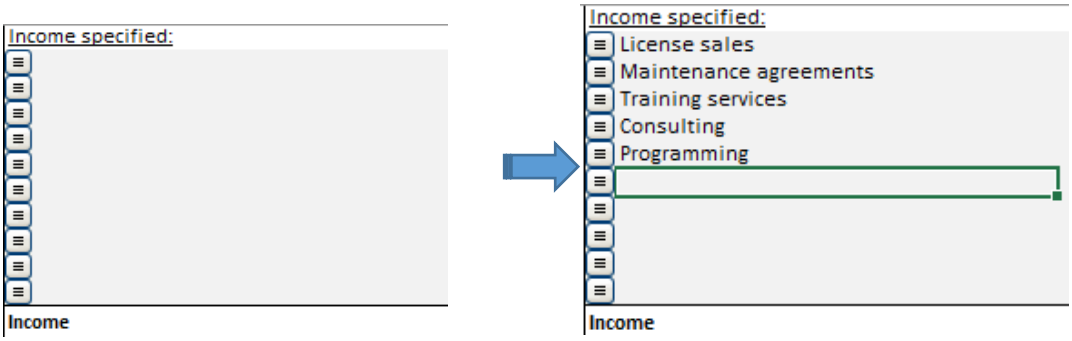
In the income statement there are 10 income rows, 10 variable cost rows and 10 fixed cost rows available, all with the possibility to add sub-rows.



As two levels of up to 99 sub-rows are available, you can have up to 98010 rows for income, for variable costs and for fixed costs (10 * 99 * 99 = 98010).

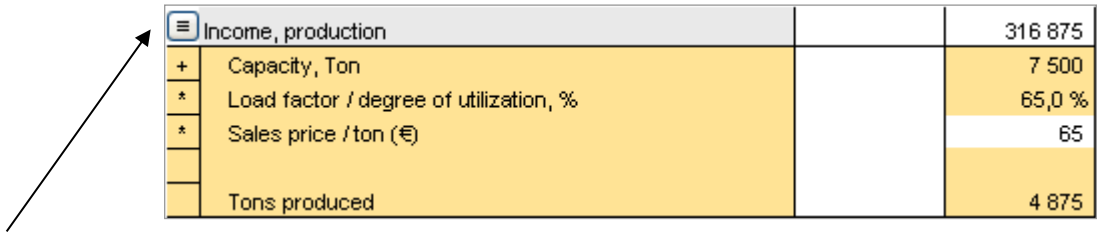
3.2.6.1 Entering income

On the rows under the header "Income specified:" you can write sub-headings:



Income can be entered in the table in the following complementary ways:

1) As figures or Excel formulas in cells on income rows.
2) By reference or link to another calculation, e.g. another Excel spreadsheet.
3) For the first period only (Note: check the time span – does the column cover a month, a quarter, etc.); then distribute the income to other columns with the ancillary function of this button:  shown in the blue bar.
4) By using Invest for Excel operators as illustrated in picture below (e.g. multiply the increase in capacity obtained through the investment with the utilization rate and the sales price).



	Income, production		316 875
+	Capacity, Ton		7 500
*	Load factor / degree of utilization, %		65,0 %
*	Sales price / ton (€)		65
	Tons produced		4 875

 Click the button to the left to specify the income more precisely. You may hide (and un-hide) the specification, in order to show the sum of this row only. The sums of all rows will be added up to a sum total in the **Income** row. For specifying income you may use up to 98010 rows (10 sub headers [grey] * 99 Specification rows [yellow] * 99 Detail level rows [fawn, light yellow brown]. 10 * 99 * 99 = 98010. Additionally you can link to other Sheets and Workbooks.

You may use the calculation operators (+ - * / or blank) of the drop down menu, when specifying the relationships between the income rows. When you start a new investment calculation, the default operator is "+". Change the operator when necessary. As one of the operators is a blank space, you can specify that row as informative text because the figure will not sum up, or as a variable for use elsewhere.

INCOME STATEMENT

EUR		1/2015	12/2015	12/2016	12/2017
Months per interval			12	12	12
≡ Passenger traffic			1 400 000	1 513 680	1 631 347
+ Number of passengers			5 000	5 300	5 600
• Average ticket price	2,00 %		280	286	291
≡ Mail service revenue			200 000	200 000	200 000
Turnover		0	**1 600 000**	**1 713 680**	**1 831 347**
(cumulative financial year)			1 600 000	1 713 680	1 831 347
≡ Other operating income					
Variable costs		0	-269 760	-282 499	-295 640
≡ Fuel costs			-194 760	-201 409	-208 246
+ Fuel costs empty plane			-149 760	-152 755	-155 810
+ Fuel cost per flight	2,00 %		-720	-734	-749
• Number of flights			208	208	208
+ Fuel costs from passenger weight					6
+ Fuel cost per passenger	2,00 %				9
• Number of passengers					0
≡ Handling costs			-75 000	-81 090	-87 394
+ Handling cost per passenger	2,00 %		-15	-15	-16
• Number of passengers			5 000	5 300	5 600
Gross margin		0	**1 330 240**	**1 431 181**	**1 535 707**
(cumulative financial year)			1 330 240	1 431 181	1 535 707
% (cumulative financial year)			83,1%	83,5%	83,9%
Fixed costs		0	-582 500	-594 150	-606 033
≡ Staff costs			-250 000	-255 000	-260 100
+ Air crew	2,00 %		-200 000	-204 000	-208 080
+ Ground staff	2,00 %		-50 000	-51 000	-52 020
≡ Maintenance costs			-332 500	-339 150	-345 933
+ Maintenance costs	2,00 %		-332 500	-339 150	-345 933
Maintenance cost %			7 %		
≡ Rents	2,00 %				
EBITDA		0	**747 740**	**837 031**	**929 674**

You may name specification rows and detail rows as you wish.

Income (cumulative financial year) shows cumulative incomes per financial year. For example, if the financial year is 12 months, and the calculation is monthly, income is cumulated, e.g.:

	1/2015	1/2015	2/2015	3/2015	4/2015	5/2015	6/2015	7/2015	8/2015	9/2015	10/2015	11/2015	12/2015
Months per interval		1	1	1	1	1	1	1	1	1	1	1	1
Income	0	87 500	88 214	88 934	89 660	90 392	91 130	91 874	92 624	93 380	94 142	94 911	95 685
(cumulative financial year)		87 500	175 714	264 648	354 308	444 700	535 830	627 704	720 327	813 707	907 849	1 002 759	1 098 445

Use the row **Other operating income** to enter extraordinary income outside of main business.

3.2.6.2 Entering costs

There are already some headings for **Variable costs**, which you may change at will. They are of the grey input field type. Remember to enter costs as negative values (outward cash-flow)!

≡ Click the button to the left to specify the rows more precisely. You may hide (and restore) the specification, in order to show the product of this row only. You have all the same functionality to add rows as in income (10*99*99=98 010 rows for variable costs). The variable costs of the investment reduce the profits for the period. The difference is shown as gross margins per interval and financial year, and as a percentage of the profits per cumulative financial year.

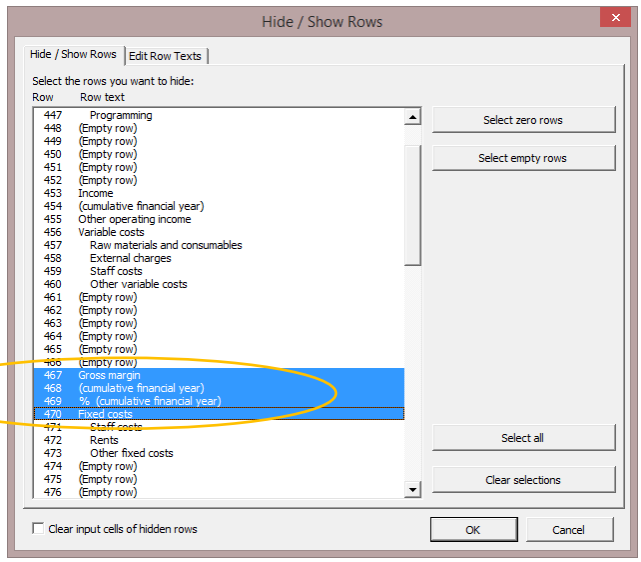
Remember to enter costs as negative values!

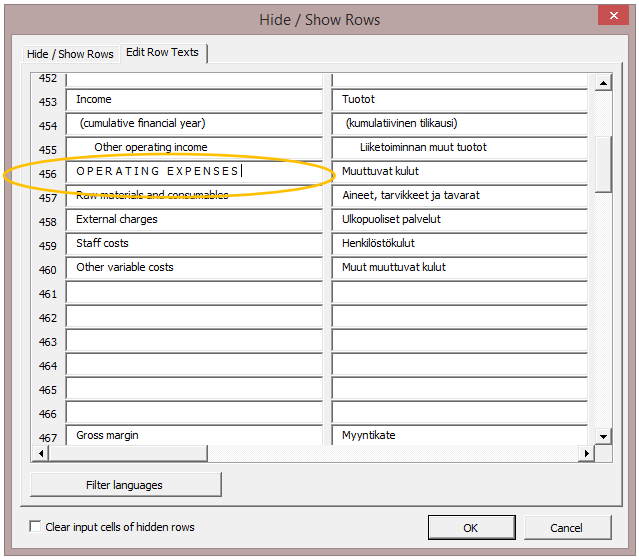
You can use the formulas to specify other costs, as well.

There are already some headings for **Fixed costs**, which you may change at will.

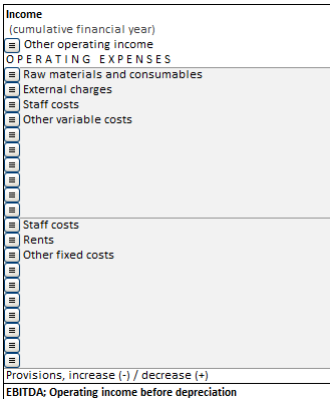
- ≡ Click the button on the left hand side to specify the rows more precisely. You may hide the specification, in order to show the product of this row only.

Hint! It is not compulsory to split the costs in variable and fixed. Just hide the rows between variable and fixed costs, and change the heading:





Result:



Depreciation does not affect the cash flow of an investment directly. Depreciation has an effect on taxation through EBIT; Operating income, and thereby indirectly on cash flow.

Note! When estimating the feasibility of an investment, its mode of financing is usually not taken into account. The assumption is that the financing cost is the discount rate. This principle is based on the idea that the investment itself should first prove itself profitable, before doing more detailed plan of financing. Normally financing is taken into account only if the investment object is tied to a particularly beneficial mode of financing (e.g. a subsidy/ subvention).

The row **Financial income and expenses** is for entering financing costs and income from financing. You can enter the NET of financing income and expenses on one row, or you can use specification rows (and detailed rows) to specify financing costs and income more exactly. Users of *Enterprise* -edition can use the financing module for the calculation of interest and all other types of financing costs involved. The costs associated with financing, as calculated in the Financing module, can be imported to this table using the button.

NOTE! Please note, that financing costs do not affect NPV, IRR or Payback, by default!

- In the 'Income Tax Options' dialog (button) in 'BASIC VALUES' you can select to include tax effects from financing.

Extraordinary income and expenses:

Realisation profit (or loss) from investment objects (this data comes straight from the Investment table) **Extraordinary income (or expenses),** expressly associated with the implementation of this investment, are given here. Use as many rows as you need.

Income tax = total income taxes for the financial year. The income tax is calculated as a percentage of the sum of 'Income before appropriations and taxes' and Appropriations. Other tax options are available, see 3.1.2.5.

Net income for the period (profit /loss) is shown per period, cumulatively per financial year, and as a percentage of the profits per cumulative financial year. The 'Net income for the period' is the sum of 'Income before appropriations and taxes', 'Appropriations, increase (-) / decrease (+)', 'Income tax', 'Deferred tax' and 'Minority interest'.

3.2.6.3 Specification and detail rows

Invest for Excel allows flexible handling and processing of rows. You can add, name, delete and hide specification rows freely for many rows with the ≡ buttons. You can also select calculation operators by yourself. For an example, see the table below:

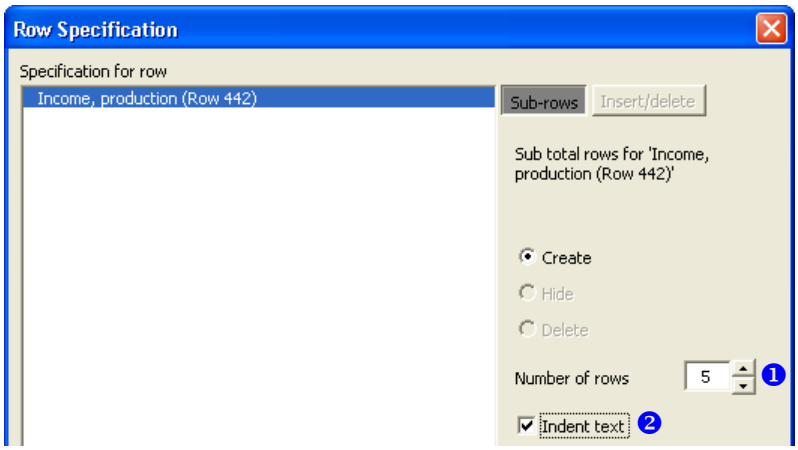
		1/2005	12/2005	12/2006
	Months per interval		12	12
	Income specified:			
≡	Income, production		316 875	439 558
+	Capacity, Ton		7 500	10 000
*	Load factor / degree of utilization, %		65,0 %	66,6 %
*	Sales price / ton (€)		65	66
+	Sales price, component 1		50	51
+	Sales price, component 2		15	15
	Tons produced		4 875	6 663

In the calculation shown, the user has:

1. Named the first row 'Income production'.
2. Clicked the ≡ button and created five specification rows.
3. Named the specification rows.
4. Clicked the ≡ button again and created two additional detail rows for "Sales price/ ton". Entered row names "price component 1 (& 2)".
5. Entered multiplier (*) as operator for two specification rows (Load factor & Sales price)
6. Entered the values in column for 2005.
7. Entered an Excel formula for tonnes produced (Excel formula =Capacity * Load factor).
8. Deleted operator for the row "Tonnes produced" (only for information, not to be included in calculation of the product of specification rows).
9. Distributed the values from 2005 to other periods with the Copy/ distribute button.

3.2.6.3.1 Create row specification

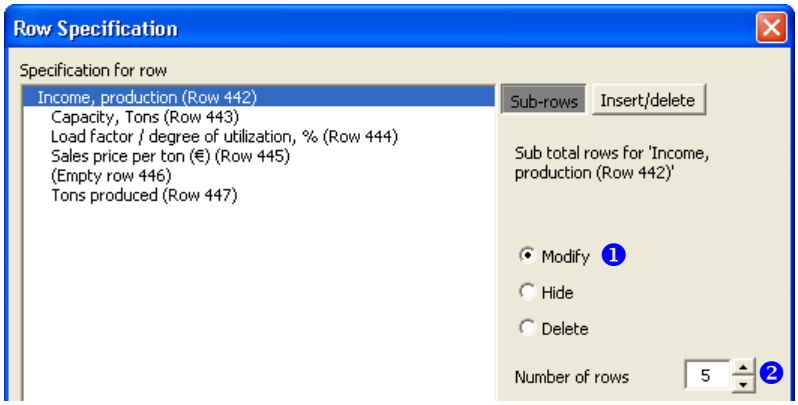
Click the button to open the following Row specification dialog box.



Enter number of rows ❶ to add. Five rows is default. You can freely change the number of rows to be created (max. 99). You can also choose if you want to indent ❷ the texts or not. When you have created the additional rows, you will notice that the actual row (host) has become a white, protected total row. If there were numbers on the actual row they are moved to the first new additional row. Enter descriptions for the new rows.

3.2.6.3.2 Modify row specification

Click the button to open the dialog box. The Modify ❶ option is chosen by default.



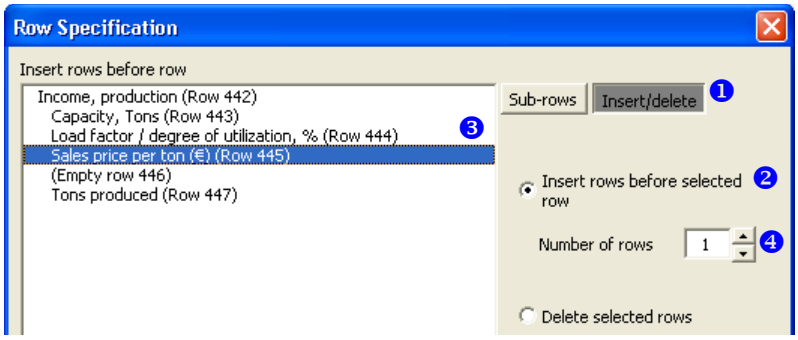
You can change the number of rows ❷ with the Modify function. Increasing number of rows will add rows to the end of the row specification. Decreasing number of rows will delete rows from the end of the specification.

3.2.6.3.3 Insert rows before selected row

To insert rows before a specific row (as opposed to adding to end using the Modify function), follow these instructions:

Click the ≡ button to open the dialog box.

❶ Activate the **Insert/delete** page
❷ Choose option Insert rows before selected row (chosen by default)
❸ Select the row, before which you want to enter rows
❹ Enter number of rows to insert (default is one row) and click OK.

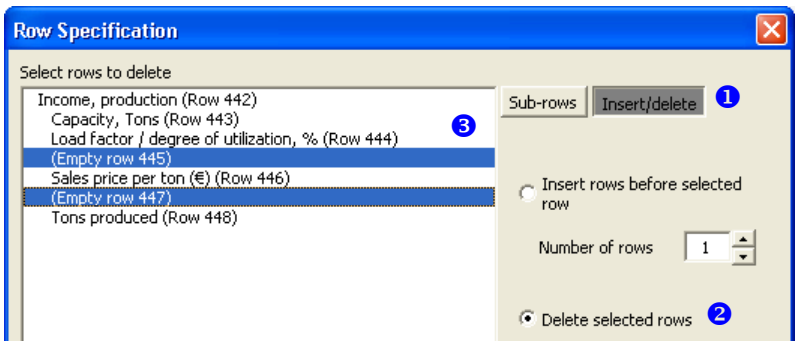


3.2.6.3.4 Delete selected rows

To delete selected rows (as opposed to deleting from the end the Modify function), follow these instructions:

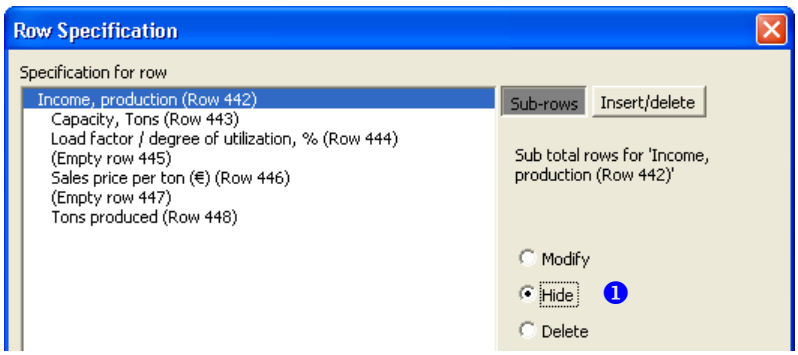
Click the ≡ button to open the dialog box.

❶ Activate the **Insert/delete** page
❷ Choose option Delete selected rows
❸ Select the rows you want to delete and click OK.

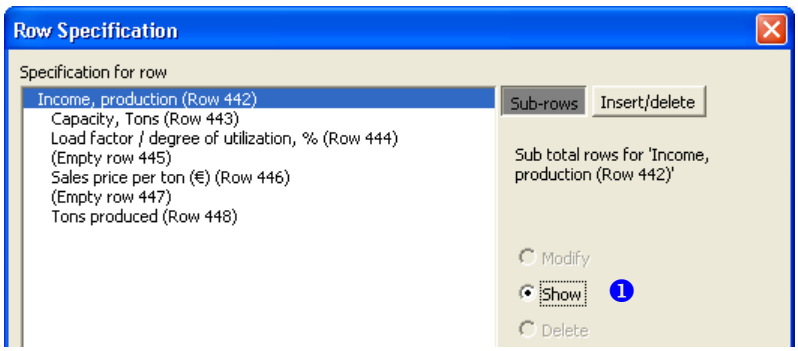


3.2.6.3.5 Hide/show row specification

When you want to hide a row specification, click the ≡ button to open the dialog box, choose Hide ❶ and click OK.

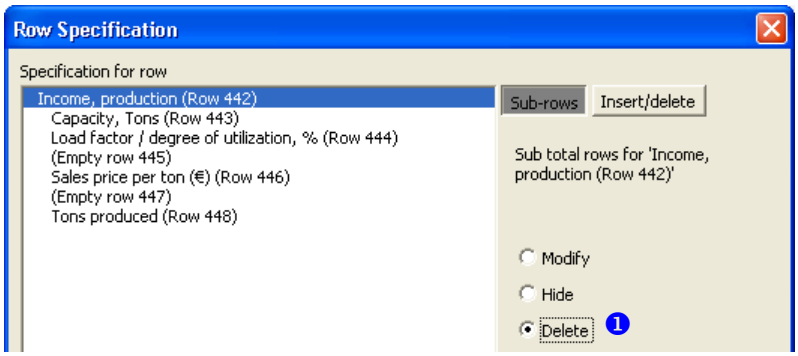


To show (unhide) a hidden row specification, click the ≡ button to open the dialog box, choose Show ❶ and click OK.



3.2.6.3.6 Delete row specification

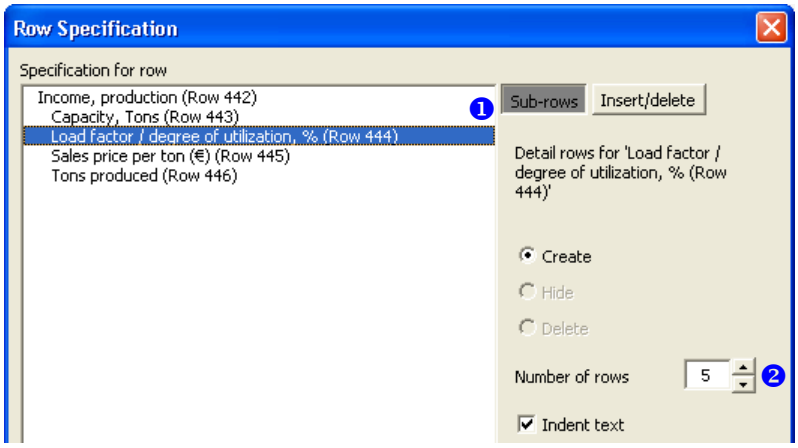
To delete a row specification, click the ≡ button to open the dialog box, choose Delete ❶ and click OK.



The result of the specification rows will be written on the main row. Note that the Delete function will delete the specification rows irreversibly.

3.2.6.3.7 Create detail level specification rows

You can add one sub-level of detail rows for specification rows. Choose the specification row ❶ to which you want to add new detail rows, specify number of rows ❷ to add and click OK.

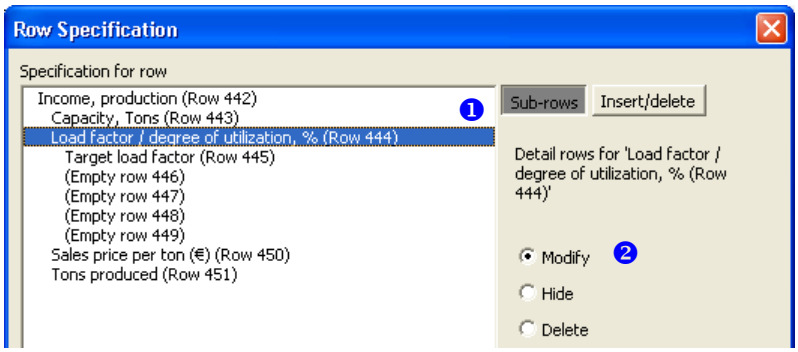


Detail rows are shown in a different background color and texts are indented by default.

≡	Income, production		5 250	7 000	7 000
+	Capacity, Tons		7 500	10 000	10 000
*	Load factor / degree of utilization, %		70,0 %	70,0 %	70,0 %
+	Target load factor		70,0 %	70,0 %	70,0 %
+					
+					
+					
+					
+	Sales price per ton (€)				
	Tons produced				

3.2.6.3.8 Modify, hide or delete detail level specification rows

To modify detail level specification rows, choose the specification row ❶ with the detail level rows and choose Modify, Hide or Delete ❷.



You can create, modify, hide and delete detail rows in the same way as specification rows.

3.2.6.3.9 Residual column and specification rows

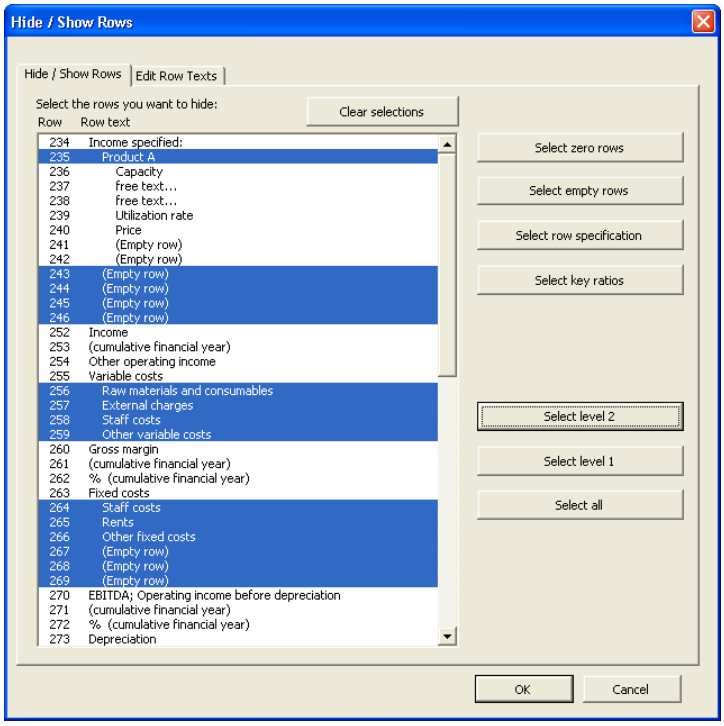
Residual column is not included when row specifications are created.

€	12/2005	12/2006	12/2007	12/2008	12/2009	Residual
Months per interval	12	12	12	12	12	(12/2009)
Income specified:						
Main products	78 000	79 950	81 949	83 997	86 097	
+ Product A	35 000	35 875	36 772	37 691	38 633	
+ Product B	27 000	27 675	28 367	29 076	29 803	
+ Product C	16 000	16 400	16 810	17 230	17 661	

Any entries in the residual column should be entered on the main row above the row specifications.

3.2.6.3.10 Hide/show rows

By clicking the button on the left of the blue bar you can select rows to hide.

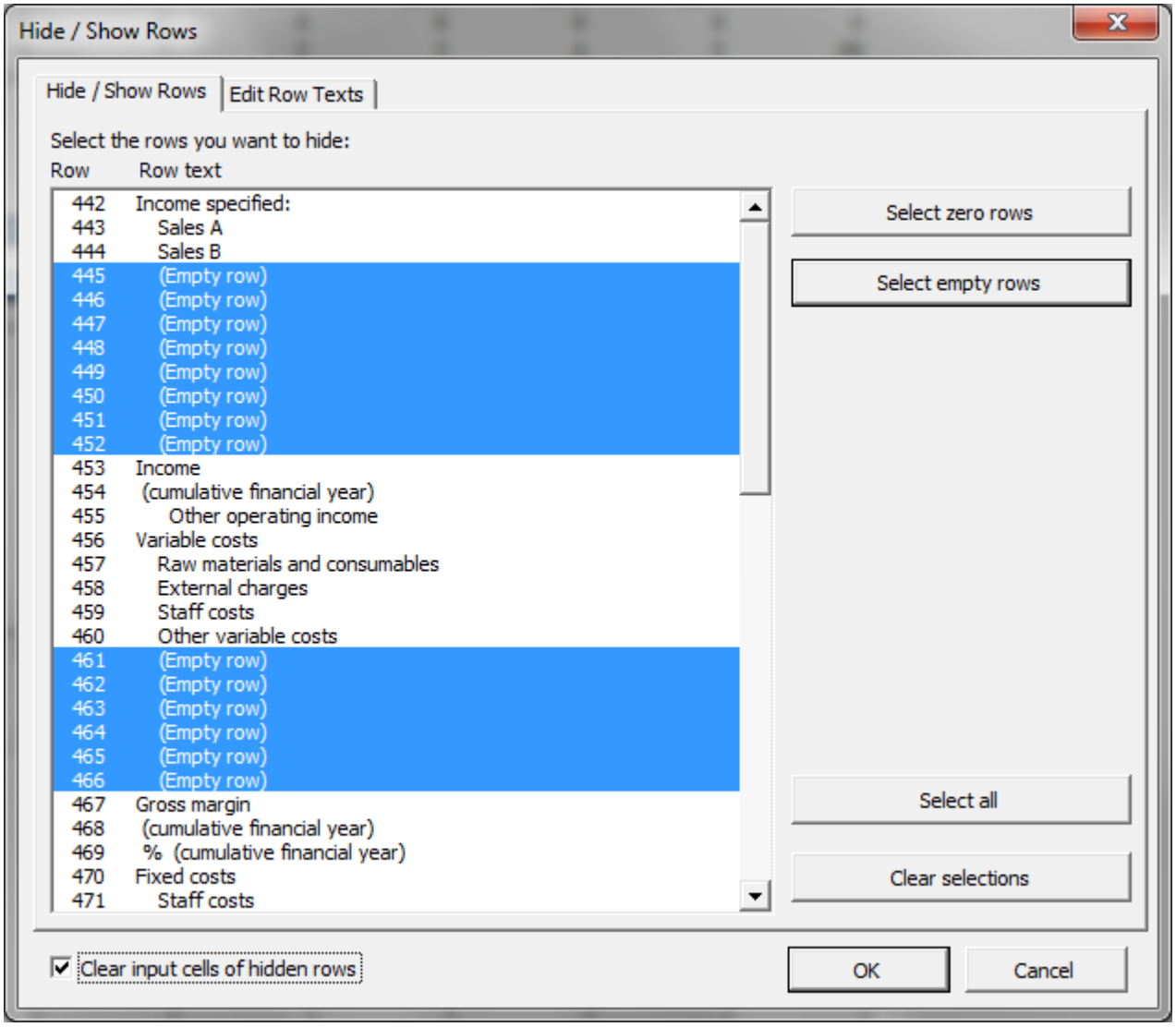


In this window you can choose which rows you want to hide. Rows marked with blue will be hidden. You can freely select rows by clicking them with mouse or use buttons on the right side in the window. If specification rows are not in use, the “Select row specification” button is hidden. When you open the window the program shows row numbers automatically on the left side in the calculation. This will help you to choose the right rows to hide/ unhide.

3.2.6.3.11 Clear input cells of hidden rows

When hiding rows in a calculation file, you can choose to clear input cells on the rows to be hidden. This way you can make sure that no numbers or formulas that could impact the result of the calculation will accidently be left on the hidden rows. Text cells will not be cleared.

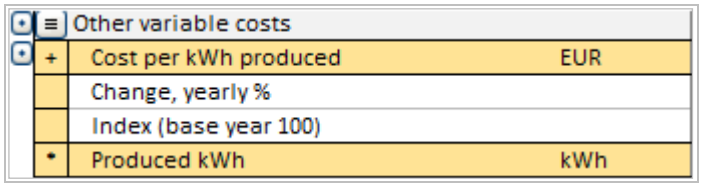
Check “Clear input cells of hidden rows in the “Hide / Show Rows” dialog box to use this function when you are hiding rows.

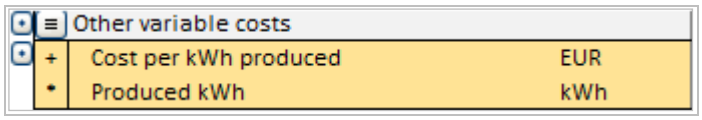


3.2.6.3.12 Flip buttons for sub-rows

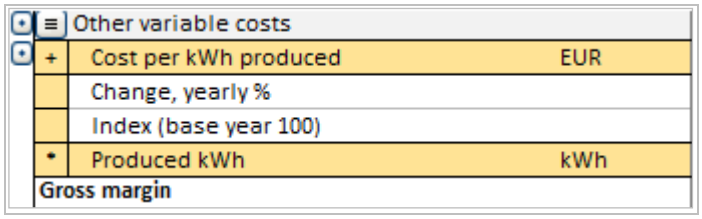
Flip buttons are automatically added for sub-rows, i.e. Specification rows and Change indicator rows. You can toggle (hide/unhide) sub-rows for the row with the Flip button by clicking it.

Flip Change indicators:



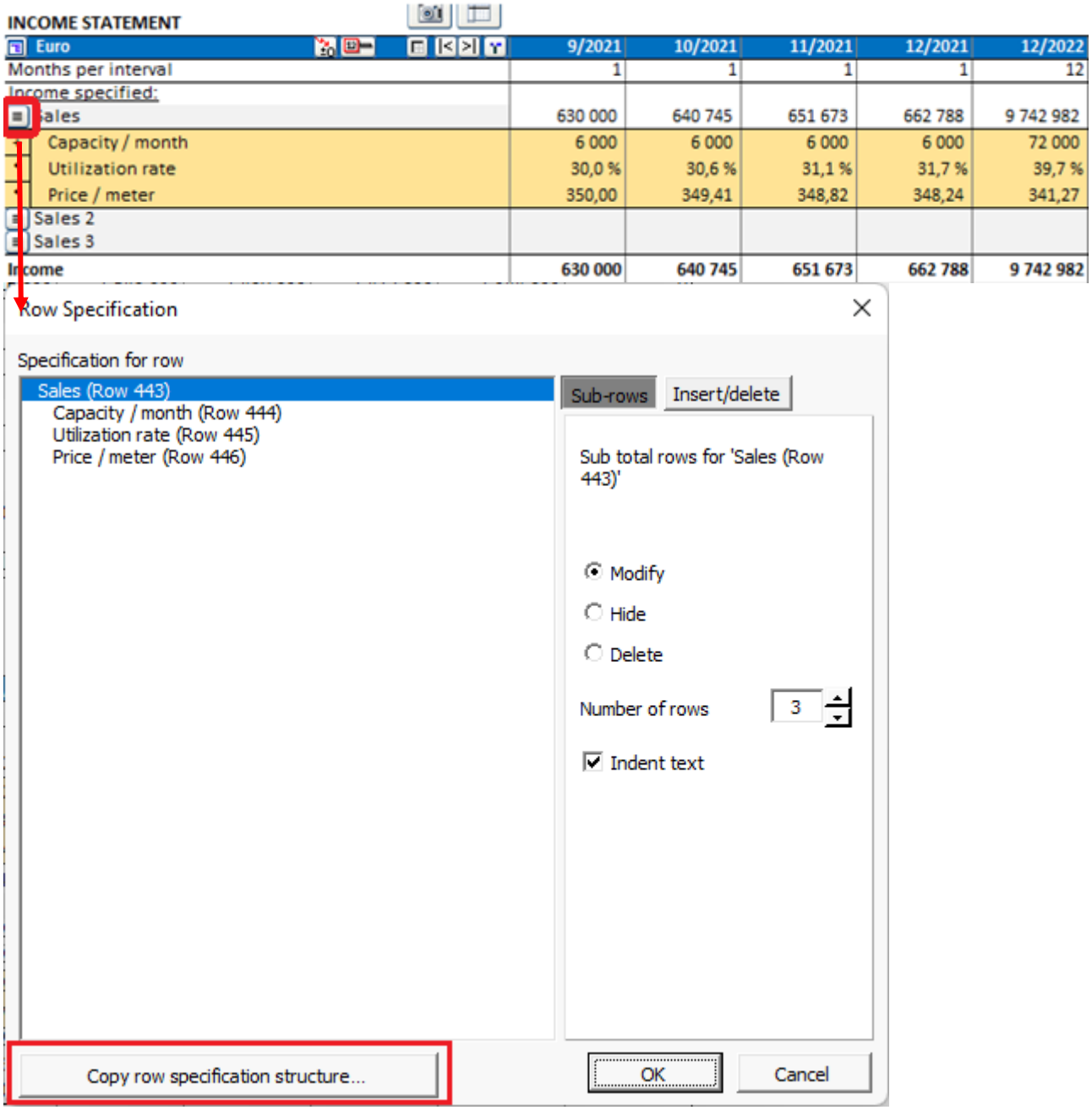


Flip Specification rows:

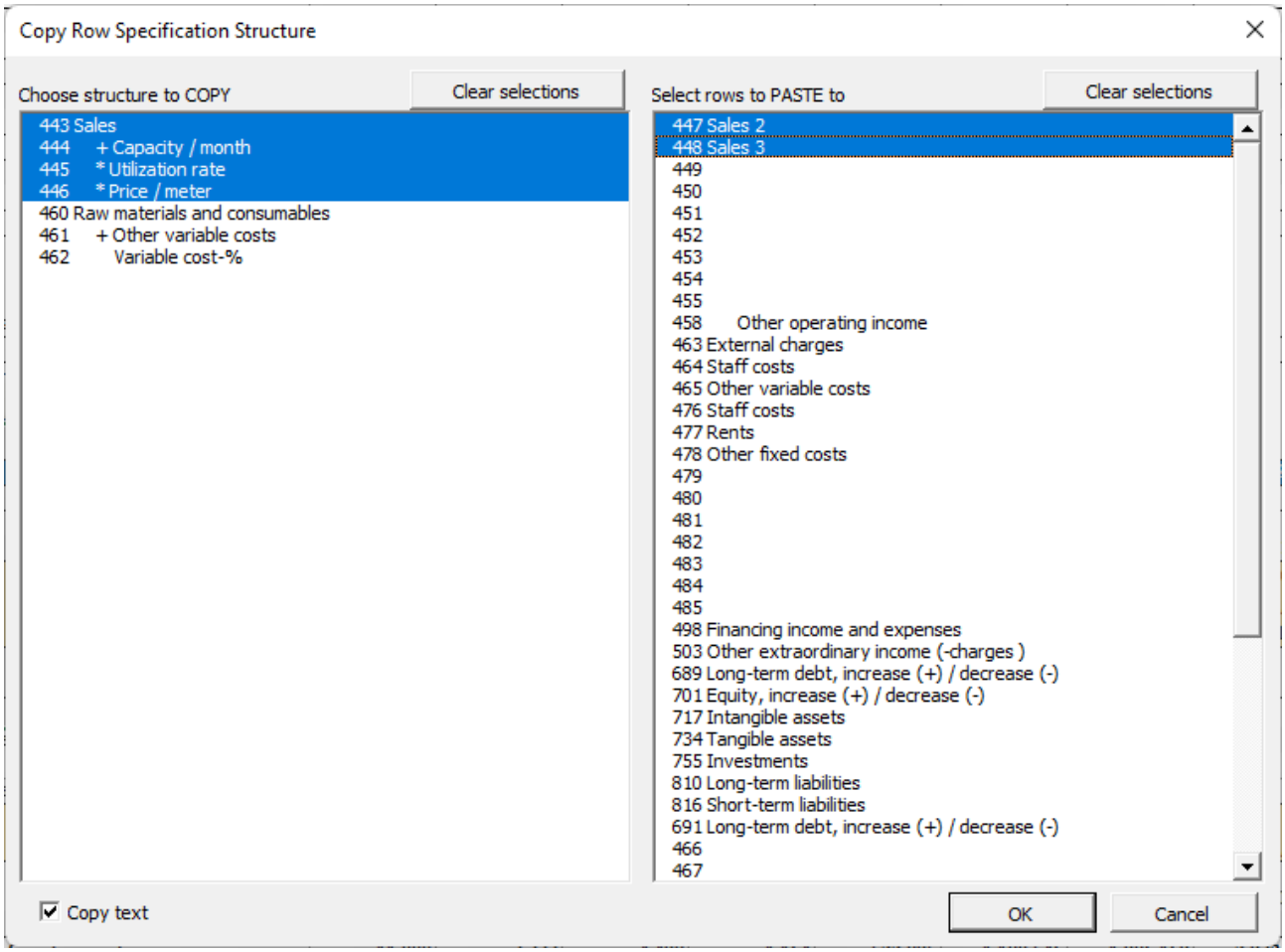


3.2.6.4 Copy row specification structure

Row specification structures can be copied to other rows. To copy a structure, open row specification form.



To the left you choose the structure you want to copy. To the right you select the rows you want the structure to be applied. In the bottom left you can choose to copy text or not.

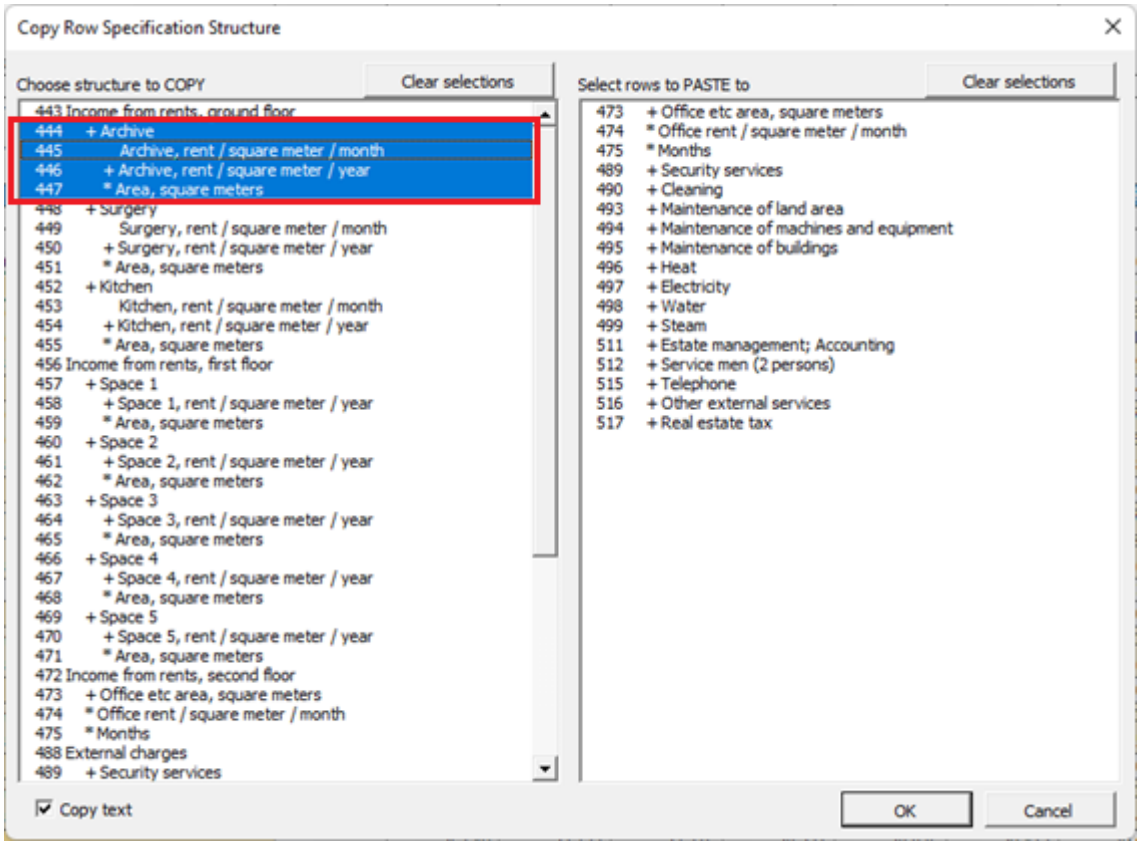


INCOME STATEMENT

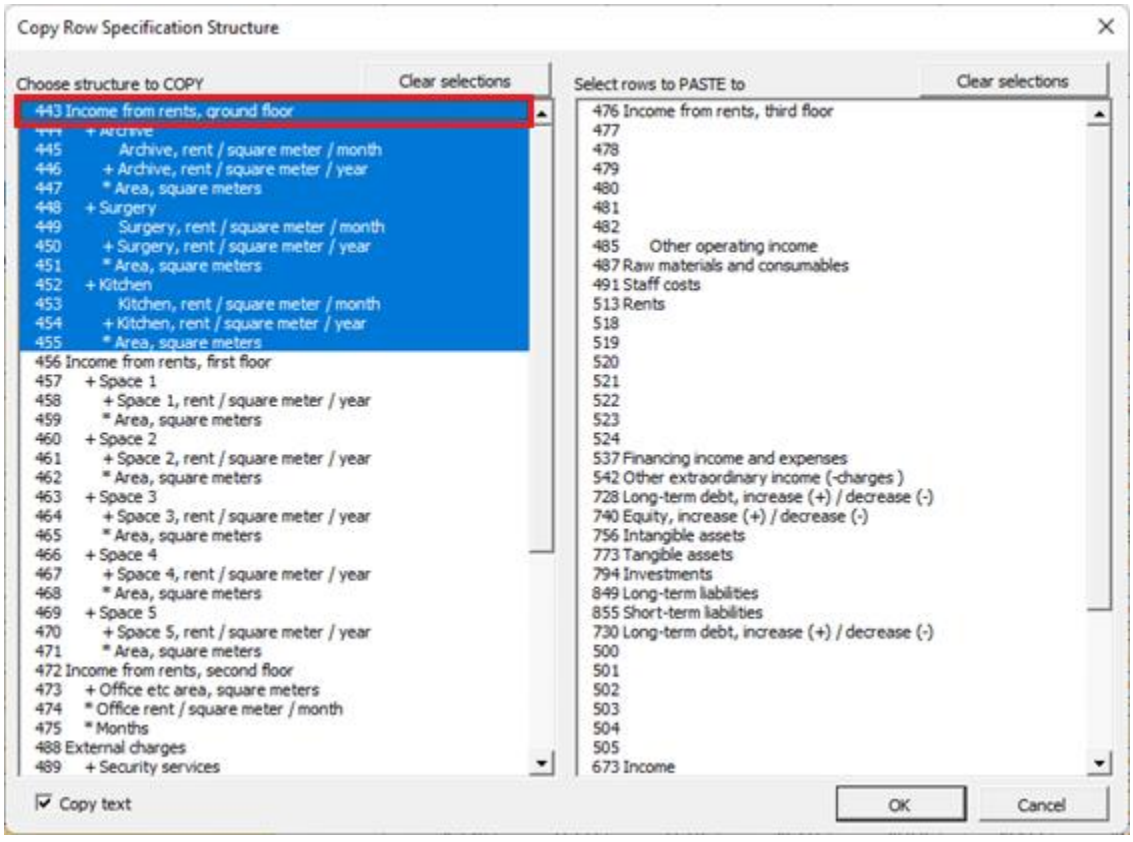
Euro	9/2021	10/2021	11/2021	12/2021	12/2022
Months per interval	1	1	1	1	12
Income specified:					
Sales	630 000	640 745	651 673	662 788	9 742 982
+ Capacity / month	6 000	6 000	6 000	6 000	72 000
* Utilization rate	30,0 %	30,6 %	31,1 %	31,7 %	39,7 %
* Price / meter	350,00	349,41	348,82	348,24	341,27
Sales 2	0	0	0	0	0
+ Capacity / month					
* Utilization rate					
* Price / meter					
Sales 3	0	0	0	0	0
+ Capacity / month					
* Utilization rate					
* Price / meter					
Income	**630 000**	**640 745**	**651 673**	**662 788**	**9 742 982**

If the calculation includes two-level row specification structures, you can choose to copy a sub structure or full structure. Each structure can only be copied to the same level rows so the rows on the right will vary depending on which structure is chosen.

To choose a sub structure, click on any sub-row.

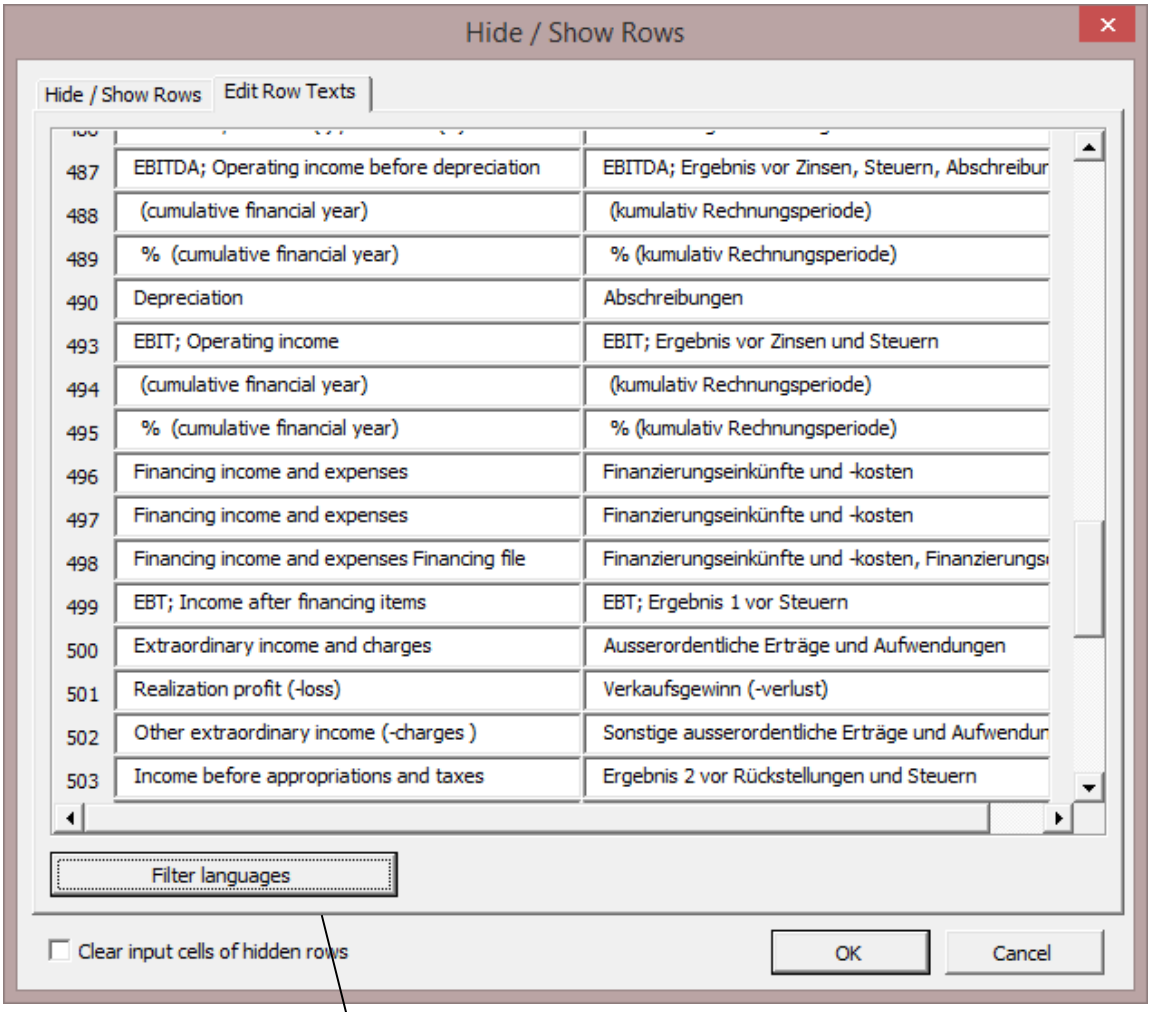


To choose full structure, click on main row.

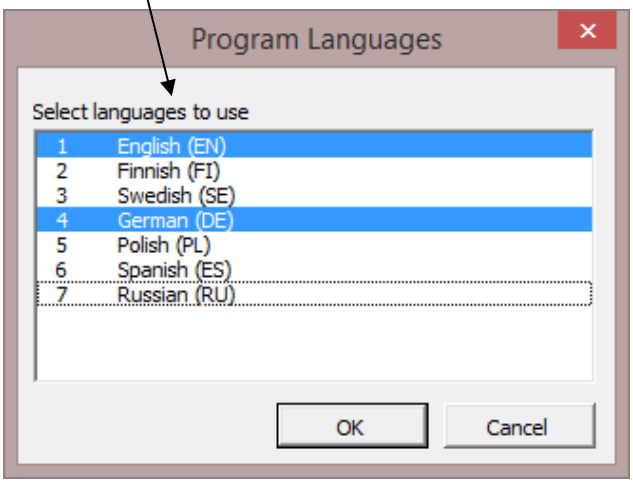


3.2.6.5 Edit row texts

In this form you can change row texts in each language used in the program. (This function is only available in Pro and Enterprise editions).



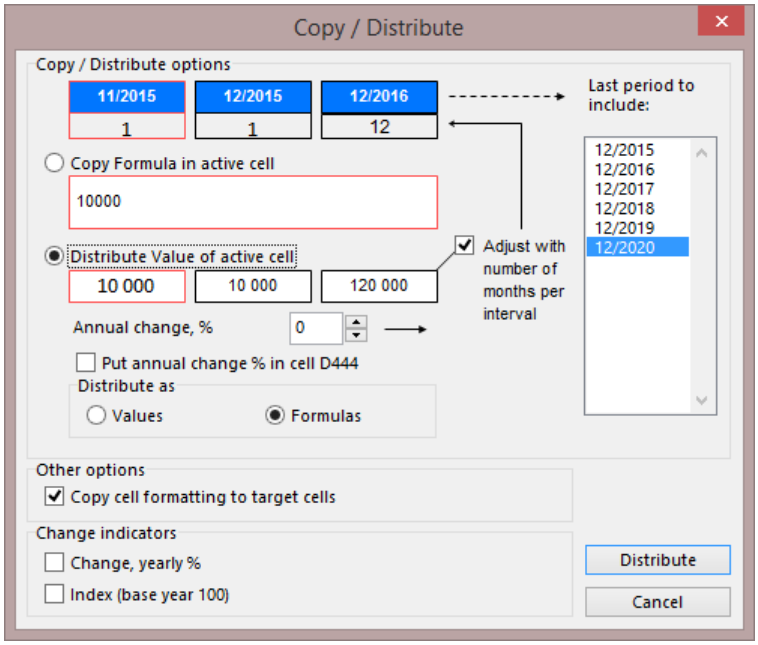
It's also possible to filter out languages not needed. The blue ones stay, the white ones will be hidden:



3.2.6.6 Copy / Distribute -function

You can copy the formula or the value from a cell to the following columns using Excel's **Copy** and **Paste** commands. For that purpose, *Invest for Excel* has a useful function, which you can activate by clicking the  button. But first select the cell, the contents of which you want to copy to the next columns! We strongly recommend using Invest for Excel's 'Copy / Distribute' function instead of Copy and Paste in Excel. Reasons are, much more security (i.e. less risk) and ease of analysis.

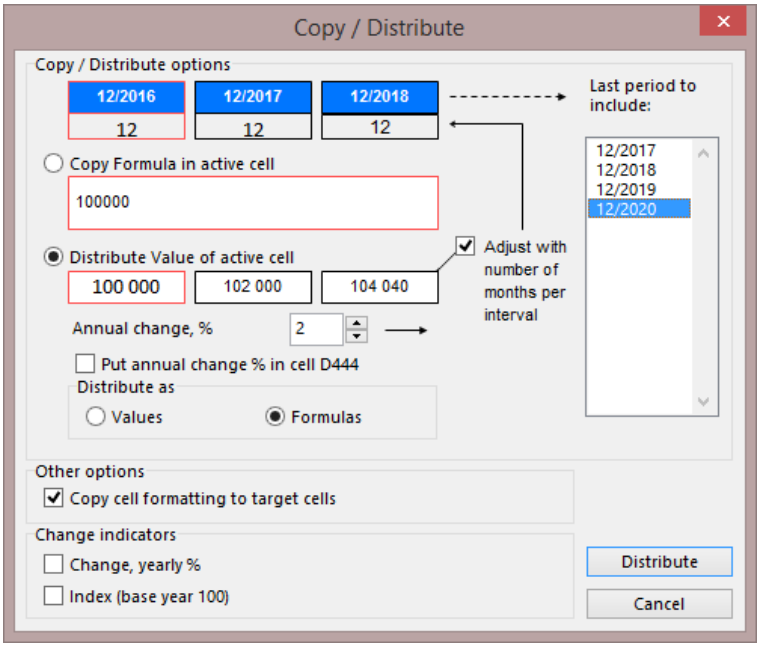
Distribute Value of active cell



If you don't want to copy the value to all columns then select from the list in the box to the right the last period to which the value shall be copied.

Checking **Adjust with number of months per interval**:
Example (see picture at left): The first month's income is 10,000 (11/2015). The next interval ends at financial closing 12/2015, also 1-month long. Therefore, the income/savings for that interval is also 10,000. The third interval lasts an entire year, why the amount should be 120,000. If you check 'Adjust with number of months per interval', it will be so.

If you apply this function to a figure that should not change; that is, it should not be multiplied twelve times when changing from monthly to annual columns (e.g. unit price, margin-%, number of employees), do not check the "Adjust with number of months per interval" (by default it is not checked).

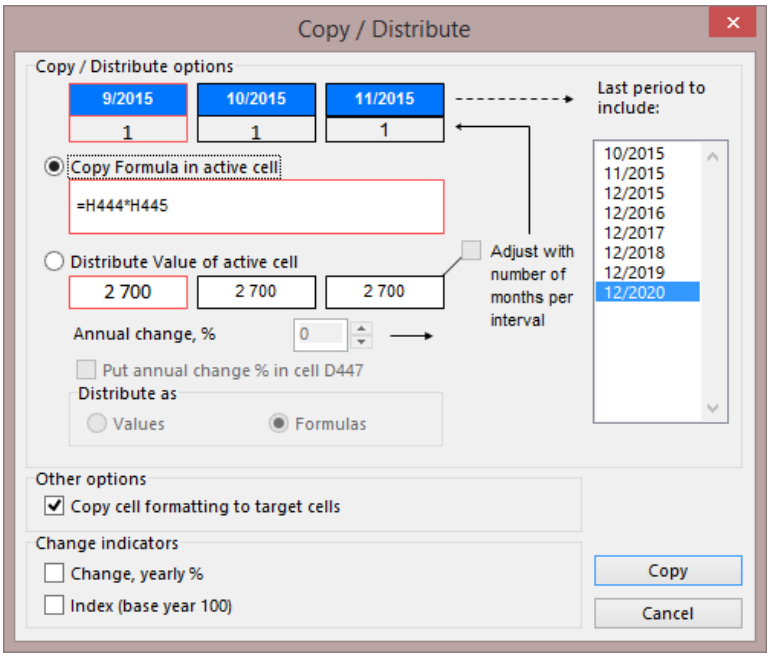


By entering the change as a per-centage, you can determine how the values of the following intervals will change, for example how sales prices or sales volume will increase or decrease. In the example to the left, the calculation is divided into annual (12-month) intervals. The calculation can just as well be divided into e.g. monthly or quarterly intervals. The change percentage is given on an annual basis. The program shows the value of the active cell and those of the next two cells.

By default **Distribute as** Formulas is selected. This means that Invest for Excel will create formulas in the columns referring to the previous column. This makes simulations a lot easier. In addition, you can distribute the value of active cell as numbers instead of formulas, should the situation call for it. This leads to a static calculation, making simulations more challenging.

Use the default **Distribute Value of active cell** and accept the selection with the **Distribute** button.

Copy Formula in active cell

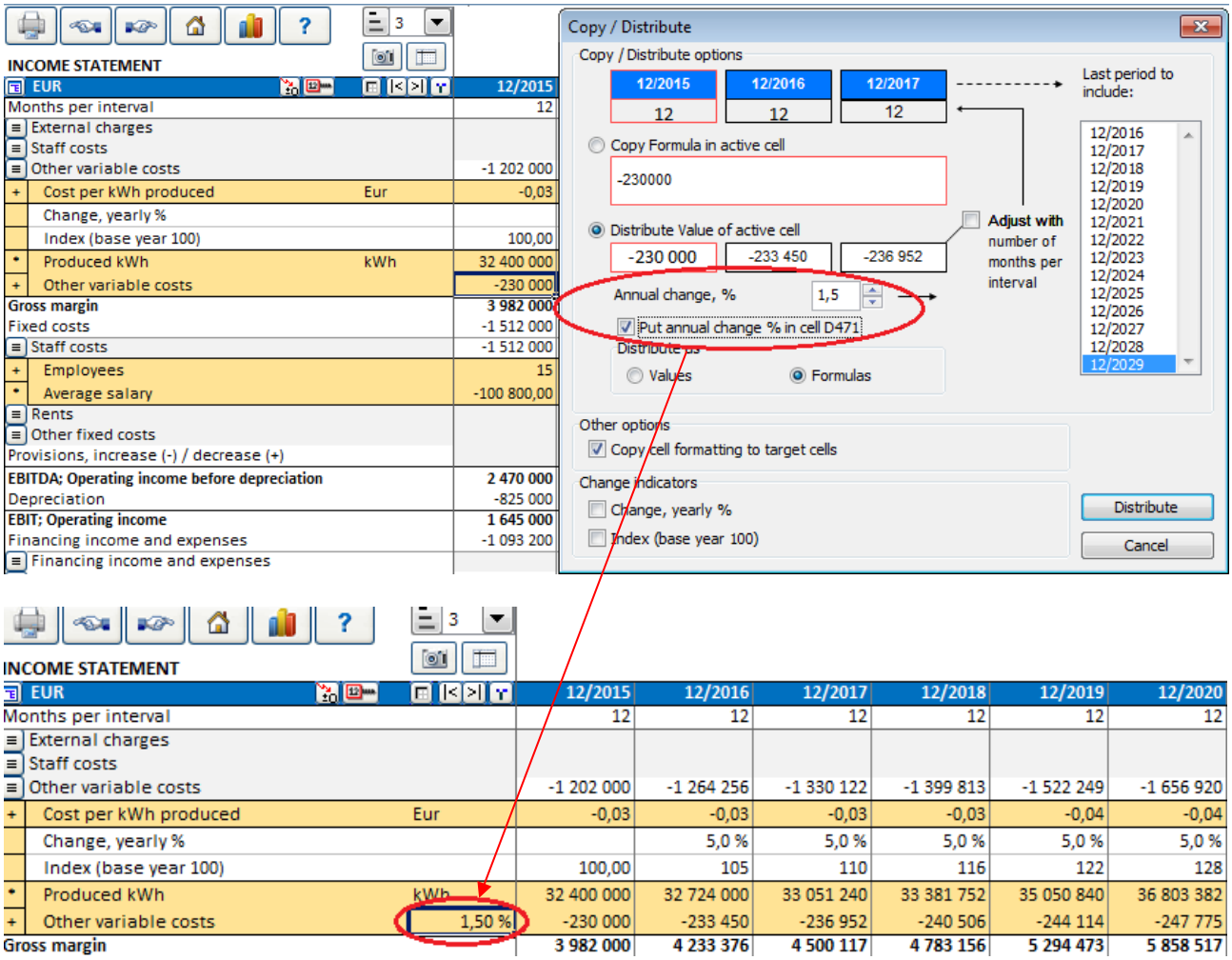


When you copy a cell containing an Excel formula to adjacent columns, use the **Copy formula in active cell** function and click the **Copy** button. See example to the left.

Other options: Use 'Copy cell formatting to target cells' to copy the cell formatting such as decimals, fonts and percentages.

3.2.6.6.1 Annual change % in cell

When distributing the value of a cell, you can choose to put the annual change % in a cell in column D.

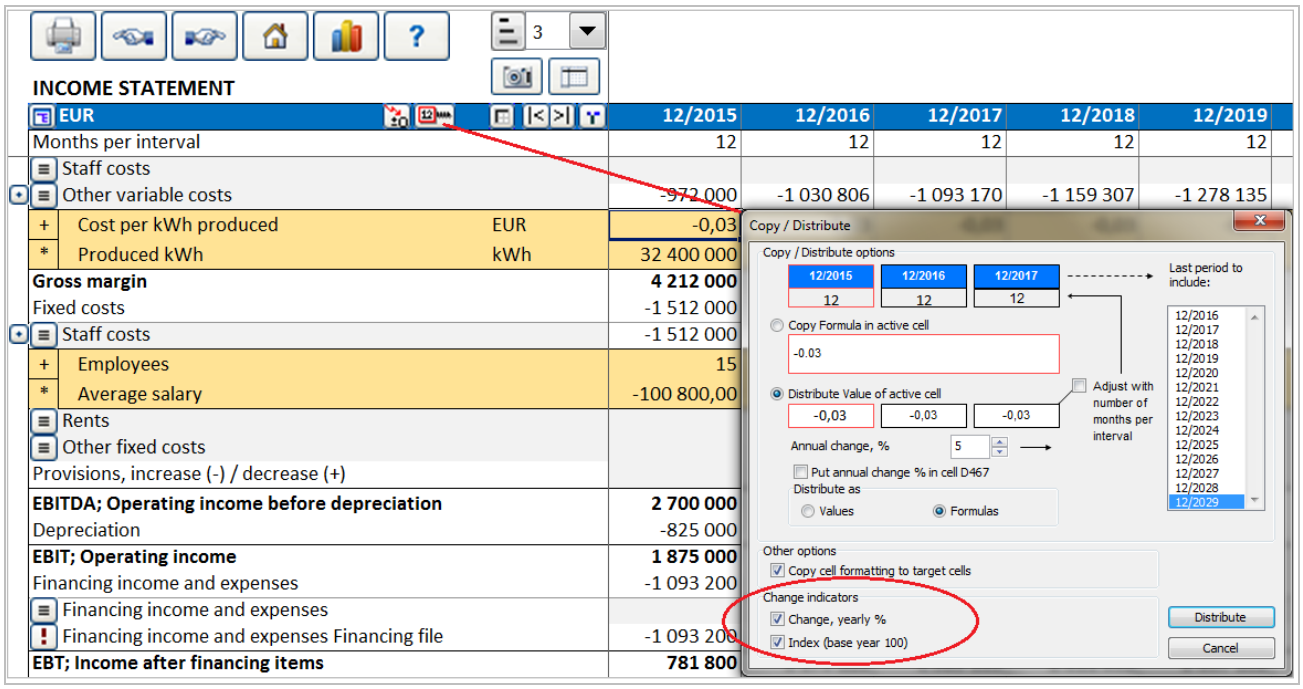


The annual change of the cell can easily be altered from this cell.

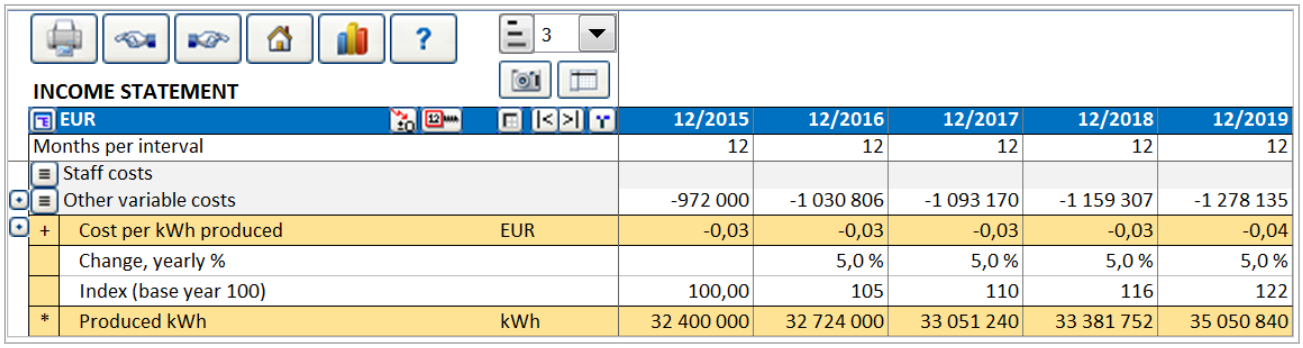
This feature is not available for all rows.

3.2.6.6.2 Change indicators

In the Distribution dialog box you can choose to include Change indicators under the selected row.



Chosen Change indicators are written to the sheet:



Change, yearly % shows the change per year of the parent row. **Index (base year 100)** shows the cumulative change as an index, where the starting year is 100. Notice that these indicators are calculated for your information only, they are not input cells. Use 'Copy / Distribute' –function to edit change-percentage.

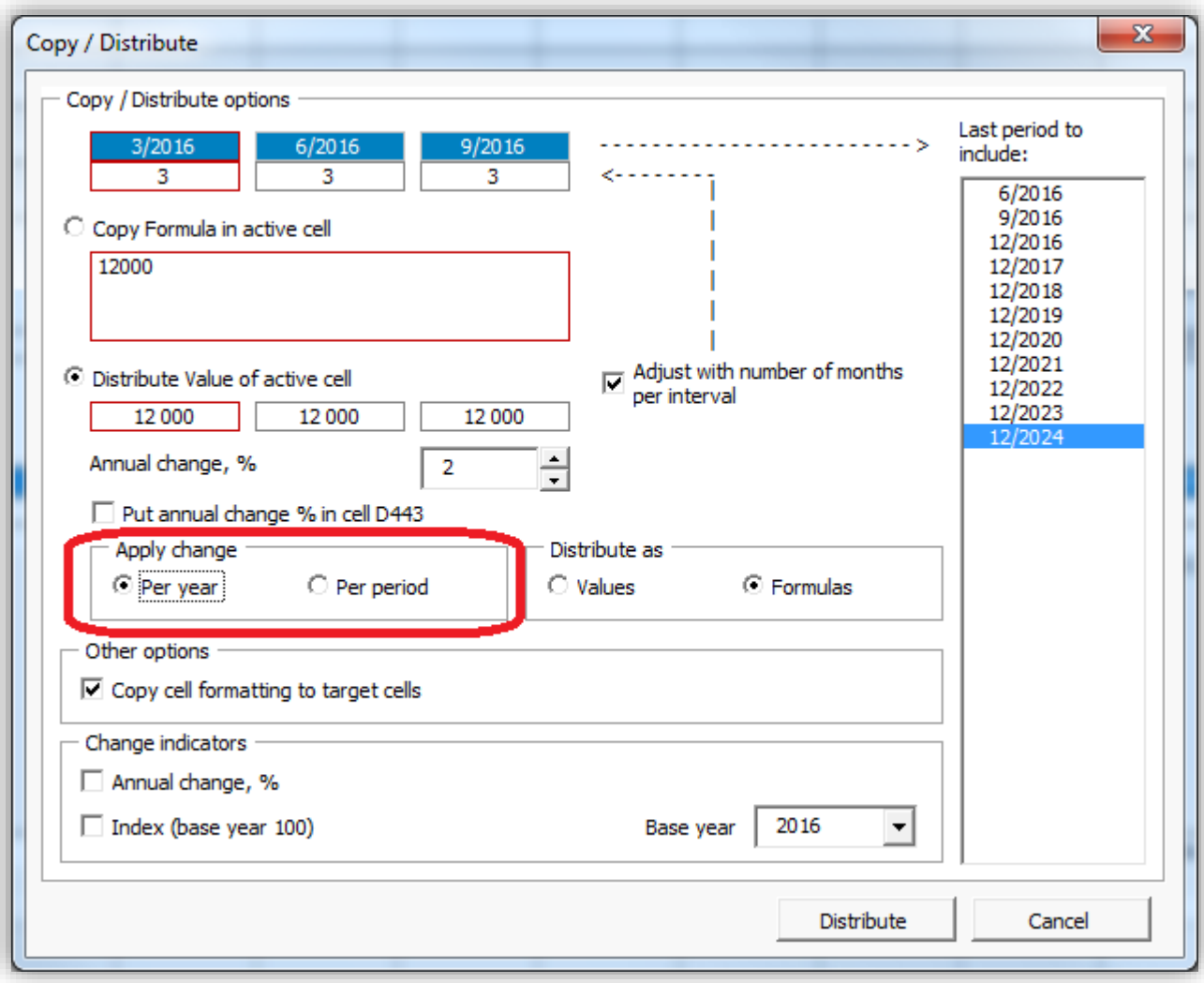
After some practise, you will find the benefits of this "Copy/ Distribute" -function, compared to the normal Copy function. One of the benefits is the linking of formulas between cells, which is a precondition for the Break-even function. If you change the figure in the first column, and a formula covers it and the adjacent columns, the figures in the other columns will also change.

Use these |< >| buttons to move between the first and the last column of the table.

Cell Break-even button: Refer to the Cell Break-even chapter 5.13, later in this manual for more information.

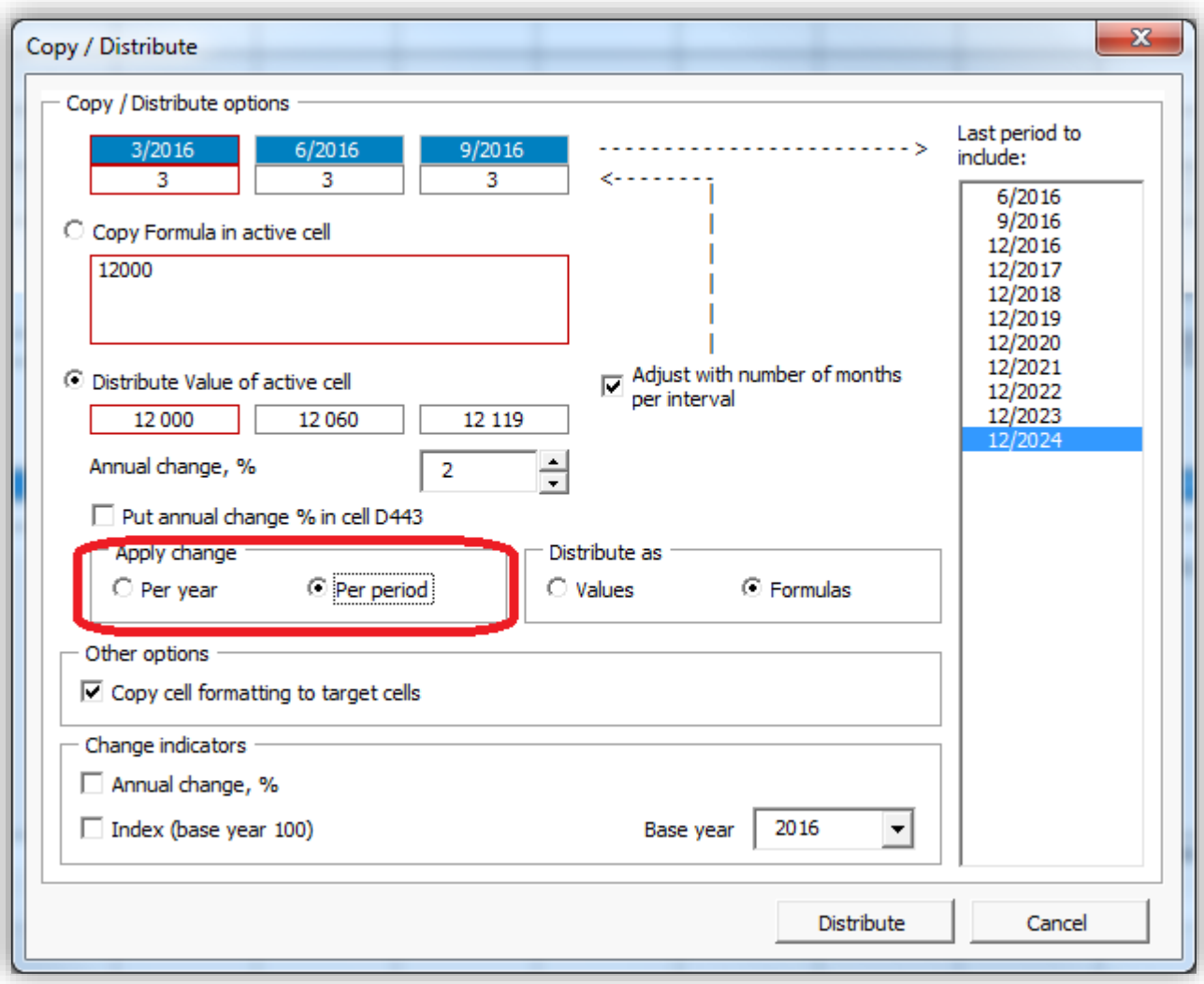
Distribution change percentage can be applied per year or per period.

When “Per year” is chosen, the change is applied when a new financial year starts.



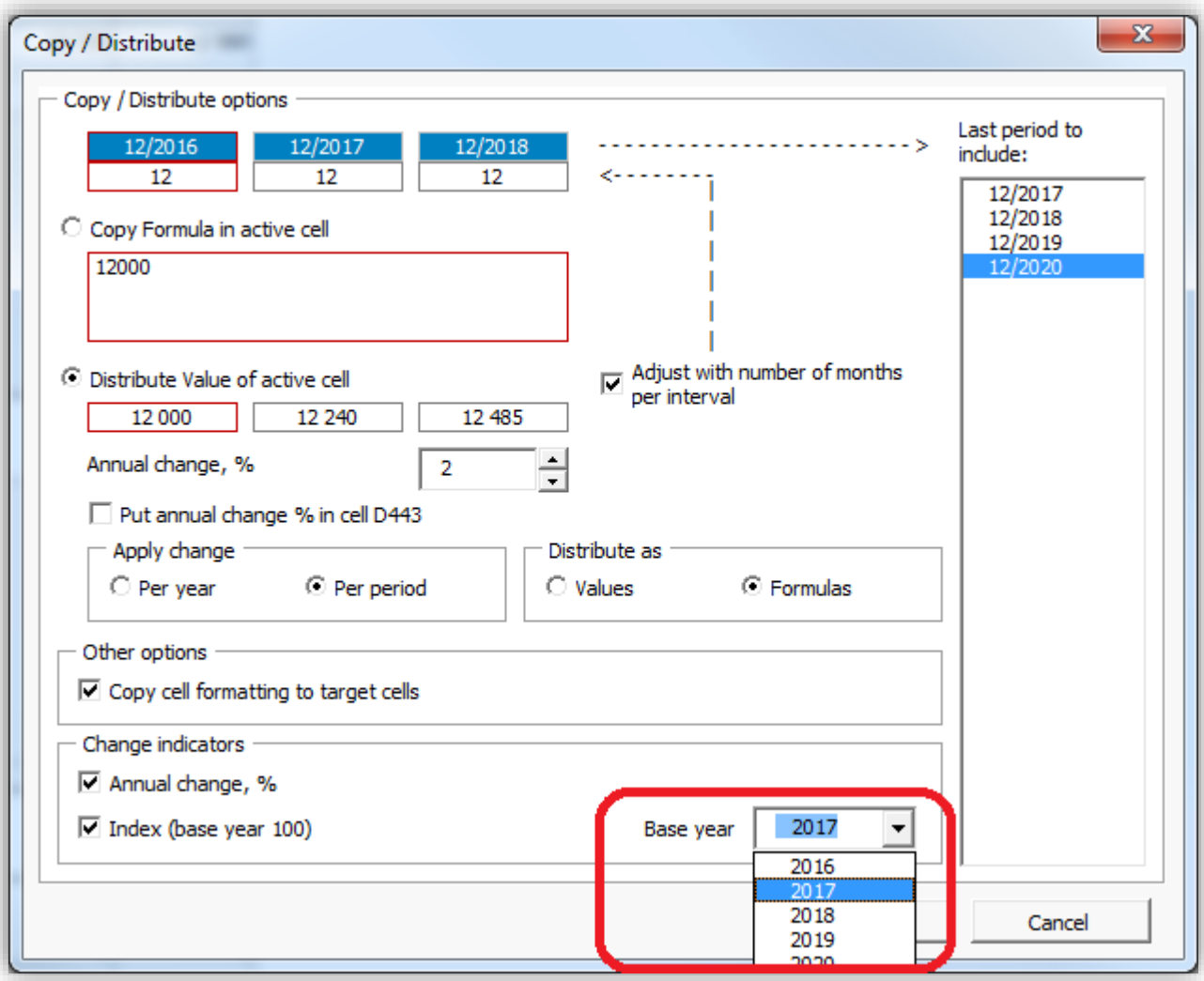
	3/2016	6/2016	9/2016	12/2016	12/2017	12/2018
Months per interval	3	3	3	3	12	12
Income specified:						
Sales	12 000	12 000	12 000	12 000	48 960	49 939

When “Per period” is chosen, the change is applied every period.



	3/2016	6/2016	9/2016	12/2016	12/2017	12/2018
Months per interval	3	3	3	3	12	12
Income specified:						
Sales	12 000	12 060	12 119	12 180	49 693	50 686

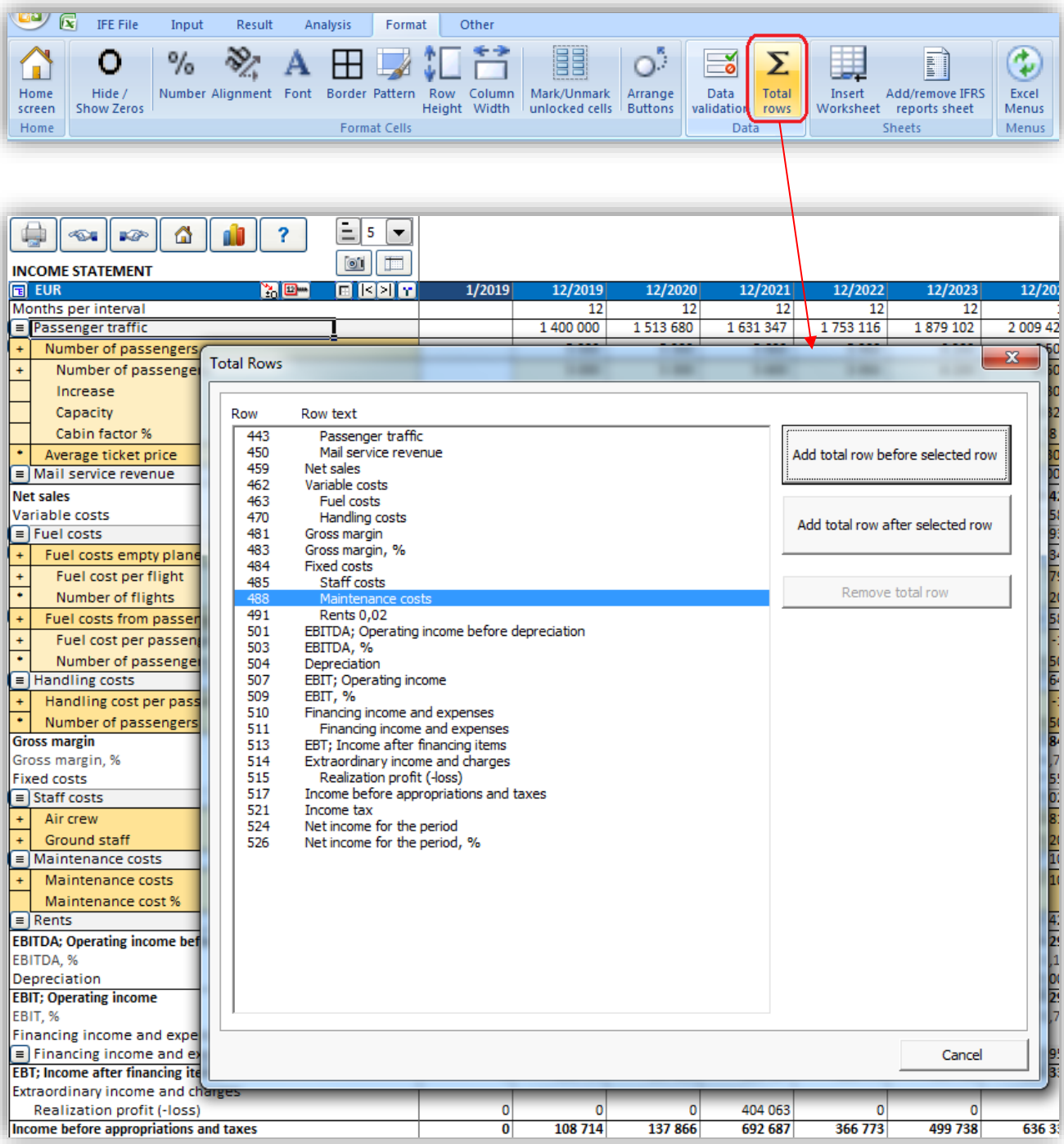
Base year can be selected for Index.



	12/2016	12/2017	12/2018	12/2019	12/2020
Months per interval	12	12	12	12	12
Income specified:					
Sales	12 000	12 240	12 485	12 734	12 989
Change, yearly %		2,0 %	2,0 %	2,0 %	2,0 %
Index (base year 100)		100	102	104	106

3.2.6.7 Total rows

Total rows can be added to Income statement from menu.

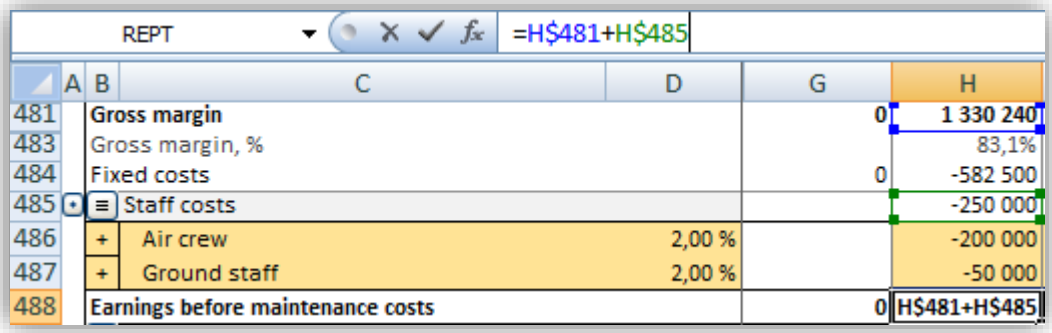


A total row can be added before or after selected Income statement row.

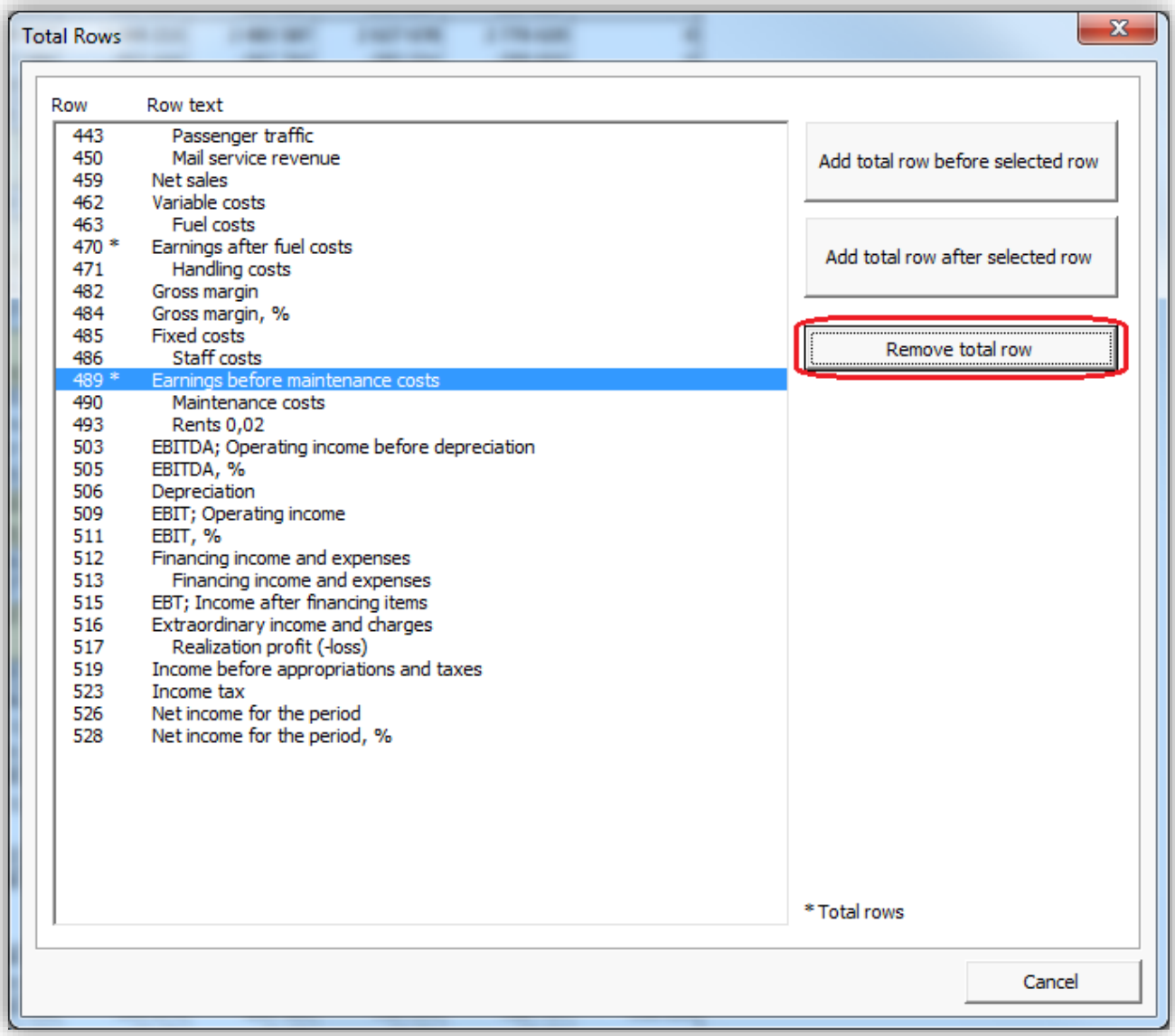
A formula is automatically created and describing text can be added in the text area.

Gross margin		**0**	**1 330 240**	**1 431 181**	**1 535 707**
Gross margin, %			83,1%	83,5%	83,9%
Fixed costs		0	-582 500	-594 150	-606 033
≡ Staff costs			-250 000	-255 000	-260 100
+ Air crew	2,00 %		-200 000	-204 000	-208 080
+ Ground staff	2,00 %		-50 000	-51 000	-52 020
Earnings before maintenance costs		**0**	**1 080 240**	**1 176 181**	**1 275 607**
≡ Maintenance costs			-332 500	-339 150	-345 933
+ Maintenance costs	2,00 %		-332 500	-339 150	-345 933
Maintenance cost %			7 %		
≡ Rents	2,00 %				
EBITDA; Operating income before depreciation		**0**	**747 740**	**837 031**	**929 674**

The formula can be edited freely so the row could be used for any kind of information.



Added total rows can be removed using the same function.



3.2.6.8 Provisions

Changes in provisions can be entered in the Income statement before EBITDA. Changes in **provisions are non-cash** items and will affect free cash flow only through changes in income tax.

INCOME STATEMENT					
1000 €	12/2010	12/2011	12/2012	12/2013	12/2014
Months per interval	12	12	12	12	12
Income specified:					
Sales	4 900	4 974	5 048	5 124	5 201
Income	**4 900**	**4 974**	**5 048**	**5 124**	**5 201**
Other operating income					
Variable costs	-588	-597	-606	-615	-624
Raw materials and consumables	-588	-597	-606	-615	-624
External charges					
Staff costs					
Other variable costs					
Gross margin	**4 312**	**4 377**	**4 442**	**4 509**	**4 577**
Fixed costs	-1 750	-1 768	-1 785	-1 803	-1 821
Staff costs					
Rents					
Other fixed costs	-1 750	-1 768	-1 785	-1 803	-1 821
Provisions, increase (-) / decrease (+)	-300	-200			500
EBITDA; Operating income before depreciation	**2 262**	**2 409**	**2 657**	**2 706**	**3 256**

Accumulated provisions are shown in the Balance sheet on the liabilities side.

Appropriations	0	0	0	0	0
Provisions	300	500	500	500	0
Liabilities					
Long-term liabilities	0	0	0	0	0
Short-term liabilities	0	0	0	0	0
Total liabilities	0	0	0	0	0
SHAREHOLDERS' EQUITY AND LIABILITIES	**1 883**	**3 770**	**5 630**	**7 524**	**9 303**

3.2.6.9 Deferred taxes

Deferred taxes can be entered in the Income statement after ordinary Income taxes. Deferred taxes do not affect Free cash flow.

INCOME STATEMENT

1000 €	12/2010	12/2011	12/2012	12/2013	12/2014
Months per interval	12	12	12	12	12
Income specified:					
Sales	4 900	4 974	5 048	5 124	5 201
Income	**4 900**	**4 974**	**5 048**	**5 124**	**5 201**
Other operating income					
Variable costs	-588	-597	-606	-615	-624
Raw materials and consumables	-588	-597	-606	-615	-624
Gross margin	**4 312**	**4 377**	**4 442**	**4 509**	**4 577**
Fixed costs	-1 750	-1 768	-1 785	-1 803	-1 821
Other fixed costs	-1 750	-1 768	-1 785	-1 803	-1 821
Provisions, increase (-) / decrease (+)	-300	-200			500
EBITDA; Operating income before depreciation	**2 262**	**2 409**	**2 657**	**2 706**	**3 256**
Depreciation	0	0	0	0	0
EBIT; Operating income	**2 262**	**2 409**	**2 657**	**2 706**	**3 256**
Financing income and expenses					
EBT; Income after financing items	**2 262**	**2 409**	**2 657**	**2 706**	**3 256**
Extraordinary income and charges					
Income before appropriations and taxes	**2 262**	**2 409**	**2 657**	**2 706**	**3 256**
Change in appropriations					
Appropriations, increase (-) / decrease (+)					
Income tax	-679	-723	-797	-812	-977
Deferred tax	-200			200	
Net income for the period	**1 383**	**1 686**	**1 860**	**2 094**	**2 279**

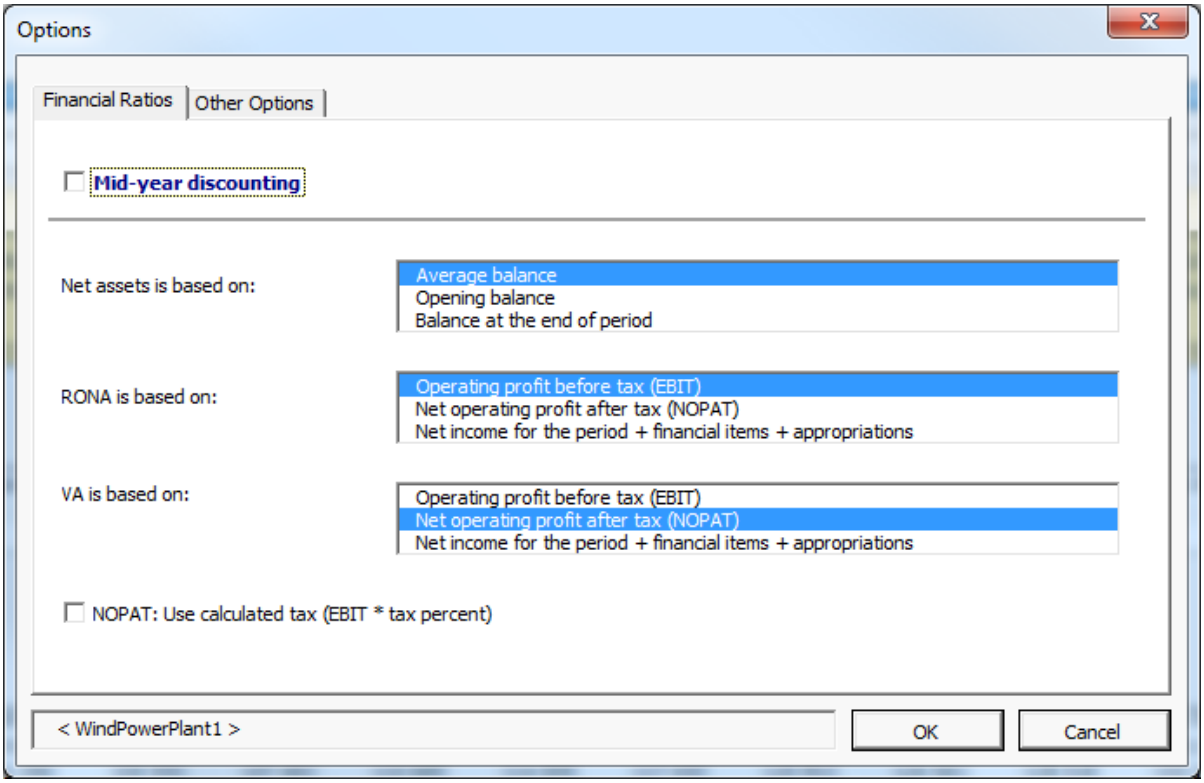
Accumulated Deferred taxes are shown under Long-term debt in the Balance sheet.

Liabilities					
Long-term liabilities	200	200	200	0	0
Interest-bearing long-term debt	0	0	0	0	0
Interest-free long-term debt	0	0	0	0	0
Deferred tax liabilities	200	200	200	0	0
Short-term liabilities	0	0	0	0	0
Total liabilities	200	200	200	0	0
SHAREHOLDERS' EQUITY AND LIABILITIES	**1 883**	**3 770**	**5 630**	**7 524**	**9 303**

3.2.6.10 Financial ratios

Return on net assets (RONA), %	...	4,6%	7,0%	22,4%
Value Added (VA)		-307 840	-182 826	262 467

When you click the ... button at the 'Return on Net Assets (RONA)' row you can select the calculation basis of the RONA and VA indicators:



3.2.6.11 Return On Net Assets (RONA), %.

Definition:

$$\text{RONA} = \frac{\text{Operating income before tax (EBIT) } \textbf{or} \text{ after tax (NOPAT)}}{\text{Net assets } *}$$

* "Average", "Opening balance" or "Balance at the end of period".

That is, the return on the invested capital. Concerning the net capital of this investment only, the figure might not be comparable with the return on the net capital of the whole company.

Where:

NOPAT (Net Operating Profit After Tax) = EBIT – Tax. Note that tax can be income tax in the Income statement or a calculated tax EBIT * tax percent, if the following option is selected:

Net Assets = Total fixed assets and other non-current assets + Net Working Capital.

Where Total fixed assets and other non-current assets are the sum of assets in balance sheet:

BALANCE SHEET

EUR	1/2015
Months per interval	
ASSETS	
Fixed assets and other non-current assets	
Intangible assets	0
Tangible assets	4 950 000
Investments	0
Total fixed assets and other non-current assets	4 950 000

Net Working Capital is the sum of the Working capital statement (last row).

Net assets – definitions for period t:

$$\text{Net Assets Average}_{(t)} = \frac{\text{Net Assets}_{(t-1)} + \text{Net Assets}_{(t)}}{2}$$

$$\text{Net Assets (Opening Balance)}_{(t)} = \text{Net Assets}_{(t-1)}$$

$$\text{Net Assets (Closing Balance)}_{(t)} = \text{Net Assets}_{(t)}$$

3.2.6.11.1 Value Added (VA)

VA can be defined as the net operating profit that a company earns above its cost of capital.

General VA formula:

VA = NOPAT - COST OF CAPITAL x CAPITAL INVESTED

where

NOPAT (Net Operating Profit After Tax) = EBIT – Tax.
Note that tax can be income tax in the Income statement or a calculated tax EBIT * tax percent, if the following option is selected:

COST OF CAPITAL = Weighted Average Cost of Capital (WACC) = discount rate

CAPITAL INVESTED = non-interest bearing capital in the beginning of year

Implementation in Invest for Excel:

VA = (operating income [EBIT] - tax) - (discount factor / 100) * (all assets + working capital) **

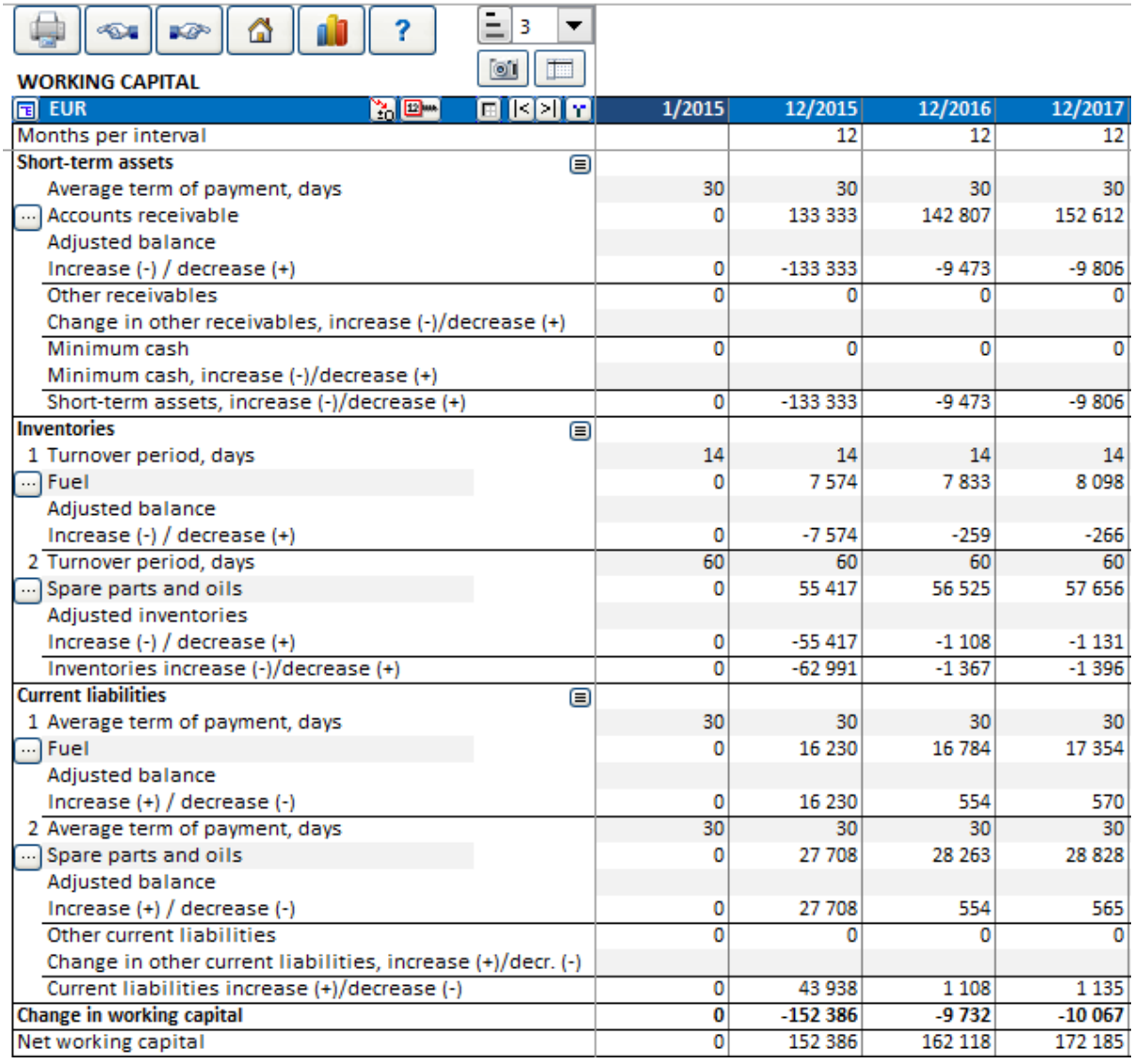
** Assets and working capital: average, opening balance or at the end of the period.

Operating profit = EBIT; Operating income

Net Operating profit after tax (NOPAT) = EBIT – Income tax for the period (cumulative financial year) or EBIT – calculated tax [EBIT *(1-tax %)], if the following option is selected:

3.2.7 Working capital

Use this table to calculate the amount of working capital required for your project/ business:

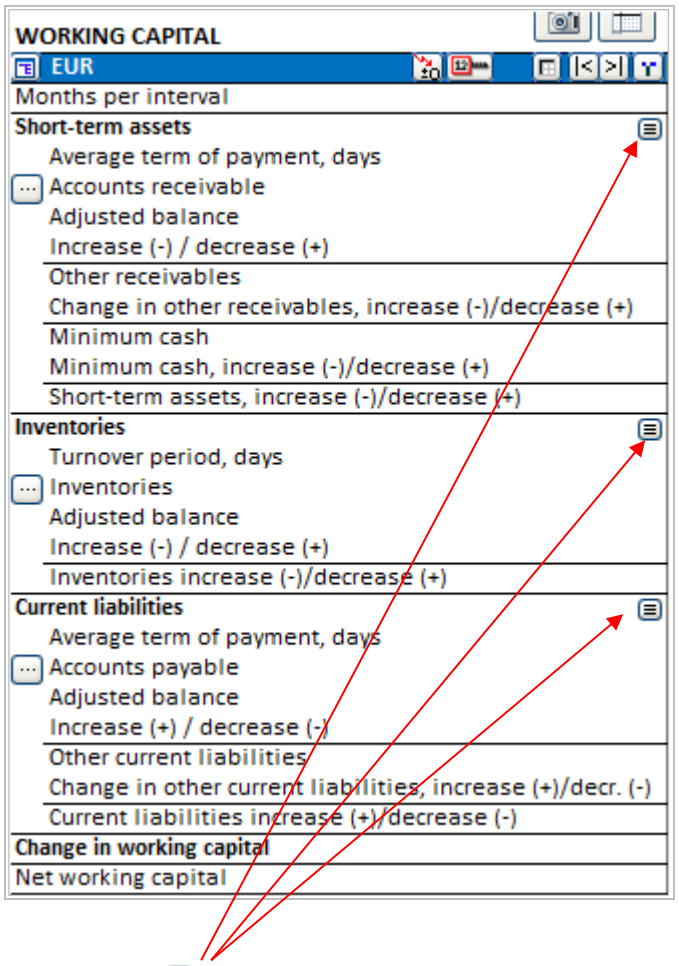


WORKING CAPITAL

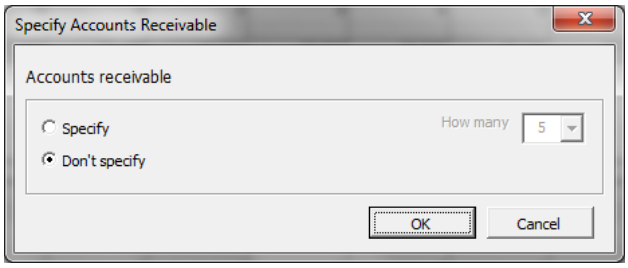
EUR	1/2015	12/2015	12/2016	12/2017
Months per interval		12	12	12
Short-term assets				
Average term of payment, days	30	30	30	30
Accounts receivable	0	133 333	142 807	152 612
Adjusted balance				
Increase (-) / decrease (+)	0	-133 333	-9 473	-9 806
Other receivables	0	0	0	0
Change in other receivables, increase (-)/decrease (+)				
Minimum cash	0	0	0	0
Minimum cash, increase (-)/decrease (+)				
Short-term assets, increase (-)/decrease (+)	0	-133 333	-9 473	-9 806
Inventories				
1 Turnover period, days	14	14	14	14
Fuel	0	7 574	7 833	8 098
Adjusted balance				
Increase (-) / decrease (+)	0	-7 574	-259	-266
2 Turnover period, days	60	60	60	60
Spare parts and oils	0	55 417	56 525	57 656
Adjusted inventories				
Increase (-) / decrease (+)	0	-55 417	-1 108	-1 131
Inventories increase (-)/decrease (+)	0	-62 991	-1 367	-1 396
Current liabilities				
1 Average term of payment, days	30	30	30	30
Fuel	0	16 230	16 784	17 354
Adjusted balance				
Increase (+) / decrease (-)	0	16 230	554	570
2 Average term of payment, days	30	30	30	30
Spare parts and oils	0	27 708	28 263	28 828
Adjusted balance				
Increase (+) / decrease (-)	0	27 708	554	565
Other current liabilities	0	0	0	0
Change in other current liabilities, increase (+)/decr. (-)				
Current liabilities increase (+)/decrease (-)	0	43 938	1 108	1 135
Change in working capital	**0**	**-152 386**	**-9 732**	**-10 067**
Net working capital	0	152 386	162 118	172 185

3.2.7.1 Detailed definition of Working Capital

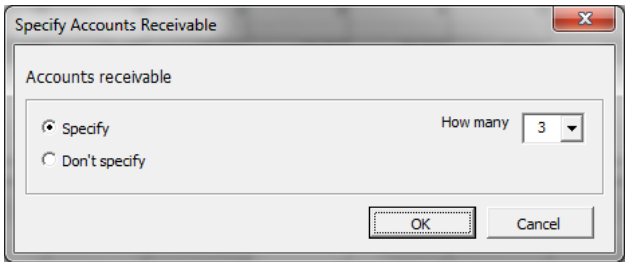
Each of the main Working capital groups (Short-term assets, Inventories and Current liabilities) can be specified in up to 5 sub-groups.



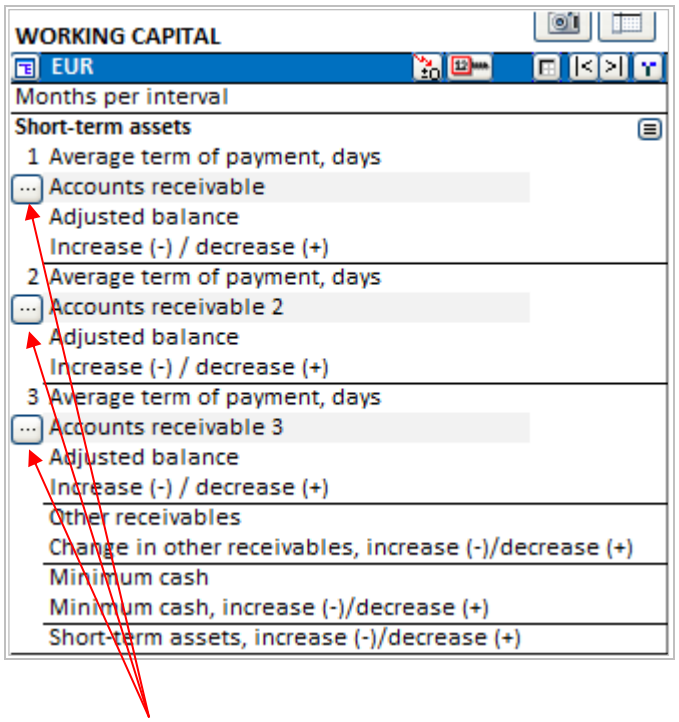
Click the small ☰ button for the asset group you want to specify in more detail. The Specify dialog box is shown for the asset group.



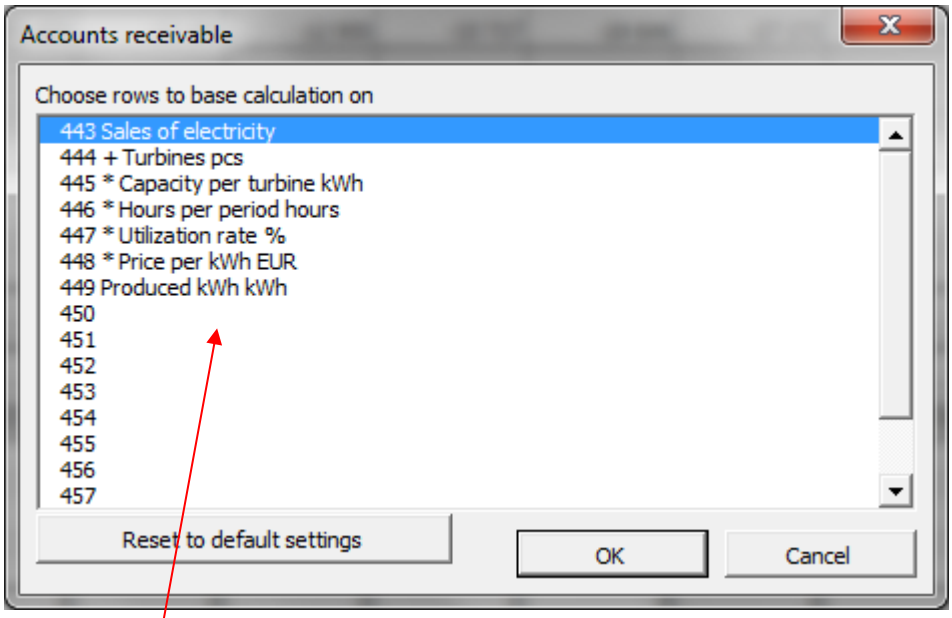
Choose Specify and choose how many subgroups (2-5) you want.



Click OK and the working capital table will give you the chosen number of subgroups.



For each working capital subgroup you can define row(s) that the calculation is based on. Click the ... button for the subgroup.



Choose row(s) to base the calculation on from the list of rows. In the table you can enter average number of days that you want to use as the term of payment.

EUR	12/2015	12/2016	12/2017
Months per interval	12	12	12
Short-term assets			
1 Average term of payment, days	14	14	14
Accounts receivable	201 600	213 797	226 732
Adjusted balance			
Increase (-) / decrease (+)	-201 600	-12 197	-12 935

3.2.7.2 Short term assets

Current receivables. How much short term assets an investment, project or business ties up depends mainly on **Accounts receivable**. There are two ways to enter the accounts receivable:

1. Enter the average term of payment for accounts receivable in days (i.e., the average number of days from delivery until payment), and the program calculates the average amount of accounts receivable per interval, based on sales (**Income** row in Income statement) and rotation. Invest for Excel liquidates the accounts receivables automatically at the end of the investment term in the last column, otherwise they would remain outstanding (credit loss). To override this feature type in a value on the row for "Adjusted balance" in the "Residual" –column.

2. Enter the estimated average accounts receivable per period on the line Adjusted balance. This is an alternative to entering the information on rotation (term of payment). NOTE! If you enter values in Adjusted accounts receivables, then these values overrule the values calculated from entered days. Although 'Average term of payment, days' is visible in calculation, only the 'Adjusted balance' values are taken into account.

Explanations of rows used in Working Capital - Short-term assets table:

Receivables average term of payment, days – enter number of days per period
Accounts receivable – calculated according to the formula:

Accounts receivables are basically calculated according to the formula:

$$Accounts\ receivable = \text{term of payment, days} * \frac{\text{sum of selected rows for the current period}}{\text{Number of days in period}}$$

If the term of payment is longer than the number of days per column (e.g. 45 days in a monthly calculation) two things happen:
1. The balance increases only with 30 days income (not 45)
2. The next period(s) will be affected cumulatively

Adjusted accounts receivable – in this row you can enter values or formulas. The values will overrule the Accounts receivable values per period

Change in accounts receivable$_{(t)}$ = Accounts receivable$_{(t-1)}$ – Accounts receivable$_{(t)}$

Or – if the Adjusted accounts receivable where used, then:

Change in accounts receivable = Adjusted Accounts receivable$_{(t-1)}$ – Adjusted Accounts receivable$_{(t)}$

Other Short term assets supported by *Invest for Excel* are:

1. **Minimum cash reserves**: Enter here the amount of non-interest bearing cash reserves needed for implementing this investment.
2. **Other receivables:** Other than accounts receivable and cash buffer, e.g. advances paid, prepaid expenses and accrued income. These kinds of items are typically not necessary for investment calculations.

The total of short-term assets is:

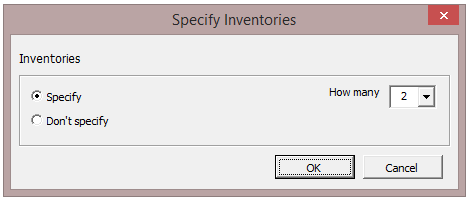
Short term assets, increase (-)/ decrease (+) = Change in accounts receivable + Change in other receivables + Minimum cash increase (-)/ decrease (+)

3.2.7.3 Inventories

Inventories tie up capital and have an impact on the investment's profitability. Enter the rotation time of inventory in days or the inventory balance (goods in stock) in the Working Capital table. Inventories comprise (by theory):

Raw materials and consumables (materials and supplies)
Work in progress, and
Finished goods.

If you select 'Turnover period, days', the calculation of the value of inventory will as default be based on the row "Variable costs" in the Income statement. For more detailed inventory management, click the ☰-button for specification of inventories.



If you give both 'Turnover period, days' and 'Adjusted balance', the program will only consider the latter.

The true residual of the inventory can be entered into the last column if a value different from that calculated by the application is desired.

Inventories are basically calculated according to the formula:

$$Inventory = \text{turnover period, days} * \frac{Sum\ of\ amounts\ in\ the\ selected\ rows \text{ for the current period}}{\text{Number of days in period}}$$

If the turnover period is longer than the number of days per column (e.g. 45 days in a monthly calculation) two things happen:

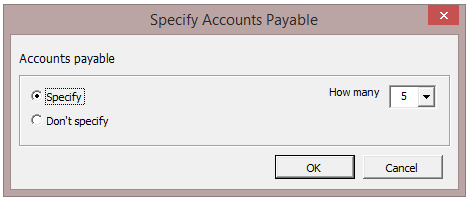
1. The balance increases only with 30 days costs (not 45)
2. The next period(s) will be affected additionally

3.2.7.4 Current liabilities

Accounts Payable. How much less working capital is needed, thanks to payment term to suppliers?

There are two ways to enter the accounts payable:

1. Enter the average term of payment for accounts payable in days (i.e., the average number of days from receiving the goods until payment). The program calculates the average amount of accounts payable per interval, in default based on the 2 first rows of Variable costs: "Raw materials and consumables" and ''External charges'' in the Income statement. For more detailed liabilities management, click the ☰-button for specification of current liabilities.



2. Enter the estimated average accounts payable per period on the line Adjusted balance. This is an alternative to entering the information on rotation. The values in 'Adjusted balance' overrule the values of term of payment for accounts payable.

Invest for Excel liquidates the accounts payable automatically at the end of the investment term in the last column, otherwise they would remain outstanding (unpaid). To overrule this feature, type in a value on the row for 'Adjusted balance' in the "Residual" –column.

Other current liabilities. Besides accounts payable there may be other current liabilities, like e.g. advance payments from customers, tax liabilities, accrued expenses and prepaid revenues. These kinds of items are typically not necessary for investment calculations.

Current liabilities are basically calculated according to the formula:

$$Current\ liability = \text{term of payment, days} * \frac{Sum\ of\ amounts\ in\ the\ selected\ rows\ for\ the\ current\ period}{\text{Number of days in period}}$$

If the term of payment, days is longer than the number of days per column (e.g. 45 days in a monthly calculation) two things happen:

1. The balance increases only with 30 days costs (not 45)
2. The next period(s) will be affected additionally

Adjusted balance – in this row you can enter values or formulas. The Adjusted balance will overrule the term of payment, days.

The last row of the table, Net working capital, shows the netted working capital tied up in the project/ business. The larger the inventories are, the more capital they tie up. The longer the payment term given to customers, the more capital is out of the cash reserves. The terms of payment concerning accounts payable liabilities work in an opposite way.

Change in working capital is Short-term assets increase (-)/ decrease (+), plus Inventories increase(-)/ decrease (+), plus Current liabilities increase (+)/ decrease (-)

Net working capital = Working capital$_{(t-1)}$ - Change in working capital$_{(t)}$

3.2.8 Cash Flow Statement

The cash flow calculation is a report giving a general view of the distribution of cash flows.

CASH FLOW STATEMENT

1000 €	1/2006	12/2006	12/2007	12/2008
Months per interval		12	12	12
Cash flow from operations				
Income	0	3 450	3 502	3 554
Variable costs	0	-856	-860	-865
Fixed costs	0	-1 250	-1 263	-1 275
Extraordinary income & expenses	0	0	0	0
Income tax	0	-284	-294	-303
Change in working capital	0	-308	0	0
Cash flow from operations	**0**	**751**	**1 085**	**1 111**
Asset investments and realizations	-1 250	0	0	0
Free cash flow (FCF)	**-1 250**	**751**	**1 085**	**1 111**
Discounted free cash flow (DFCF)	-1 250	672	869	796
Cumulative discounted free cash flow	-1 250	-578	291	1 088
Information				
Financial cash flow				
Financial income and expenses	0	0	0	0
Correction of income tax for financial items	0	0	0	0
Long-term debt, increase (+) / decrease (-)	0	0	0	0
Equity, increase (+) / dividends (-)	0	0	0	0
Changes in short-term borrowings				
Total cash flow	**-1 250**	**751**	**1 085**	**1 111**
Cumulative total cash flow	-1 250	-499	586	1 698

While calculating the overall profitability of an investment, (NPV, IRR, MIRR and Payback), *Invest for Excel* discounts the Free cash flow of the investment. Discounted free cash flow , means the current free cash flow discounted to the Calculation point (in time, usually the beginning). The alternative cost of capital has been taken into account (discount factor). ”Cumulative discounted free cash flow” = the realised total ‘Discounted free cash flow’. **Hint:** The investment has paid itself back when the “Cumulative discounted free cash flow” turns positive.

If you want to analyse the cash flows to be expected during each period or cumulatively, not forgetting cash flows from financing, enter the increase and decrease of debts, increase of equity and possible dividend payments. Input the cost of debt in the Income statement, it will show here in Cash flow statement in the row Financing income and expenses. These figures have no bearing on the overall profitability of the investment, but by taking them into account you will see here the effect on total cash flow.

If you have the *Enterprise* –edition of *Invest for Excel* you can:

1) Bring the cash flow from the investment calculation to Financing –module.
2) Plan project financing in Financing module, and
3) Update your calculation file Cash flow calculation with changes in debt.
4) Update your Calculation file Income statement with the cost of debt.
5) See profitability indicators based on Free Cash Flow to Equity (FCFE). By taking the debt leverage into account, the investor’s true return is shown.

Refer to chapter 13 for more information on using the financing module.

3.2.8.1 Correction of income tax for financial items

"Correction of income tax for financial items" row is used when tax effect of financial items are not included in free cash flow, but are taken into account in the profit statement. Any difference between profit statement income tax and cash flow statement income tax is shown here and included in total cash flow.

INCOME STATEMENT

EUR	1/2015	12/2015	12/2016	12/2017	12/2018
Turnover	**0**	**1 600 000**	**1 713 680**	**1 831 347**	**1 953 116**
Variable costs	0	-269 760	-282 499	-295 640	-309 194
Gross margin	**0**	**1 330 240**	**1 431 181**	**1 535 707**	**1 643 922**
Fixed costs	0	-582 500	-594 150	-606 033	-670 464
EBITDA	**0**	**747 740**	**837 031**	**929 674**	**973 458**
Depreciation	0	-518 750	-518 750	-495 000	-495 000
EBIT; Operating income	**0**	**228 990**	**318 281**	**434 674**	**478 458**
Financing income and expenses	0	-120 276	-180 415	-146 050	-111 685
EBT; Income after financing items	**0**	**108 714**	**137 866**	**288 624**	**366 773**
Income tax	0	-32 614	-41 360	-186 431	-110 032
Net income for the period	**0**	**76 100**	**96 506**	**435 006**	**256 741**

CASH FLOW STATEMENT

EUR	1/2015	12/2015	12/2016	12/2017	12/2018
Months per interval		12	12	12	12
Cash flow from operations					
Income	0	1 600 000	1 713 680	1 831 347	1 953 116
Variable costs	0	-269 760	-282 499	-295 640	-309 194
Fixed costs	0	-582 500	-594 150	-606 033	-670 464
Extraordinary income & expenses	0	0	0	0	0
Income tax (adjusted)	0	-68 697	-95 484	-230 246	-143 538
Change in working capital	0	-152 386	-9 732	-10 067	-10 411
Cash flow from operations	**0**	**526 657**	**731 815**	**689 361**	**819 509**
Asset investments and realizations	-4 950 000	0	0	600 000	0
Free cash flow to firm (FCFF)	**-4 950 000**	**526 657**	**731 815**	**1 289 361**	**819 509**
Discounted free cash flow to firm (DFCFF)	-4 950 000	478 084	603 050	964 501	556 491
Cumulative discounted free cash flow to firm	-4 950 000	-4 471 916	-3 868 866	-2 904 365	-2 347 874
Information					
Financial cash flow					
Financial income and expenses	0	-120 276	-180 415	-146 050	-111 685
Correction of income tax for financial items	0	36 083	54 124	43 815	33 506
Long-term debt, increase (+) / decrease (-)	3 800 000	-316 667	-633 333	-633 333	-633 333
Changes in short-term borrowings					
Free cash flow to equity (FCFE)	**-1 150 000**	**125 797**	**-27 809**	**553 793**	**107 996**
Discounted free cash flow to equity (DFCFE)	-1 150 000	104 831	-19 312	320 482	52 082
Cumulative discounted free cash flow to equity	-1 150 000	-1 045 169	-1 064 481	-743 999	-691 917
Equity, increase (+) / decrease (-)	1 187 500	0	0	0	0
Total cash flow	**37 500**	**125 797**	**-27 809**	**553 793**	**107 996**
Cumulative total cash flow	37 500	163 297	135 488	689 281	797 278

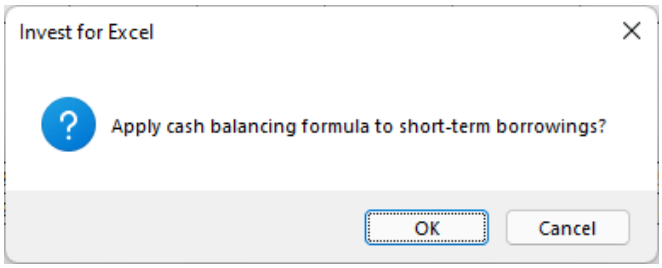
In the Enterprise edition the 'Free cash flow to equity' can be added for profitability analysis from owner's point of view. See chapter 4.1.3. Profitability calculation based on 'Free cash flow to equity (FCFE)'.

3.2.8.2 Cash balancing

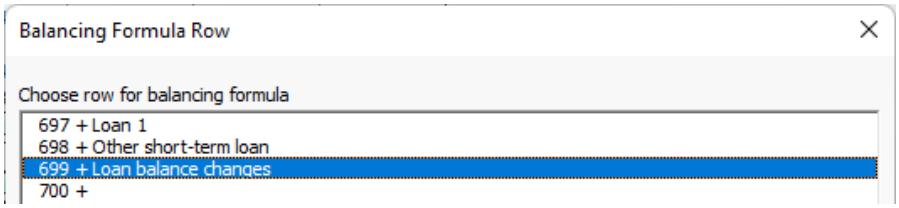
A cash balancing formula can easily by applied for Short-term borrowings. Short-term borrowings are used to keep Cumulative total cash flow >= 0. Press the button on the Changes in short-term borrowings row in the Cash flow statement.

CASH FLOW STATEMENT

Euro	9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	1	1	1	1	12	12	12	12	12	(12/2026)
Cash flow from operations										
Income	630 000	640 745	651 673	662 788	9 742 982	11 935 153	14 620 563	17 910 189	21 939 982	0
Variable costs	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	0
Fixed costs	-200 000	-200 000	-200 000	-200 000	-2 400 000	-2 400 000	-2 400 000	-2 400 000	-2 400 000	0
Extraordinary income & expenses	0	0	0	0	0	0	0	0	0	0
Income tax	0	0	0	0	-61 745	-255 994	-493 873	-776 280	-1 121 704	0
Change in working capital	-747 600	-233 251	-16 729	-17 014	-138 326	-259 407	-317 773	-389 272	-476 859	2 596 231
Cash flow from operations	**-758 600**	**-241 027**	**-21 227**	**-18 178**	**322 824**	**665 145**	**1 174 522**	**1 807 504**	**2 583 431**	**2 596 231**
Asset investments and realizations	-1 500 000	-500 000	-350 000	-350 000	0	-90 000	0	-45 000	0	522 500
Free cash flow (FCF)	**-2 258 600**	**-741 027**	**-371 227**	**-368 178**	**322 824**	**575 145**	**1 174 522**	**1 762 504**	**2 583 431**	**3 118 731**
Discounted free cash flow (DFCF)	-2 242 867	-730 740	-363 523	-358 026	288 664	472 907	888 035	1 225 378	1 651 610	1 993 832
Cumulative discounted free cash flow	-2 242 867	-2 973 607	-3 337 130	-3 695 156	-3 406 492	-2 933 585	-2 045 549	-820 172	831 438	2 825 270
Information										
Financial cash flow										
Financial income and expenses	0	0	0	0	0	0	0	0	0	0
Correction of income tax for financial items	0	0	0	0	0	0	0	0	0	0
Long-term debt, increase (+) / decrease (-)	0	0	0	0	0	0	0	0	0	0
Changes in short-term borrowings										
Total cash flow	**-2 258 600**	**-741 027**	**-371 227**	**-368 178**	**322 824**	**575 145**	**1 174 522**	**1 762 504**	**2 583 431**	**3 118 731**
Cumulative total cash flow	-2 258 600	-2 999 627	-3 370 854	-3 739 032	-3 416 209	-2 841 064	-1 666 542	95 962	2 679 394	5 798 125



If the Changes in short-term borrowings row has specification rows, you need to select which row should hold the balancing formula.



The balancing formula keeps Cumulative total cash flow at a minimum of zero. This is especially useful when negative cash lead to distorted Financial ratios.

Free cash flow (FCF)	**-2 258 600**	**-741 027**	**-371 227**	**-368 178**	**322 824**	**575 145**	**1 174 522**	**1 762 504**	**2 583 431**	**3 118 731**
Discounted free cash flow (DFCF)	-2 242 867	-730 740	-363 523	-358 026	288 664	472 907	888 035	1 225 378	1 651 610	1 993 832
Cumulative discounted free cash flow	-2 242 867	-2 973 607	-3 337 130	-3 695 156	-3 406 492	-2 933 585	-2 045 549	-820 172	831 438	2 825 270
Information										
Financial cash flow										
Financial income and expenses	0	0	0	0	0	0	0	0	0	0
Correction of income tax for financial items	0	0	0	0	0	0	0	0	0	0
Long-term debt, increase (+) / decrease (-)	0	0	0	0	0	0	0	0	0	0
Changes in short-term borrowings	2 258 600	741 027	371 227	368 178	-322 824	-575 145	-1 174 522	-1 666 542	0	
Total cash flow	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**95 962**	**2 583 431**	**3 118 731**
Cumulative total cash flow	0	0	0	0	0	0	0	95 962	2 679 394	5 798 125

Note that interest is not applied automatically on short-term borrowings.

3.2.9 Balance sheet (Pro and Enterprise editions)

BALANCE SHEET

EUR	1/2015	12/2015	12/2016	12/2017	12/2018
Months per interval		12	12	12	12
ASSETS					
Fixed assets and other non-current assets					
Intangible assets	0	0	0	0	0
Tangible assets	5 264 688	4 745 938	4 227 188	3 465 000	2 970 000
Machinery and equipment	4 950 000	4 455 000	3 960 000	3 465 000	2 970 000
Buildings and structures	314 688	290 938	267 188	0	0
Land and water	0	0	0	0	0
Prepayments and construction in progress	0	0	0	0	0
Other tangible assets	0	0	0	0	0
Investments	0	0	0	0	0
Total fixed assets and other non-current assets	5 264 688	4 745 938	4 227 188	3 465 000	2 970 000
Current Assets					
Inventories and work in progress	0	62 991	64 358	65 754	67 180
Accounts receivable	0	133 333	142 807	152 612	162 760
Other receivables	0	0	0	0	0
Bank and cash	37 500	163 297	135 488	689 281	797 278
Total Current Assets	37 500	359 621	342 653	907 648	1 027 218
ASSETS	**5 302 188**	**5 105 559**	**4 569 840**	**4 372 648**	**3 997 218**
SHAREHOLDERS' EQUITY AND LIABILITIES					
Shareholders' equity					
Share capital	1 187 500	1 187 500	1 187 500	1 187 500	1 187 500
Share issue premium	0	0	0	0	0
Other restricted equity	0	0	0	0	0
Retained earnings	0	0	76 100	172 606	607 612
Profit (loss) for the period	0	76 100	96 506	435 006	256 741
Total shareholders' equity	1 187 500	1 263 600	1 360 106	1 795 112	2 051 853
Appropriations	0	0	0	0	0
Provisions	0	0	0	0	0
Minority interest	0	0	0	0	0
Liabilities					
Long-term liabilities	3 800 000	2 850 000	2 216 667	1 583 333	950 000
Short-term liabilities	0	649 563	650 117	650 687	651 273
Total liabilities	3 800 000	3 499 563	2 866 784	2 234 021	1 601 273
SHAREHOLDERS' EQUITY AND LIABILITIES	**4 987 500**	**4 763 163**	**4 226 890**	**4 029 132**	**3 653 126**

In investment calculations, the balance sheet is mainly a supplementary report. When you are calculating a corporate acquisition or want an investment calculation to take your existing assets into account, the balance sheet is also an input table. The balance sheet is described in more detail in Chapter 9 of this User Manual.

The following is a brief description of how to use the balance sheet as a report when calculating a new investment:

When you were entering the investments (in the "Investments" –screen), you selected the type of fixed assets for the investment. In the **Assets** section of the balance sheet, under the heading **Fixed assets and other non-current assets,** you can see the book value of assets divided into intangible and tangible assets, and investments.

Current assets are divided into inventories and receivables based on the data you have entered in the **Working capital** calculation.

As the cash flow is usually negative at the beginning of the investment term, the item **Bank and cash** in the balance sheet is also negative. If financing of the investment was taken into account, cash and bank would of course be positive. When evaluating profitability of an investment, it's perfectly normal, and in most cases even desirable, to ignore financing and let bank and cash be negative in the beginning of the investment term.

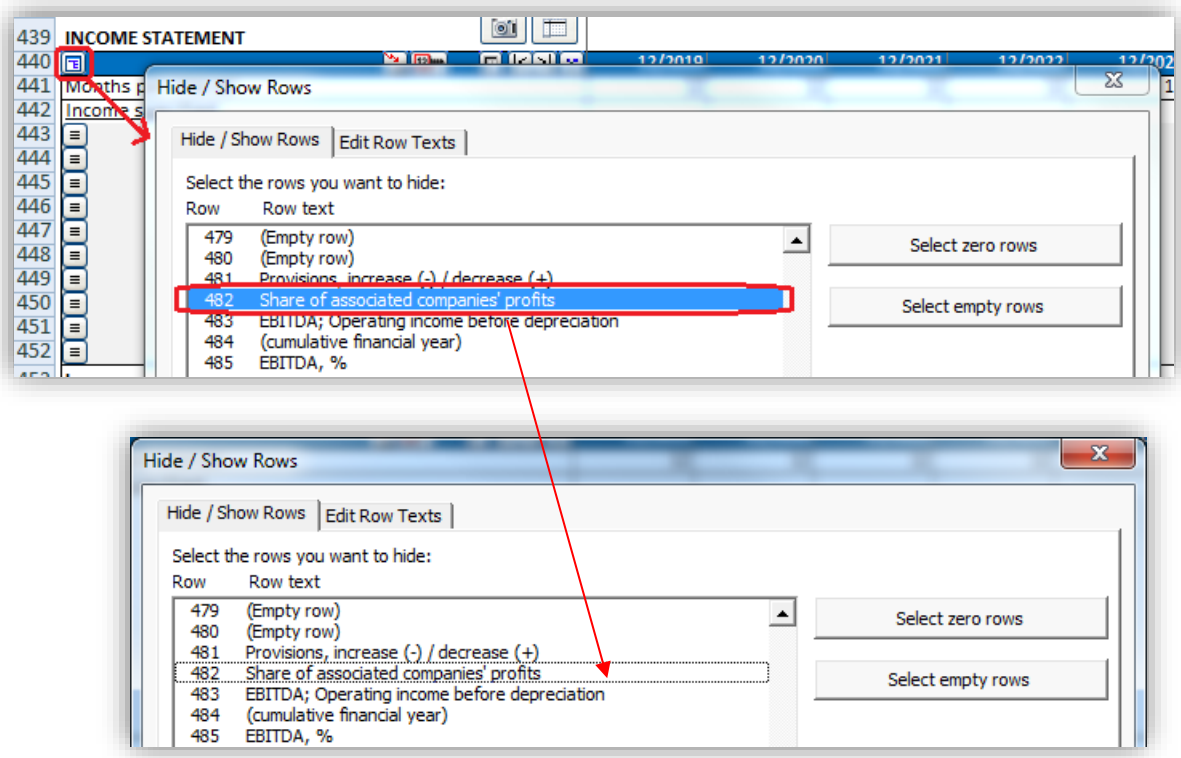
Profits for the current financial year and the past years accumulate equity. **Debts** are shown under liabilities, and similarly, accounts payable is shown under short-term liabilities.

3.2.10 Group-related rows

15 group-related rows can be found in the calculation file in Pro and Enterprise edition. The rows, which are hidden by default, are:

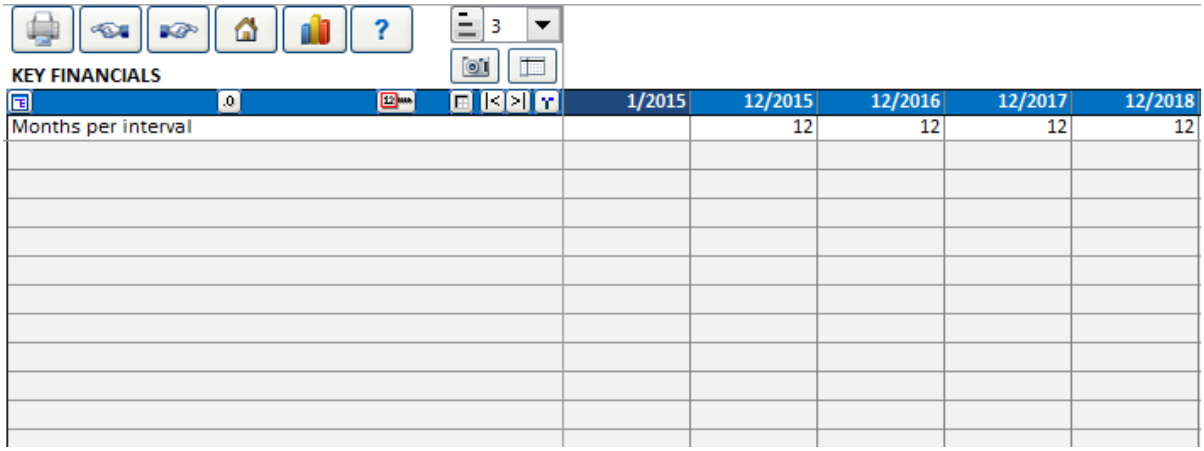
(Income statement)
Share of associated companies' profits
(Working capital)
Accounts receivable, group
Change in accounts receivable, group, incr. (-)/decr. (+)
Other receivables, group
Change in other receivables, group, incr. (-)/decr. (+)
Accounts payable, group
Change in accounts payable, group, incr. (+)/decr. (-)
Other interest-free current liabilities, group
Change in interest-free current liabilities, group
(Cash flow statement)
Changes in long-term debt, group
(Balance sheet)
Accounts receivable, group
Other receivables, group
Interest-bearing long-term debt, group
Accounts payable, group
Other interest-free short-term debt, group

The idea behind these rows is easier follow-up of consolidated values with eliminations in a group-planning scenario. To show the rows, unselect them in “Hide / Show Rows”.



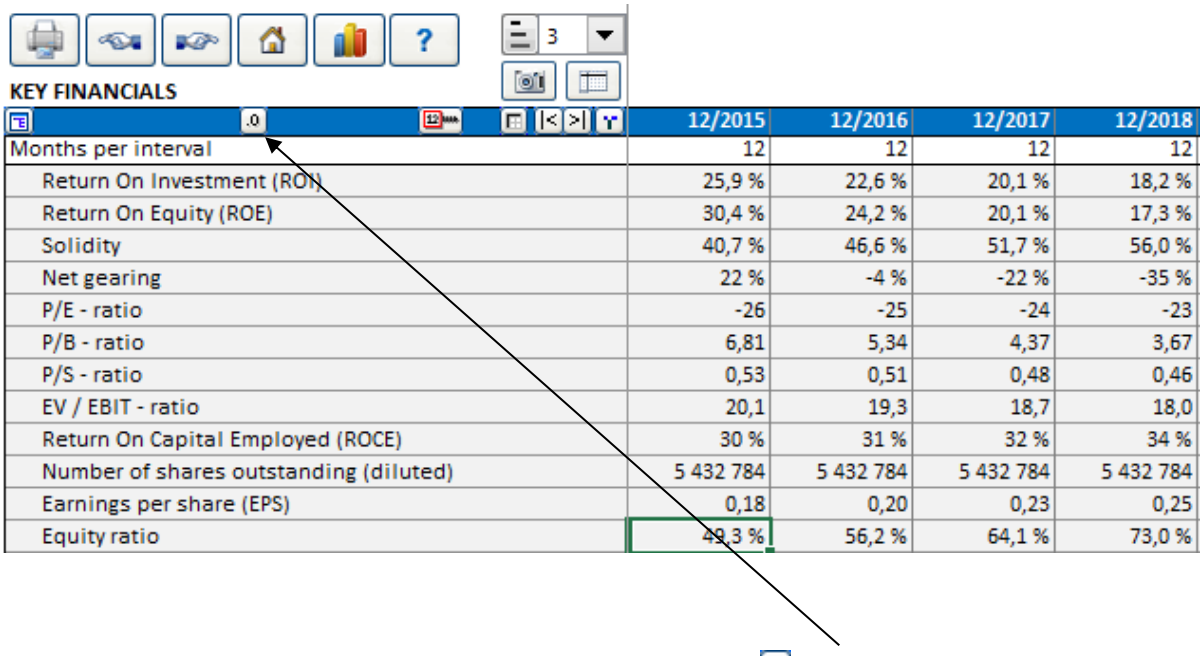
3.2.11 Key financials

A table with 60 editable rows is reserved for entering your own key financials:



	1/2015	12/2015	12/2016	12/2017	12/2018
Months per interval		12	12	12	12

Any type of ratios, information or totals can be defined:



	12/2015	12/2016	12/2017	12/2018
Months per interval	12	12	12	12
Return On Investment (ROI)	25,9 %	22,6 %	20,1 %	18,2 %
Return On Equity (ROE)	30,4 %	24,2 %	20,1 %	17,3 %
Solidity	40,7 %	46,6 %	51,7 %	56,0 %
Net gearing	22 %	-4 %	-22 %	-35 %
P/E - ratio	-26	-25	-24	-23
P/B - ratio	6,81	5,34	4,37	3,67
P/S - ratio	0,53	0,51	0,48	0,46
EV / EBIT - ratio	20,1	19,3	18,7	18,0
Return On Capital Employed (ROCE)	30 %	31 %	32 %	34 %
Number of shares outstanding (diluted)	5 432 784	5 432 784	5 432 784	5 432 784
Earnings per share (EPS)	0,18	0,20	0,23	0,25
Equity ratio	49,3 %	56,2 %	64,1 %	73,0 %

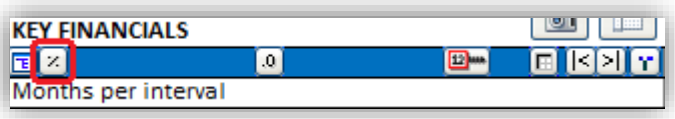
Number format of Key financials cells can easily be changed using the .0 button in the header bar.

The key financials can be used in Invest for Excel charts and sensitivity analyses.

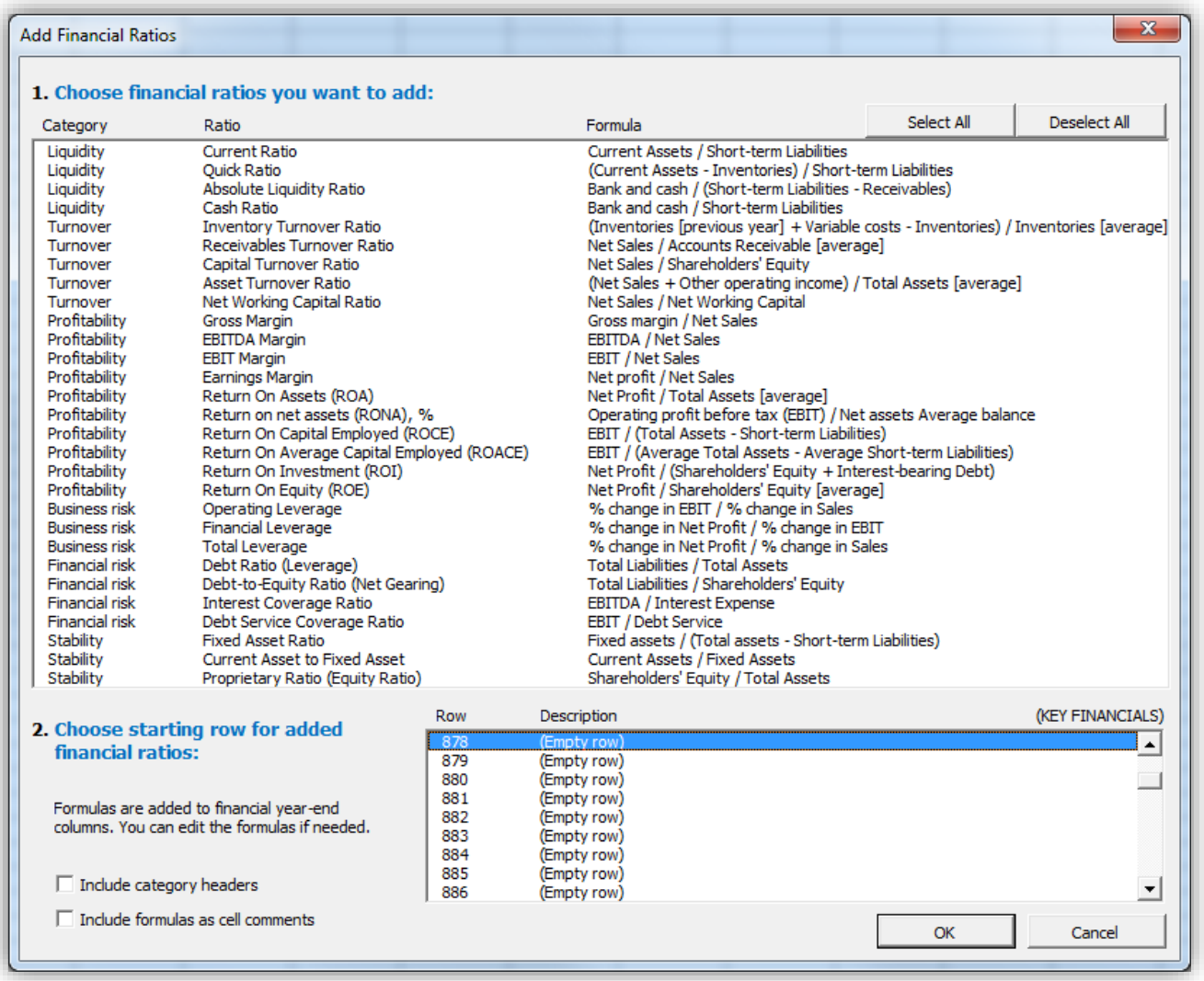
3.2.11.1 Add financial ratios

This function requires Invest for Excel Pro or Enterprise Edition.

Predefined financial ratios can be added to the Key financials table. Press the %-button in the header:



A window opens up for selecting financial ratios to add ratios to the Key financial table:



The ratios are divided in 6 categories:

- Liquidity
- Turnover
- Profitability
- Business risk
- Financial risk
- Stability

3.2.11.1.1 Liquidity ratios

Ratio	Predefined formula
Current Ratio	Current Assets / Short-term Liabilities
Quick Ratio	Current Assets - Inventories / Short-term Liabilities
Absolute Liquidity Ratio	Bank and cash / Short-term Liabilities - Receivables To avoid misleading values, Absolute Liquidity Ratio is not calculated if Cash and bank is zero or if receivables exceed short-term liabilities.
Cash Ratio	Bank and cash / Short-term Liabilities

3.2.11.1.2 Turnover ratios

Ratio	Predefined formula
Inventory Turnover Ratio *	Inventories [previous year] + Variable costs - Inventories / Inventories [average]
Receivables Turnover Ratio	Net Sales / Accounts Receivable [average]
Capital Turnover Ratio	Net Sales / Shareholders' Equity
Asset Turnover Ratio	Net Sales + Other operating income / Total Assets [average]
Net Working Capital Ratio	Net Sales / Net Working Capital

* Note! "Variable costs" should include only items related to inventory so the formula may need adjusting.

3.2.11.1.3 Profitability

Ratio	Predefined formula
Gross Margin	Gross margin / Net Sales
EBITDA Margin	EBITDA / Net Sales
EBIT Margin	EBIT / Net Sales
Earnings Margin	Net profit / Net Sales
Return On Assets (ROA)	Net Profit / Total Assets [average]
Return on net assets (RONA), %	Operating profit before tax EBIT / Net assets Average balance
Return On Capital Employed (ROCE)	EBIT / Total Assets - Short-term Liabilities
Return On Average Capital Employed (ROACE)	EBIT / Average Total Assets - Average Short-term Liabilities
Return On Investment (ROI)	Net Profit / Shareholders' Equity + Interest-bearing Debt
Return On Equity (ROE)	Net Profit / Shareholders' Equity [average]

3.2.11.1.4 Business risk

Ratio	Predefined formula
Operating Leverage	% change in EBIT / % change in Sales
Financial Leverage	% change in Net Profit / % change in EBIT
Total Leverage	% change in Net Profit / % change in Sales

3.2.11.1.5 Financial risk

Ratio	Predefined formula
Debt Ratio (Leverage)	Total Liabilities / Total Assets
Debt-to-Equity Ratio (Net Gearing)	Total Liabilities / Shareholders' Equity
Interest Coverage Ratio *	EBIT / Interest Expense
Debt Service Coverage Ratio **	EBITDA / Debt Service

* "Interest Expense" should include financing cost payments so the formula may need adjusting.

** "Debt service" should include financing cost payments and loan amortization payments so the formula may need adjusting.

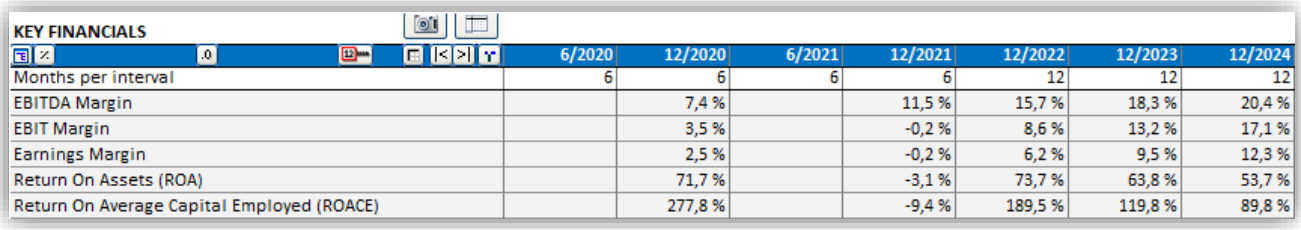
3.2.11.1.6 Stability

Ratio	Predefined formula
Fixed Asset Ratio	Fixed assets / Total assets - Short-term Liabilities
Current Asset to Fixed Asset	Current Assets / Fixed Assets
Proprietary Ratio (Equity Ratio)	Shareholders' Equity / Total Assets

3.2.11.1.7 Formulas in Key financials

Added financial ratio formulas can be edited in the Key financials table after adding.

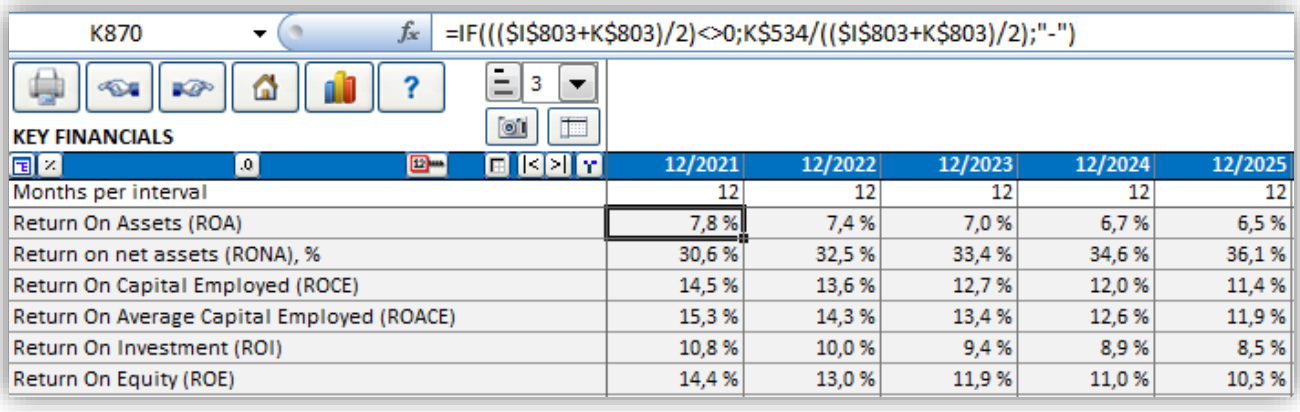
Formulas are written to financial year-end columns.



KEY FINANCIALS

	6/2020	12/2020	6/2021	12/2021	12/2022	12/2023	12/2024
Months per interval	6	6	6	6	12	12	12
EBITDA Margin		7,4 %		11,5 %	15,7 %	18,3 %	20,4 %
EBIT Margin		3,5 %		-0,2 %	8,6 %	13,2 %	17,1 %
Earnings Margin		2,5 %		-0,2 %	6,2 %	9,5 %	12,3 %
Return On Assets (ROA)		71,7 %		-3,1 %	73,7 %	63,8 %	53,7 %
Return On Average Capital Employed (ROACE)		277,8 %		-9,4 %	189,5 %	119,8 %	89,8 %

All formulas use direct cell references for easy reading.

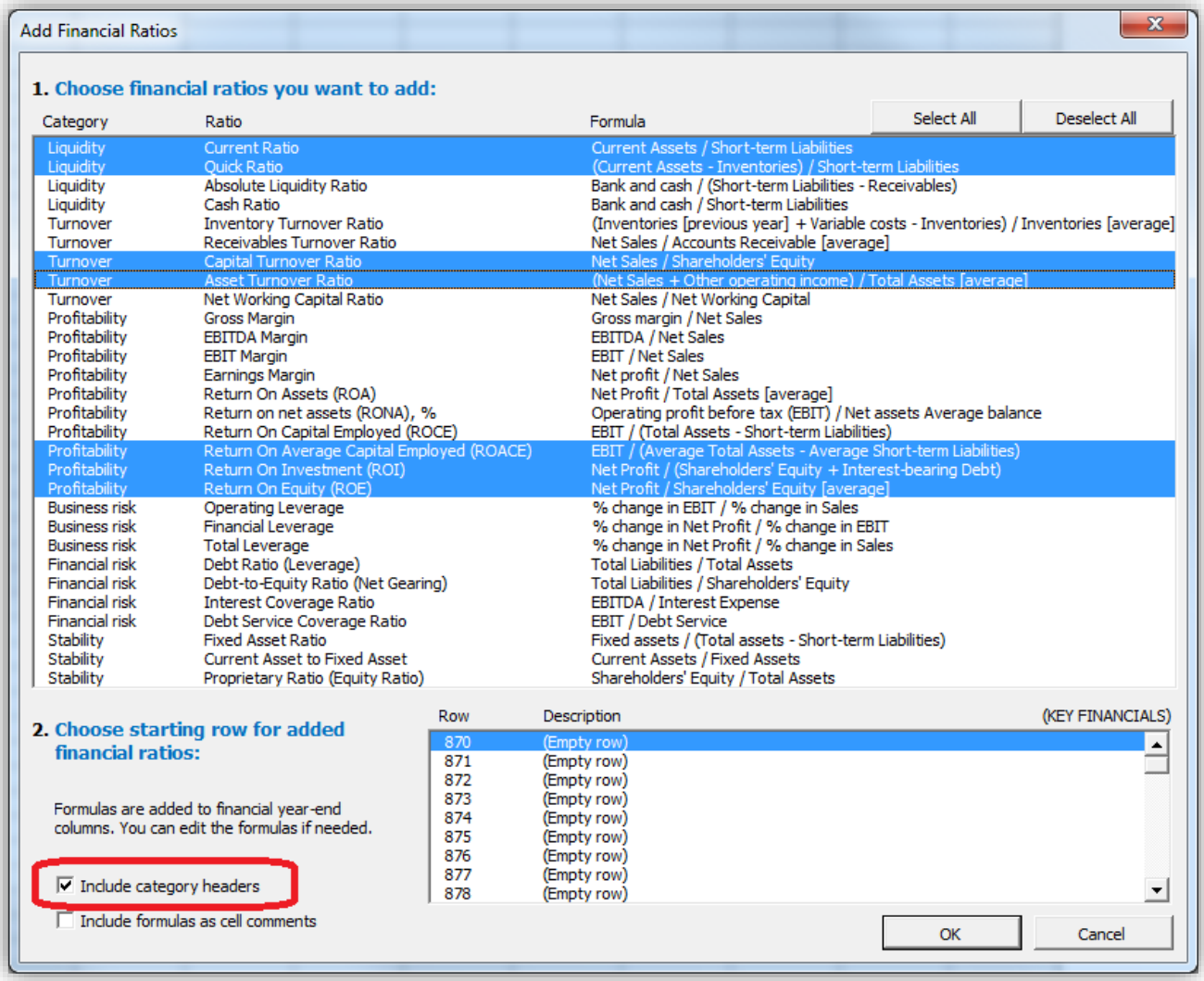


	12/2021	12/2022	12/2023	12/2024	12/2025
Months per interval	12	12	12	12	12
Return On Assets (ROA)	7,8 %	7,4 %	7,0 %	6,7 %	6,5 %
Return on net assets (RONA), %	30,6 %	32,5 %	33,4 %	34,6 %	36,1 %
Return On Capital Employed (ROCE)	14,5 %	13,6 %	12,7 %	12,0 %	11,4 %
Return On Average Capital Employed (ROACE)	15,3 %	14,3 %	13,4 %	12,6 %	11,9 %
Return On Investment (ROI)	10,8 %	10,0 %	9,4 %	8,9 %	8,5 %
Return On Equity (ROE)	14,4 %	13,0 %	11,9 %	11,0 %	10,3 %

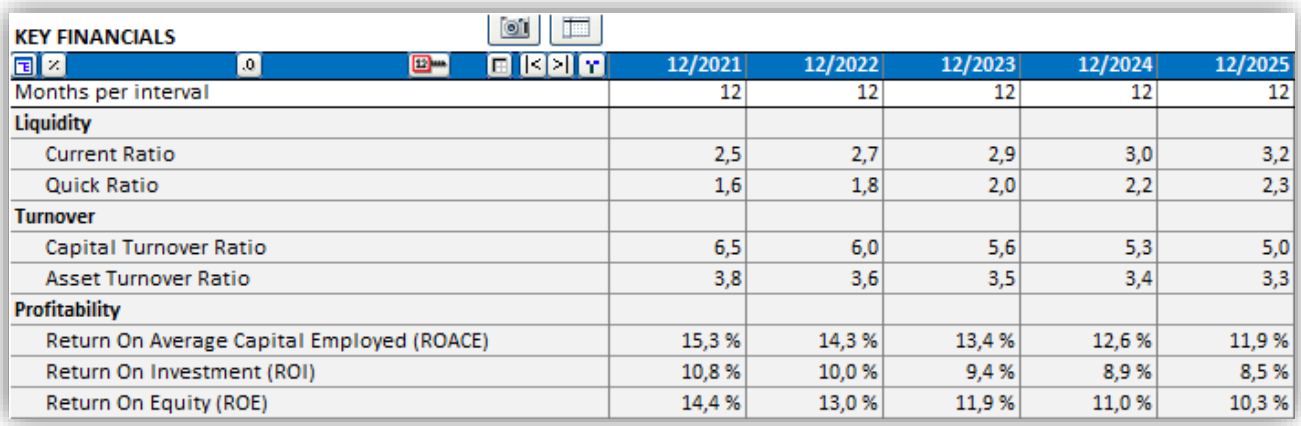
Note that if you change periods in the calculation, you may need to check the ratio formulas or adding then again.

3.2.11.1.8 Options

When adding you can include category headers. Check “include category headers”.



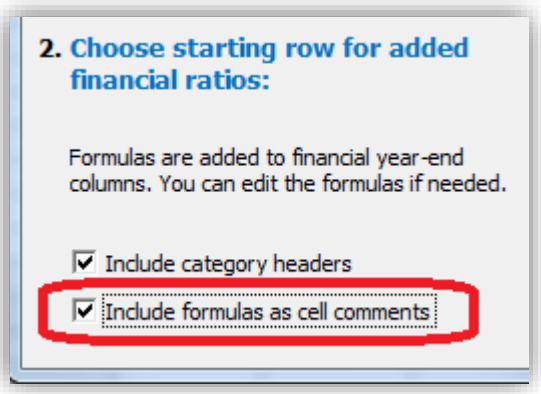
Category headers are added before each new category.



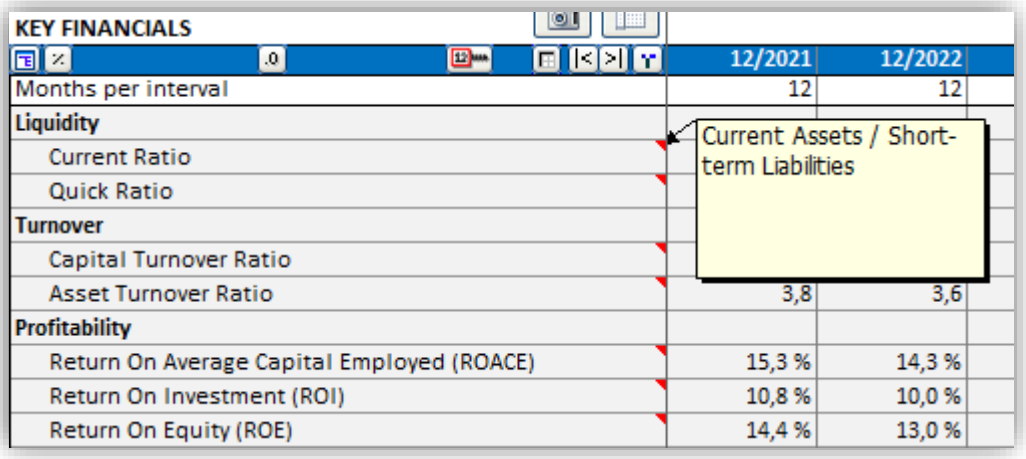
KEY FINANCIALS

	12/2021	12/2022	12/2023	12/2024	12/2025
Months per interval	12	12	12	12	12
Liquidity					
Current Ratio	2,5	2,7	2,9	3,0	3,2
Quick Ratio	1,6	1,8	2,0	2,2	2,3
Turnover					
Capital Turnover Ratio	6,5	6,0	5,6	5,3	5,0
Asset Turnover Ratio	3,8	3,6	3,5	3,4	3,3
Profitability					
Return On Average Capital Employed (ROACE)	15,3 %	14,3 %	13,4 %	12,6 %	11,9 %
Return On Investment (ROI)	10,8 %	10,0 %	9,4 %	8,9 %	8,5 %
Return On Equity (ROE)	14,4 %	13,0 %	11,9 %	11,0 %	10,3 %

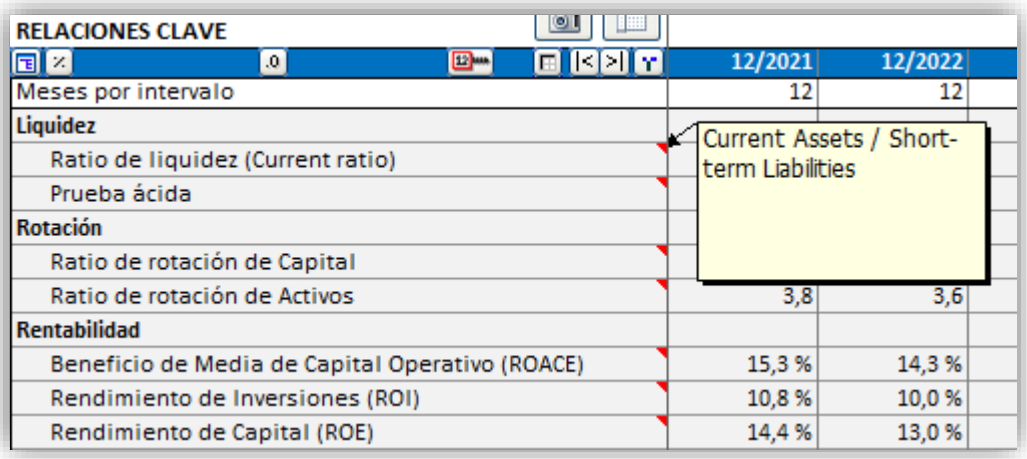
The ratio formulas can be included as cell comments by checking “Include formulas as cell comments”.



The comments are added in column D cells.

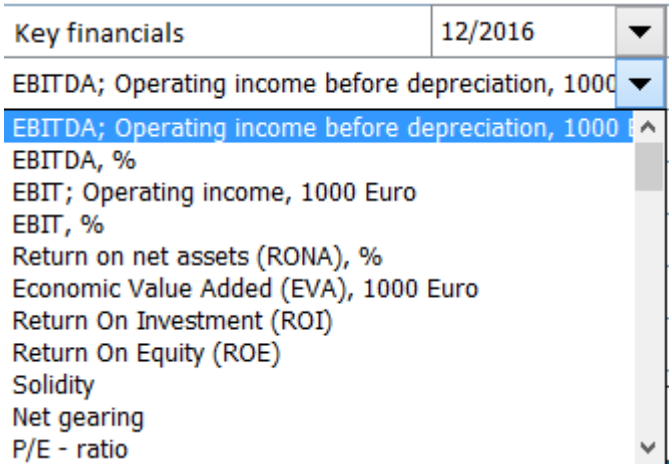


Note that the comments do not change when language of calculation file is changed. The descriptions are however updated.

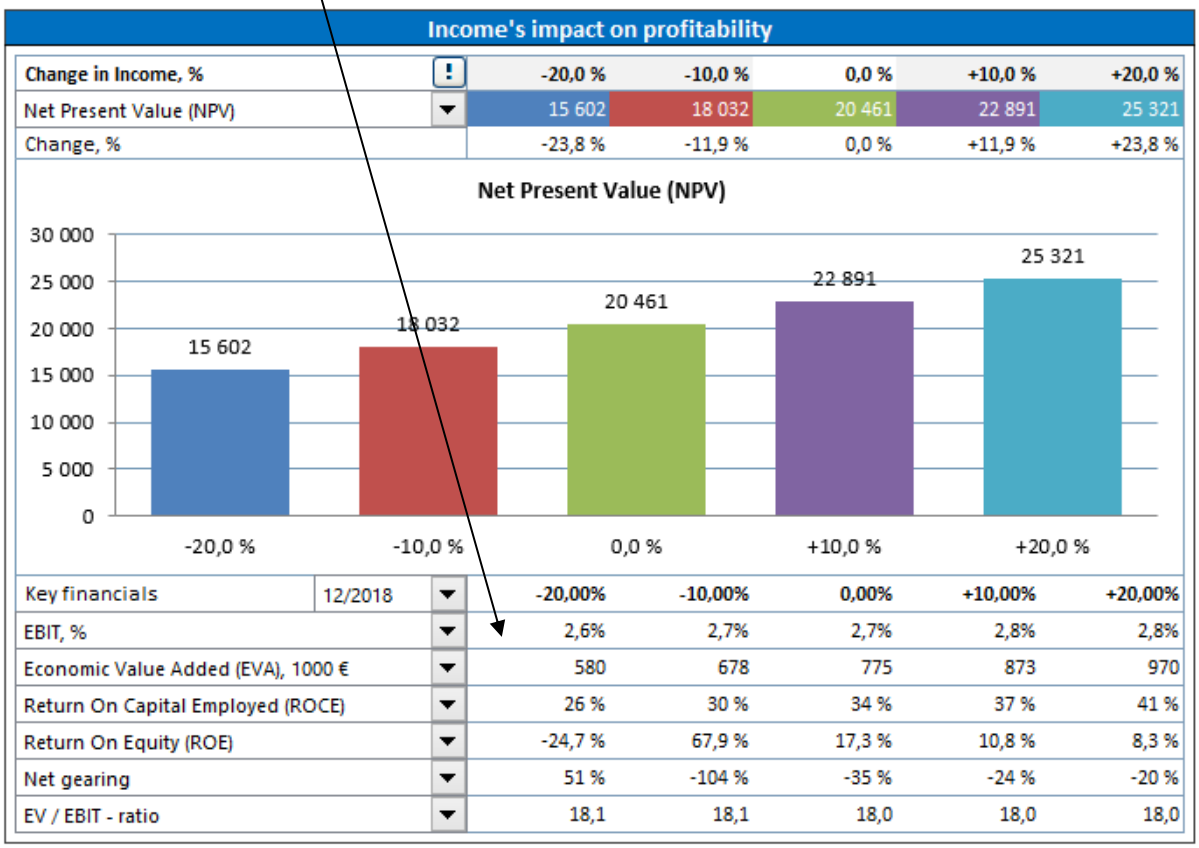


3.2.11.2 Key financials in analyses

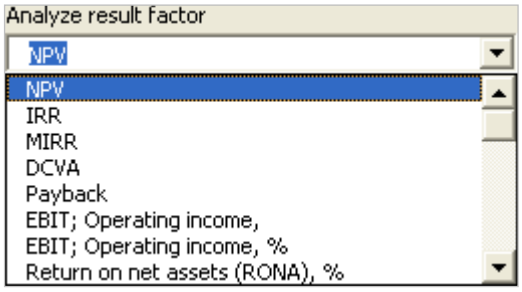
In the Analysis sheet, each analysis can use Key financials as period-specific ratios. For each of the 6 period-specific rows, you can select “EBITDA; Operating income before depreciation”, “EBITDA, %”, "EBIT; Operating income", "EBIT, %", "Return on net assets (RONA), %", " Value Added (VA)" or any of your own added Key financials:



The selected Key financials are updated when the analysis is updated:

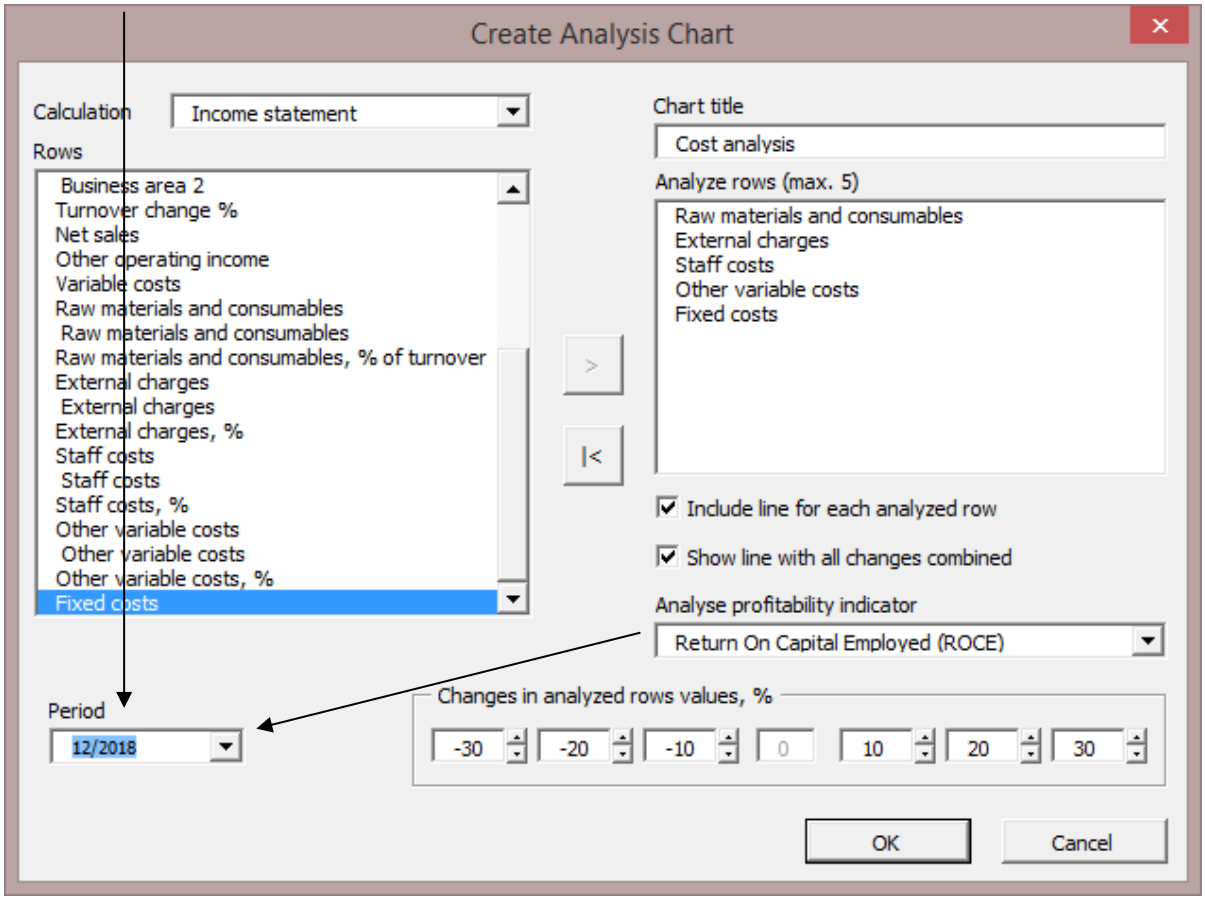


When you create custom analysis charts, you can analyse the following indicators: NPV, IRR, IRR before tax, MIRR, Profitability Index (PI), DCVA, Payback, Simple Payback, *EBITDA; Operating income before depreciation', 'EBITDA %', 'EBIT; Operating income', 'EBIT; Operating income, %', 'Return on net assets (RONA), %', 'Value Added (VA)' and any of the entered Key financials:



In the Enterprise edition also the following ratios are available when FCFE is activated: 'Net Present Value to equity (NPVe)', 'Internal Rate of Return to equity (IRRe)', 'Internal Rate of Return to equity before tax', 'Modified Internal Rate of Return to equity (MIRRe)', 'Payback time to equity' and 'Simple payback time to equity'.

When a period-specific Key financial is selected, you also need to specify which period you want to analyse:



3.2.12 Roll Forecast

This feature is available in the Pro edition and Enterprise edition of Invest for Excel.

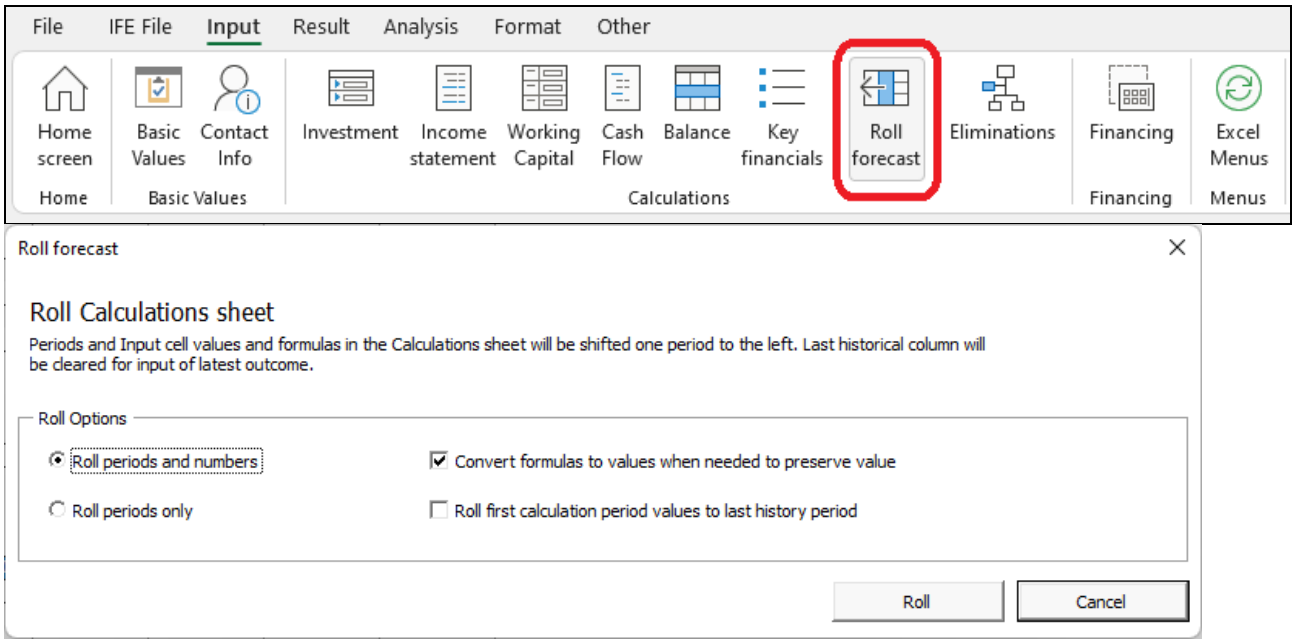
You can use this feature when you want to have a rolling forecast, i.e. a time-frame that stays the same but moves forward in time when new actual figures are available.

Before rolling:

INCOME STATEMENT

1000 EUR	3/2014	6/2014	9/2014	12/2014	3/2015	6/2015	9/2015	12/2015
Months per interval	3	3	3	3	3	3	3	3
Income specified:								
Sales forecast	23 345	24 120	22 970	23 988	24 127	24 127	24 127	24 127
Income	**23 345**	**24 120**	**22 970**	**23 988**	**24 127**	**24 127**	**24 127**	**24 127**
(cumulative financial year)	23 345	47 465	70 435	94 423	24 127	48 254	72 381	96 508
Other operating income	1 320	1 100	1 100	1 100	1 106	1 106	1 106	1 106
Variable costs	-2 801	-2 894	-2 756	-2 856	-2 895	-2 895	-2 895	-2 895
Variable costs, total	-2 801	-2 894	-2 756	-2 856	-2 895	-2 895	-2 895	-2 895
Gross margin	**21 864**	**22 326**	**21 314**	**22 232**	**22 337**	**22 337**	**22 337**	**22 337**
Fixed costs	-4 570	-4 610	-4 660	-4 680	-4 703	-4 703	-4 703	-4 703
Fixed costs, total	-4 570	-4 610	-4 660	-4 680	-4 703	-4 703	-4 703	-4 703
Provisions, increase (-) / decrease (+)								
EBITDA; Operating income before depreciation	**17 294**	**17 716**	**16 654**	**17 552**	**17 634**	**17 634**	**17 634**	**17 634**
Depreciation	-32	-35	-35		-44	-88	-247	-7 691
EBIT; Operating income	**17 262**	**17 681**	**16 619**	**17 552**	**17 590**	**17 546**	**17 387**	**9 943**
Financing income and expenses	-120	-122	-122	-124	-125	-125	-125	-125
Financing income and expenses	-120	-122	-122	-124	-125	-125	-125	-125
Financing income and expenses Financing file								
EBT; Income after financing items	**17 142**	**17 559**	**16 497**	**17 428**	**17 465**	**17 421**	**17 262**	**9 818**
Income tax				-15 940	0	0	0	-16 111
Net income for the period	**17 142**	**17 559**	**16 497**	**1 488**	**17 465**	**17 421**	**17 262**	**-6 293**
(cumulative financial year)	17 142	34 700	51 197	52 685	17 465	34 885	52 147	45 854
% (cumulative financial year)	73,4%	73,1%	72,7%	55,8%	72,4%	72,3%	72,0%	47,5%

In the Invest for Excel menus, Roll forecast can be found in the Input section:



You can choose to roll periods and numbers or periods only. When you roll numbers, formulas are converted to values if the moved formula would change the value of the cell. If you however prefer to keep all formulas even if values would change, you can uncheck the “Convert formulas to values when needed to preserve value” checkbox.

After rolling (periods and numbers):

INCOME STATEMENT

1000 EUR	6/2014	9/2014	12/2014	3/2015	6/2015	9/2015	12/2015	3/2016
Months per interval	3	3	3	3	3	3	3	3
Income specified:								
Sales forecast	24 120	22 970	23 988		24 127	24 127	24 127	24 610
Income	**24 120**	**22 970**	**23 988**	**0**	**24 127**	**24 127**	**24 127**	**24 610**
(cumulative financial year)	24 120	47 090	71 078	0	24 127	48 254	72 381	24 610
Other operating income	1 100	1 100	1 100		1 106	1 106	1 106	1 111
Variable costs	-2 894	-2 756	-2 856	0	-2 895	-2 895	-2 895	-2 953
Variable costs, total	-2 894	-2 756	-2 856		-2 895	-2 895	-2 895	-2 953
Gross margin	**22 326**	**21 314**	**22 232**	**0**	**22 337**	**22 337**	**22 337**	**22 767**
Fixed costs	-4 610	-4 660	-4 680	0	-4 703	-4 703	-4 703	-4 727
Fixed costs, total	-4 610	-4 660	-4 680		-4 703	-4 703	-4 703	-4 727
Provisions, increase (-) / decrease (+)								
EBITDA; Operating income before depreciation	**17 716**	**16 654**	**17 552**	**0**	**17 634**	**17 634**	**17 634**	**18 041**
Depreciation	-35	-35			-88	-247	-291	-176
EBIT; Operating income	**17 681**	**16 619**	**17 552**	**0**	**17 546**	**17 387**	**17 342**	**17 864**
Financing income and expenses	-122	-122	-124	0	-125	-125	-125	-126
Financing income and expenses	-122	-122	-124		-125	-125	-125	-126
Financing income and expenses Financing file								
EBT; Income after financing items	**17 559**	**16 497**	**17 428**	**0**	**17 421**	**17 262**	**17 217**	**17 738**
Income tax			-15 940		0	0	-13 494	0
Net income for the period	**17 559**	**16 497**	**1 488**	**0**	**17 421**	**17 262**	**3 723**	**17 738**
(cumulative financial year)	17 559	34 055	35 543	0	17 421	34 682	38 406	17 738
% (cumulative financial year)	72,8%	72,3%	50,0%		72,2%	71,9%	53,1%	72,1%

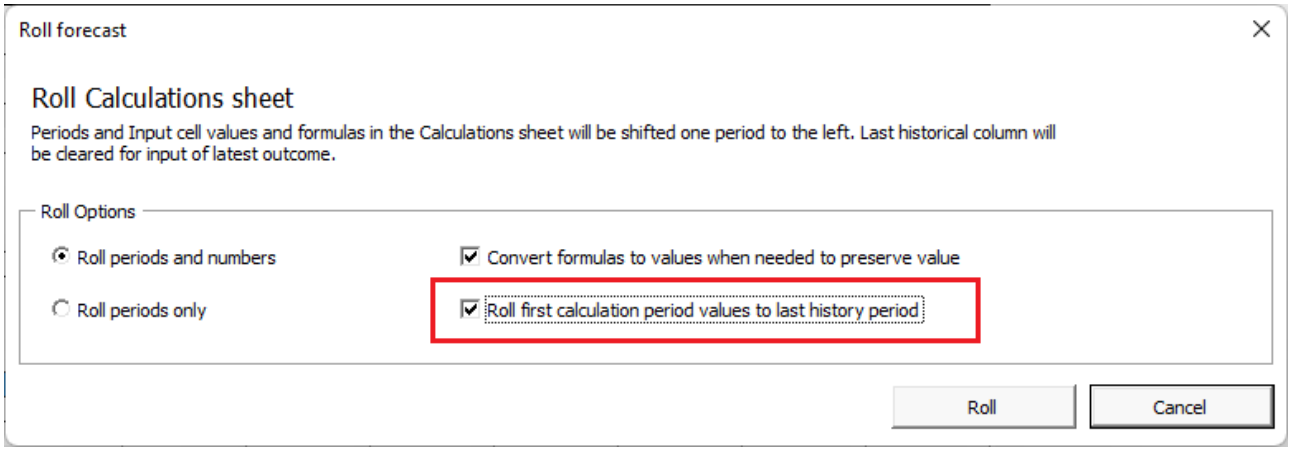
You can see that actual values (2014) have moved left and quarter 3/2015 is cleared for actual numbers entry.

When rolling periods only, all numbers stay in their cells and only the periods are moved one column to the left.

3.2.12.1 Roll first calculation period values to last history period

This function requires Invest for Excel Pro or Enterprise Edition.

First period of forecast can be rolled to last historical period. This is useful if you want to have the forecast as basis when you enter actual figures. It is also useful for including actual investments depreciation plans in the investment table.



Before roll:

INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation	Depr.-%	12/2020	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026
Months per interval		12	12	12	12	12	12	12
1 **Factory**				**-9 000**	**-2 000**			
Depreciation (straight line)	10,00%			-900	-1 100	-1 100	-1 100	-1 100
Book value				8 100	9 000	7 900	6 800	5 700
2 **Maintenance**				**-100**	**-104**	**-108**	**-112**	**-117**
Depreciation (straight line)	20,00%			-20	-41	-62	-85	-108
Book value				80	143	189	216	225
Investments		0	0	**-9 100**	**-2 104**	**-108**	**-112**	**-117**
Realizations				0	0	0	0	0
Depreciation		0	0	-920	-1 141	-1 162	-1 185	-1 208
Realization profit (+) / loss (-)				0	0	0	0	0
Book value		0	0	8 180	9 143	8 089	7 016	5 925

INCOME STATEMENT

1000 EUR		12/2020	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026
Months per interval		12	12	12	12	12	12	12
Income specified								
Income		31 854	36 529	38 355	40 273	42 287	44 401	46 621
+ Europe		16 576	17 580	18 459	19 382	20 351	21 369	22 437
+ Business area 1	5,00 %	14 637	15 556	16 334	17 150	18 008	18 908	19 854
+ Business area 2	5,00 %	1 283	1 335	1 402	1 472	1 545	1 623	1 704
+ Business area 3	5,00 %	656	689	723	760	798	837	879
+ America		11 489	13 352	14 020	14 721	15 457	16 229	17 041
+ Business area 1	5,00 %	8 144	8 551	8 979	9 427	9 899	10 394	10 913
+ Business area 2	5,00 %	3 345	3 579	3 758	3 946	4 143	4 350	4 568
+ Business area 3	5,00 %		1 222	1 283	1 347	1 415	1 485	1 560
+ Asia		3 789	5 597	5 877	6 171	6 479	6 803	7 143
+ Business area 1	5,00 %	3 789	4 054	4 257	4 470	4 693	4 928	5 174
+ Business area 2	5,00 %		1 543	1 620	1 701	1 786	1 876	1 969
Turnover change %				5 %	5 %	5 %	5 %	5 %
Income		**31 854**	**36 529**	**38 355**	**40 273**	**42 287**	**44 401**	**46 621**

After roll:

INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation	Depr.-%	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	12/2027
Months per interval		12	12	12	12	12	12	12
1 **Factory**			-9 000	**-2 000**				
Depreciation (straight line)	10,00%		-900	-1 100	-1 100	-1 100	-1 100	-1 100
Book value		0	8 100	9 000	7 900	6 800	5 700	4 600
2 **Maintenance**			-100	**-104**	**-108**	**-112**	**-117**	**-122**
Depreciation (straight line)	20,00%		-20	-41	-62	-85	-108	-113
Book value		0	80	143	189	216	225	234
Investments		0	-9 100	**-2 104**	**-108**	**-112**	**-117**	**-122**
Realizations				0	0	0	0	0
Depreciation		0	-920	-1 141	-1 162	-1 185	-1 208	-1 213
Realization profit (+) / loss (-)				0	0	0	0	0
Book value		0	8 180	9 143	8 089	7 016	5 925	4 834

INCOME STATEMENT

1000 EUR		12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	12/2027
Months per interval		12	12	12	12	12	12	12
Income specified								
Income		36 529	38 355	40 273	42 287	44 401	46 621	48 952
+ Europe		17 580	18 459	19 382	20 351	21 369	22 437	23 559
+ Business area 1	5,00 %	15 556	16 334	17 150	18 008	18 908	19 854	20 847
+ Business area 2	5,00 %	1 335	1 402	1 472	1 545	1 623	1 704	1 789
+ Business area 3	5,00 %	689	723	760	798	837	879	923
+ America		13 352	14 020	14 721	15 457	16 229	17 041	17 893
+ Business area 1	5,00 %	8 551	8 979	9 427	9 899	10 394	10 913	11 459
+ Business area 2	5,00 %	3 579	3 758	3 946	4 143	4 350	4 568	4 796
+ Business area 3	5,00 %	1 222	1 283	1 347	1 415	1 485	1 560	1 638
+ Asia		5 597	5 877	6 171	6 479	6 803	7 143	7 501
+ Business area 1	5,00 %	4 054	4 257	4 470	4 693	4 928	5 174	5 433
+ Business area 2	5,00 %	1 543	1 620	1 701	1 786	1 876	1 969	2 068
Turnover change %			0	5 %	5 %	5 %	5 %	5 %
Income		**36 529**	**38 355**	**40 273**	**42 287**	**44 401**	**46 621**	**48 952**

After rolling, the “Asset investments and realizations”-row in the Cash flow statement will reference the investments table also in the historical periods.

CASH FLOW STATEMENT

1000 EUR	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	12/2027
Months per interval	12	12	12	12	12	12	12
Cash flow from operations							
Income	36 543	38 370	40 289	42 303	44 419	46 640	48 972
Variable costs	-35 702	-37 190	-39 050	-41 002	-43 052	-45 205	-47 465
Fixed costs	0	0	0	0	0	0	0
Extraordinary income & expenses	0	0	0	0	0	0	0
Income tax (adjusted)	-120	-56	-10	-21	-33	-46	-65
Change in working capital	-957	0	0	0	0	0	0
Cash flow from operations	-236	1 124	**1 229**	**1 280**	**1 333**	**1 389**	**1 442**
Asset investments and realizations	0	-9 100	-2 104	-108	-112	-117	-122
Free cash flow to firm (FCFF)	-236	-7 976	**-875**	**1 172**	**1 220**	**1 272**	**1 320**

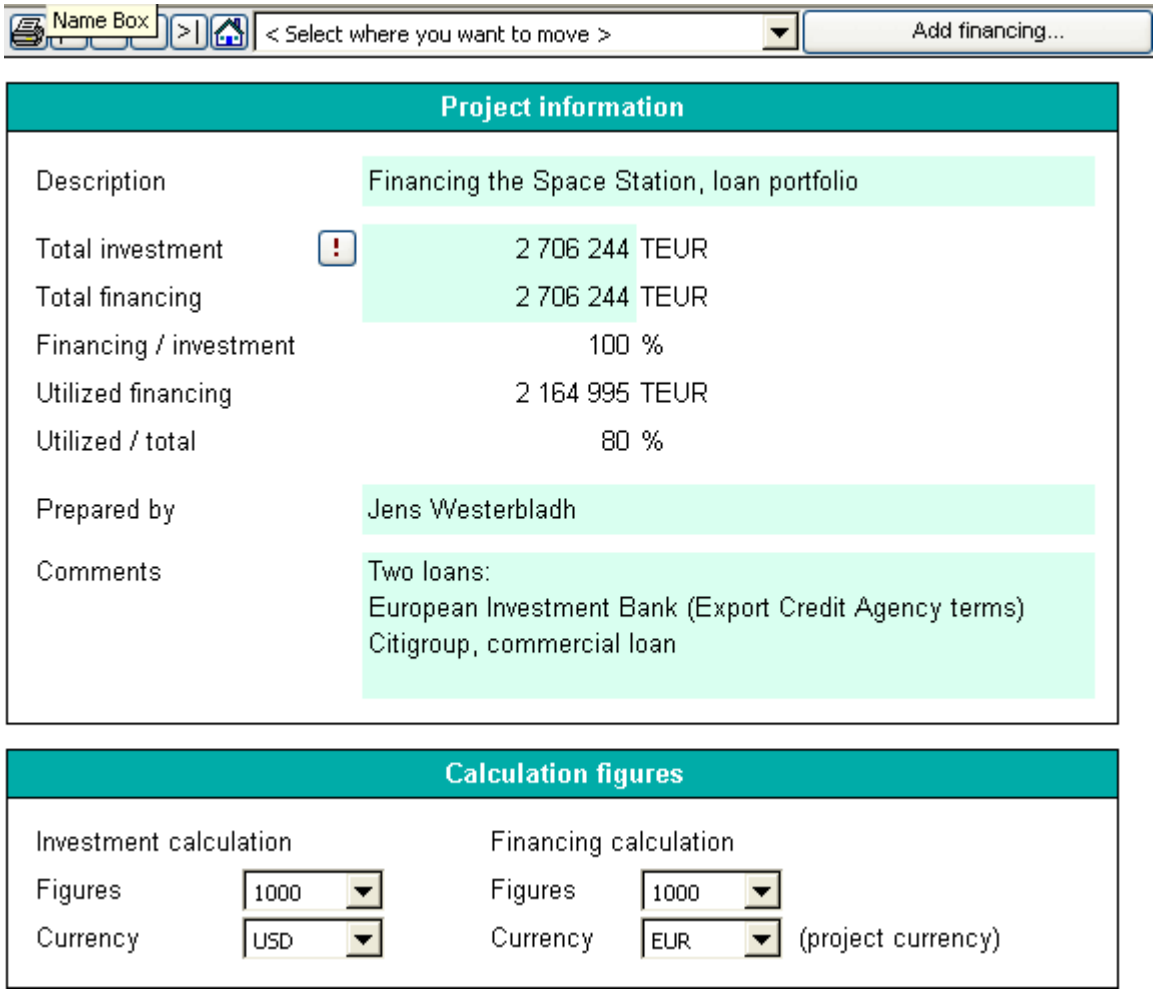
3.3 Debt financing (Enterprise edition)

With the additional *Financing* module, included in the Enterprise edition, you can plan the financing of your investment.

Use the Financing module to find the need for financing in your investment calculation, and transfers interest expenses and amortisation instalments to it.

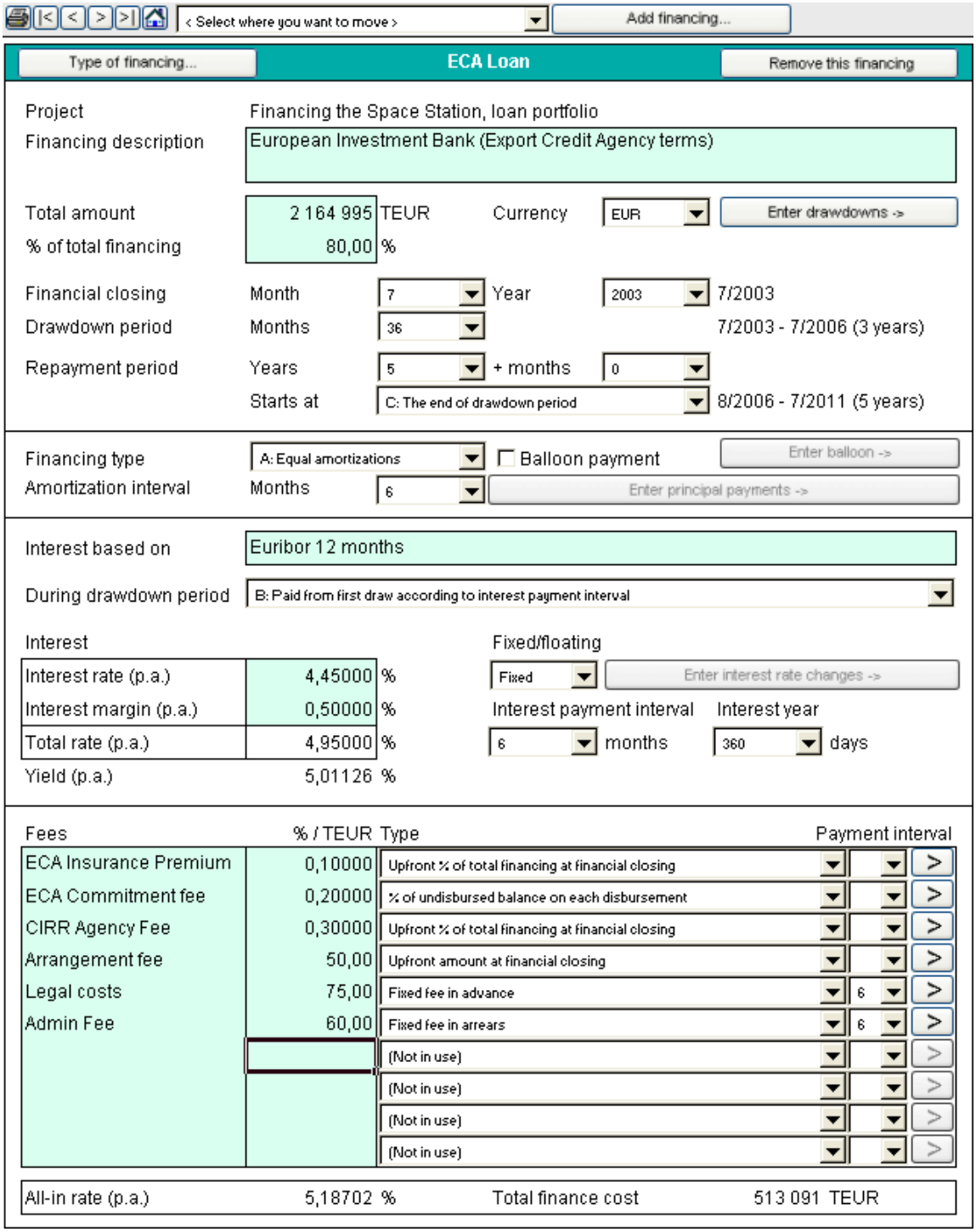
The financing module will be explained in more detail in **Chapter 11: Financing module**. Here is only a short overview (3 pages):

Project details screen:

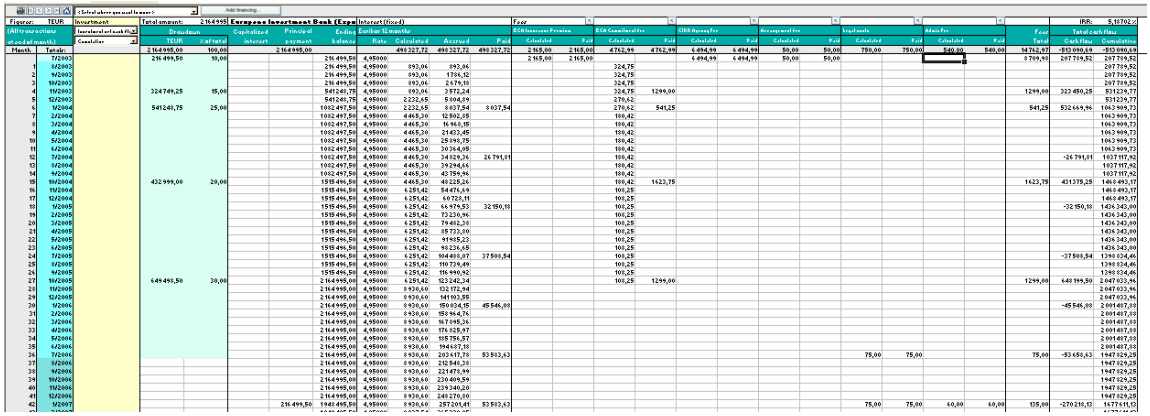


The financing module enables you to compile a financing package consisting of one or more loans. You can add loans by clicking the **Add financing** button. The program covers various types of loans and the costs associated with them.

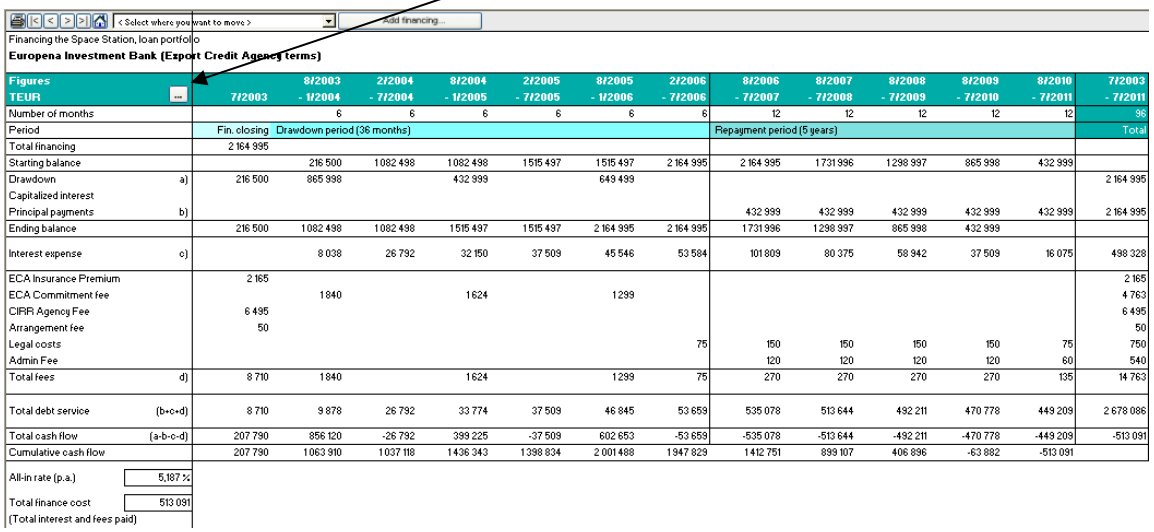
Param –sheet: Entering loan parameters:



Spec –sheet: Specification of the loan in a detailed tabular form:



The loan can be viewed also in report form. You can set the rows, columns and interval lengths as you please.
View –sheet: Example of loan summary:



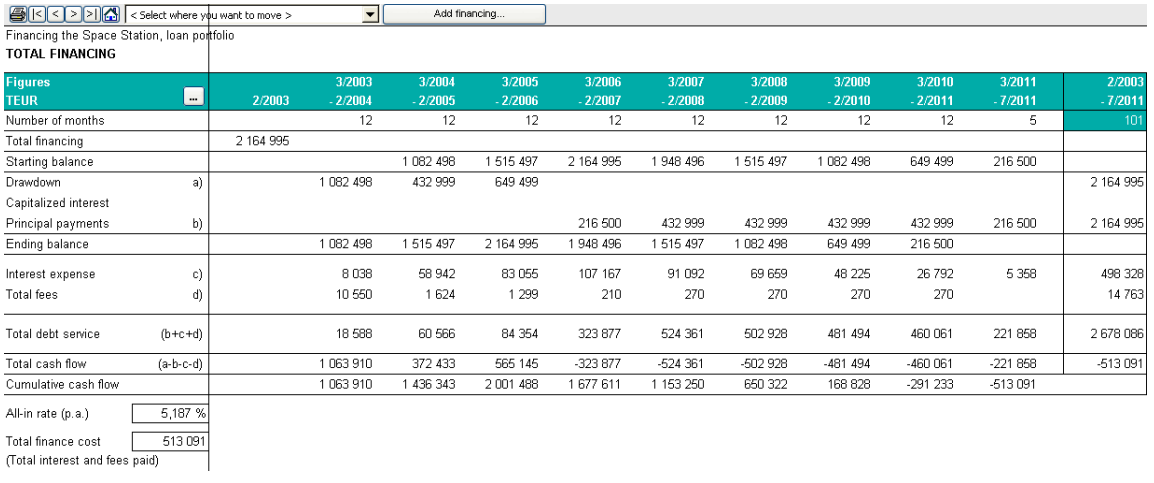
Financing the Space Station, loan portfolio
Europena Investment Bank (Export Credit Agency terms)

Figures		1/2003	2/2004	2/2004	2/2005	2/2005	2/2006	2/2006	2/2007	2/2008	2/2009	2/2010	2/2011
TEUR		7/2003	- 1/2004	- 7/2004	- 1/2005	- 7/2005	- 1/2006	- 7/2006	- 7/2007	- 7/2008	- 7/2009	- 7/2010	- 7/2011
Number of months			6	6	6	6	6	6	12	12	12	12	12
Period		Fin. closing	Drawdown period (36 months)						Repayment period (5 years)				
Total financing		2 164 995											
Starting balance			216 500	1 082 498	1 082 498	1 515 497	1 515 497	2 164 995	2 164 995	1 731 996	1 298 997	865 998	432 999
Drawdown	a)	216 500	865 998		432 999		649 499						
Capitalized interest													
Principal payments	b)								432 999	432 999	432 999	432 999	432 999
Ending balance		216 500	1 082 498	1 082 498	1 515 497	1 515 497	2 164 995	2 164 995	1 731 996	1 298 997	865 998	432 999	
Interest expense	c)		8 038	26 792	32 150	37 509	45 546	53 584	101 809	80 375	58 942	37 509	16 075
ECA Insurance Premium		2 165											
ECA Commitment fee			1 840		1 624		1 299						
CIRR Agency Fee		6 495											
Arrangement fee		50											
Legal costs								75	150	150	150	150	75
Admin Fee									120	120	120	120	60
Total fees	d)	8 710	1 840		1 624		1 299	75	270	270	270	270	135
Total debt service	(b+c+d)	8 710	9 878	26 792	33 774	37 509	46 845	53 659	535 078	513 644	492 211	470 778	449 209
Total cash flow	(a-b-c-d)	207 790	856 120	-26 792	399 225	-37 509	602 653	-53 659	-535 078	-513 644	-492 211	-470 778	-449 209
Cumulative cash flow		207 790	1 063 910	1 037 118	1 436 343	1 398 834	2 001 488	1 947 829	1 412 751	899 107	406 896	-63 882	-513 091

All-in rate (p.a.)	5,187 %
Total finance cost (Total interest and fees paid)	513 091

When the financing is made up of several loans, the program will make a summary of all loans, including details and a report. (TotalSpec & TotalView -sheets)

TotalView –sheet: Example of summary report:



Financing the Space Station, loan portfolio
TOTAL FINANCING

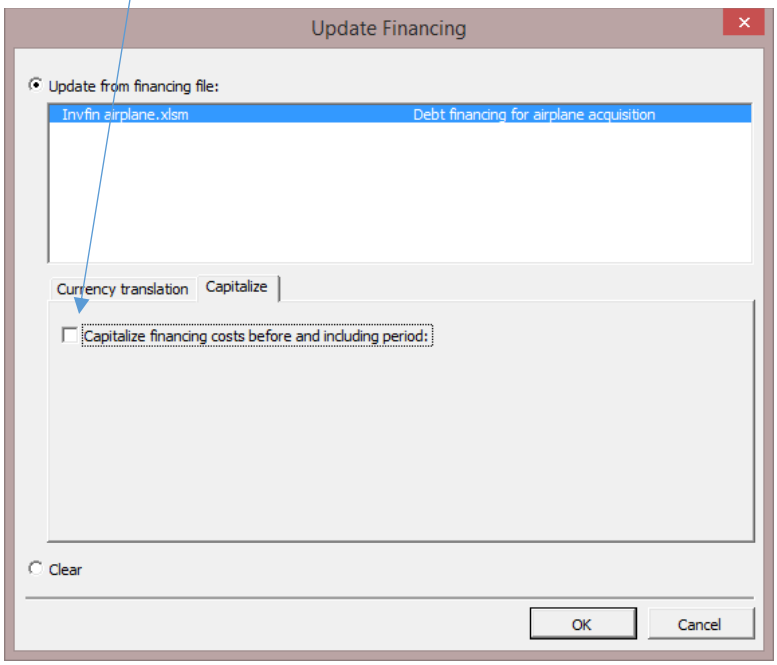
Figures			3/2003	3/2004	3/2005	3/2006	3/2007	3/2008	3/2009	3/2010	3/2011	2/2003
TEUR		2/2003	- 2/2004	- 2/2005	- 2/2006	- 2/2007	- 2/2008	- 2/2009	- 2/2010	- 2/2011	- 7/2011	- 7/2011
Number of months			12	12	12	12	12	12	12	12	5	101
Total financing		2 164 995										
Starting balance				1 082 498	1 515 497	2 164 995	1 948 496	1 515 497	1 082 498	649 499	216 500	
Drawdown	a)		1 082 498	432 999	649 499							2 164 995
Capitalized interest												
Principal payments	b)					216 500	432 999	432 999	432 999	432 999	216 500	2 164 995
Ending balance			1 082 498	1 515 497	2 164 995	1 948 496	1 515 497	1 082 498	649 499	216 500		
Interest expense	c)		8 038	58 942	83 055	107 167	91 092	69 659	48 225	26 792	5 358	498 328
Total fees	d)		10 550	1 624	1 299	210	270	270	270	270		14 763
Total debt service	(b+c+d)		18 588	60 566	84 354	323 877	524 361	502 928	481 494	460 061	221 858	2 678 086
Total cash flow	(a-b-c-d)		1 063 910	372 433	565 145	-323 877	-524 361	-502 928	-481 494	-460 061	-221 858	-513 091
Cumulative cash flow			1 063 910	1 436 343	2 001 488	1 677 611	1 153 250	650 322	168 828	-291 233	-513 091	

All-in rate (p.a.)	5,187 %
Total finance cost (Total interest and fees paid)	513 091

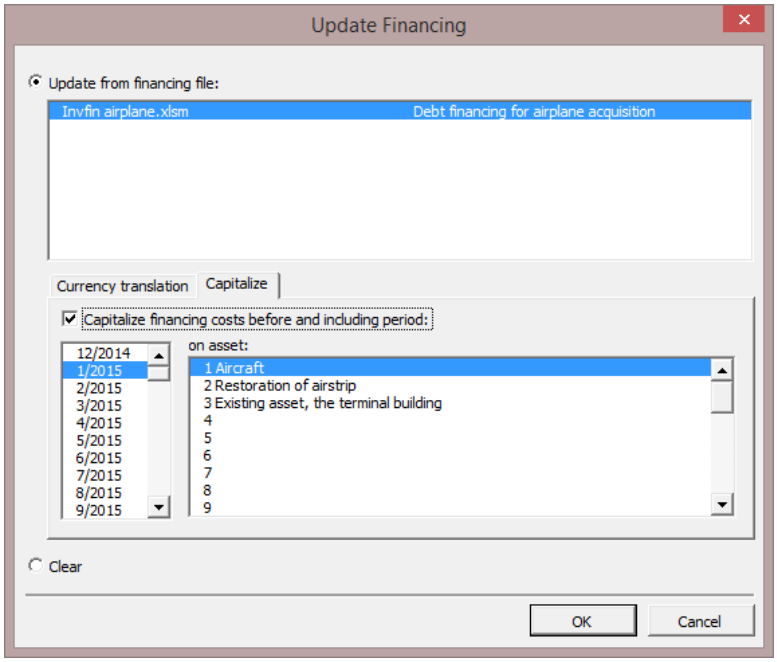
3.3.1 Capitalizing financing costs on assets

Part of the financing costs in a Financing file can be capitalized on an investment asset and depreciated in the Income statement according to the depreciation plan of the asset.

You can choose to capitalize financing costs when they are read to the Calculation file. Check the "Capitalize financing costs before and including period:" option in the Update financing dialog box.



Select the last month of financing costs that you want to capitalize and the investment table asset you want to capitalize the financing costs on.



Without capitalization, all financing costs go to the Financing income and expense:

INCOME STATEMENT

	1/2008	12/2008	12/2009	12/2010	12/2011	12/2012
Months per interval		12	12	12	12	12
EBITDA; Operating income before depreciation		**150 000**	**300 000**	**315 000**	**330 750**	**347 288**
Depreciation	0	0	0	-100 000	-100 000	-100 000
EBIT; Operating income	**0**	**150 000**	**300 000**	**215 000**	**230 750**	**247 288**
Financing income and expenses						
Financing income and expenses						
Financing income and expenses Financing file		-36 400	-32 663	-28 925	-25 188	-21 450
EBT; Income after financing items	**0**	**113 600**	**267 338**	**186 075**	**205 563**	**225 838**

When capitalization is used, the capitalized part of the financing costs is included in the chosen assets book value and depreciated accordingly.

INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation	Depr.-%	1/2008	12/2008	12/2009	12/2010	12/2011	12/2012
Months per interval			12	12	12	12	12
1		**-1 000 000**					
Depreciation (straight line)	**10,00%**				-106 906	-106 906	-106 906
Book value		1 000 000	1 036 400	1 069 063	962 156	855 250	748 344
Investments		**-1 000 000**	**0**	**0**	**0**	**0**	**0**

INCOME STATEMENT

	1/2008	12/2008	12/2009	12/2010	12/2011	12/2012
Months per interval		12	12	12	12	12
EBITDA; Operating income before depreciation		**150 000**	**300 000**	**315 000**	**330 750**	**347 288**
Depreciation	0	0	0	-106 906	-106 906	-106 906
EBIT; Operating income	**0**	**150 000**	**300 000**	**208 094**	**223 844**	**240 381**
Financing income and expenses						
Financing income and expenses						
Financing income and expenses Financing file				-28 925	-25 188	-21 450
EBT; Income after financing items	**0**	**150 000**	**300 000**	**179 169**	**198 656**	**218 931**

4 Result

4.1 Profitability analysis

The result of the investment calculation is shown in this table:

PROFITABILITY ANALYSIS

Project description	**Alpha Machine 37**				Euro
Nominal value of all investments		2 835 000	Discounted investments		2 745 878
Required rate of return		12,75 %			
Calculation term		5,3	years		9/2015 - 12/2020
Calculation point		9/2015	(In the beginning of period)		
Present value of business cash flows	Nominal	PV	Notes		
± PV of operative cash flow		7 595 958			
+ PV of residual value		2 328 935			
Present value of business cash flows		**9 924 893**			
- Present value of reinvestments	0	0			
Total Present Value (PV)		**9 924 893**			
Investment proposal	Nominal	PV			
- Proposed investments in assets	-2 835 000	-2 745 878			
+ Investment subventions	0	0			
Investment proposal	-2 835 000	-2 745 878			
Net Present Value (NPV)		**7 179 015**	>= 0	->	profitable
NPV as a monthly annuity		152 633			
Internal Rate of Return (IRR)		50,27 %	>= 12,75 %	->	profitable
Modified Internal Rate of Return (MIRR)		37,20 %	>= 12,75 %	->	profitable
Profitability Index (PI)		3,61	>= 1	->	profitable
Payback time, years		3,2	Based on discounted FCF		
Return on net assets (RONA), %		76,2 %	Average 6 years		
Economic Value Added (EVA)		1 997 077	Average 6 years		
Discounted Value Added (DCVA)		6 709 798			
Calculation is made by	Datapartner Customer Support				27.8.2014
Calculation file	C:\Users\JENS\W\Documents\Calc\3.7 examples\Kone mallilaskelmat 37\Kone mallilaskelmat 37\EN Machine 37 b3.xlsm				

☑ Show conclusions of profitability indicators

By removing the tick you remove the 'profitable/ not profitable' comments.

An investment is considered profitable when the IRR and MIRR are at least as high as the discount rate (capital cost), NPV is positive (>=0) and PI is at least 1.

Project description the descriptive text from the **Basic Values** table.

Nominal value of all investments is the sum of all investments defined in the **Investments** table.

Discounted Investments the discounted sum of all investments defined in the **Investments** table.

Required rate of return the discount rate entered in the **Basic Values** table.

Calculation term Number of years and the starting and ending months of the project.

Calculation point The point in time to where the Free cash flow is discounted/compounded. By default, the calculation point is equal to the starting point of the calculation term.

4.1.1 Profitability indicators

4.1.1.1 Net Present Value (NPV)

The net present value is the sum of discounted free cash flows after tax. NPV is an abbreviation of the term 'Net Present Value', a term widely used in other languages, too.

The method for calculating NPV is called the Discounted cash flow (DCF) method. The Discounted cash flow method is based on discounting the expected net investment cash flows *per interval* to the beginning of the investment term, using the investment's required rate of return.

NOTE! If the calculation point is not set at the beginning of the calculation term, free cash flow before the calculation point is compounded and free cash flow after the calculation point is discounted to the calculation point using the required rate of return.

Decision-making rule: *The investment is profitable when NPV* ≥ 0.

Formula: NPV = $\sum_{t=0}^{N} FCF_t * (1+r)^{-t}$

FCF (t) = Free cash flow in period t,
t = period, r = discount rate per period,
N = number of periods,
For residual values t = N

In acquisition calculations, net debt of the acquired company is deducted from NPV.

4.1.1.2 Monthly annuity of net present value

As the NPVs of two or more investments with different economic life are not directly comparable, a monthly annuity of NPV can be used as the basis for comparison.

Decision-making rule: *The higher the monthly annuity, the better the investment is*.

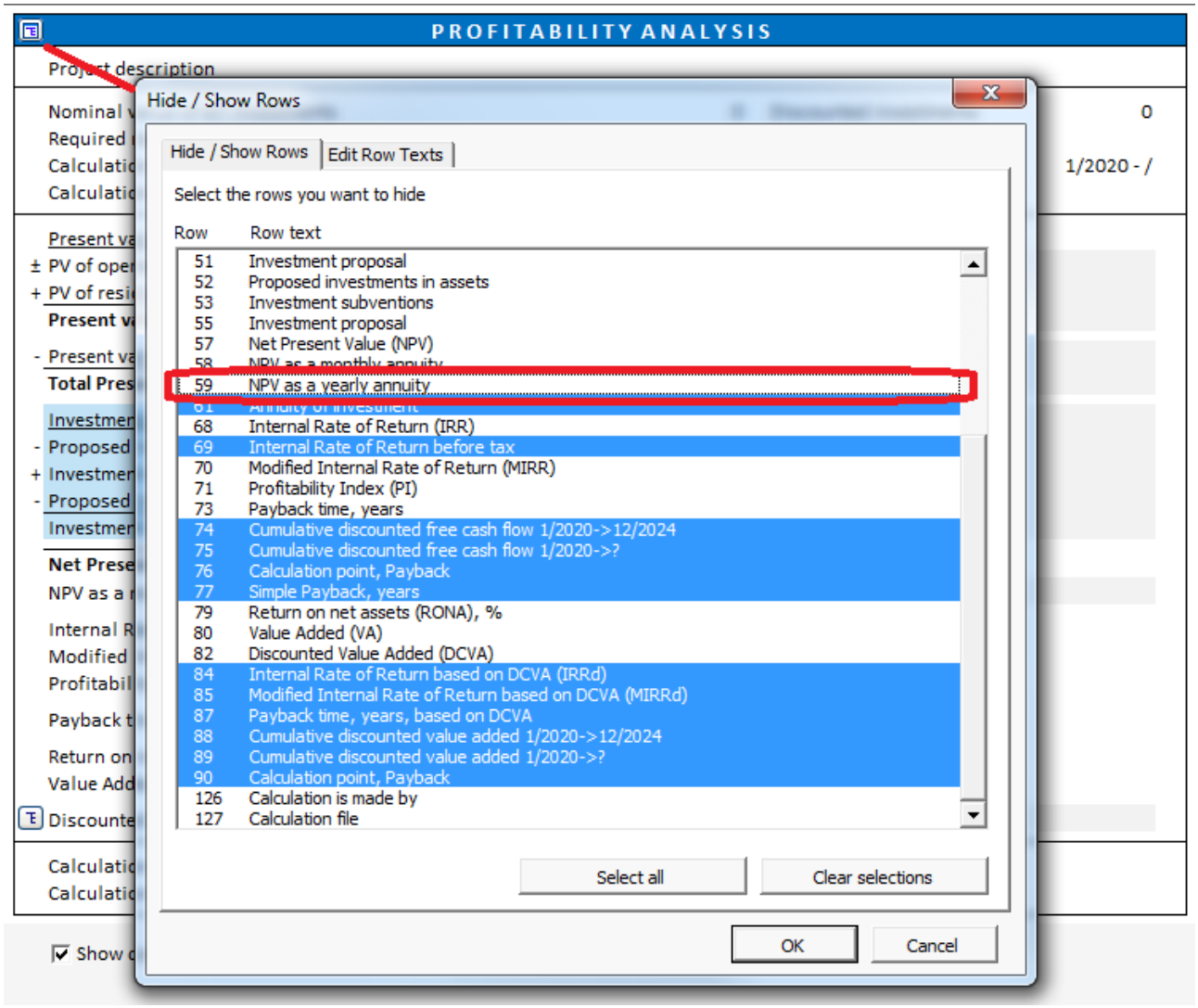
Formula: NPV as monthly annuity = NPV * $\left(\frac{r}{(1-(1+r)^{-n}} \right)$

r = discount rate per month
n= number of months

4.1.1.3 NPV as yearly annuity

NPV as yearly annuity can be shown in the Profitability Analysis in the Result sheet. This requires the calculation file to be of version 3.9 or newer.

NPV as yearly annuity is hidden by default. You can make it visible by deselecting the “NPV as yearly annuity” in the “Hide / Show Rows” selection window.



NPV as a yearly annuity is shown under NPV as a monthly annuity.

Net Present Value (NPV)	**73 161**
NPV as a monthly annuity	877
NPV as a yearly annuity	10 903

If the calculation does not consist entirely of full-year periods, the NPV as a yearly annuity is not exact. In this case an Approximately Equal To-sign (≈) appears in front of the value cell.

NPV as a monthly annuity is always exact.

4.1.1.4 Discounted Value Added (DCVA)

DCVA = VA for each financial year is discounted/compounded to calculation point. DCVA is the sum of discounted VAs. DCVA gives approximately the same result as NPV. The following corrections are made to DCVA for compatibility with NPV:

Asset investment/impairment test:
- Sum of discounted correction of income tax for financial items

Acquisition/valuation:
+ Tax effects, mother company
- Sum of discounted correction of income tax for financial items
+ Interest-bearing net debt of acquired company
+ Net assets, opening balance

Decision-making rule: *The investment is profitable when DCVA* ≥ 0.

4.1.1.5 Annuity of investment

The investment annuity method shows the sum of discounted investments divided into fixed amortisation instalments over the estimated term of the investment, using the discount factor as the interest rate. This method is not a profitability gauge as such, but it is a complementary indicator. Think of it as an annual leasing payment for the investment. It is an imputed cost of the investment per year.

By default, this row is hidden in the Profitability Analysis, but it can be shown pressing the  - button, found top left.

4.1.1.6 Internal Rate of Return (IRR)

The internal rate of return is the discount rate resulting in NPV=0. In other words, this method is used to calculate the discount rate yielding a net present value of Cash flow from operations to equal the investment costs. IRR is an abbreviation of the term 'Internal Rate of Return'. The term is widely used in other languages, too. Internal rate of return is the most common investment profitability index.

Companies usually have a policy concerning the required rate of return on the investment capital. The required rate of return should at least match the financing costs. The required rate of return is staggered according to the type of investment. Staggering the required returns on different types of investments makes it possible to delegate investment decisions, and to direct operations in line with the chosen investment policy.

It makes sense to assess investment alternatives in advance on the basis of a specific rate of return requirement, as companies usually become aware of potential investment objects one by one.

FORMULA: The internal rate of return (IRR) is defined as the compound rate of return *r* that makes the NPV equal to zero:

Formula: $0 = NPV = \sum_{t=0}^{N} FCF_t * (1 + IRR)^{-t}$

FCF (t) = Free cash flow in period t,

t = period, IRR = Internal rate of return (per period)

N = number of periods,

For residual values t = N

Multiple Internal Rates of Return. Sometimes a series of 'Free cash flows' has more than one IRR. *Invest for Excel* searches for 40 possible IRR's. If it finds more than one solution, it will return the highest and the lowest IRR.

4.1.1.7 Internal Rate of Return before tax

Internal rate of return before tax can be found in the Profitability analysis table.

Internal Rate of Return (IRR)	33,04 %	>= 12 %
Internal Rate of Return before tax	41,81 %	
Modified Internal Rate of Return (MIRR)	23,77 %	>= 12 %

In some type of calculations, like real estate valuations, IRR before tax is of interest. IRR before tax is calculated the same way as IRR, but with taxes added back to the cash flow.

When free cash flow is separated for firm and equity, IRR to Equity before tax is also available.

The IRR before tax row is hidden by default and must be unhidden manually.

Decision-making rule: *The investment is profitable when IRR ≥ (greater than or equal to) the required rate of return (discount factor).*

4.1.1.8 Modified IRR

Modified IRR differs from the above method in that it reinvests the returns at the discount rate, not at the Internal Rate of Return. In terms of the calculation, it means that interest accrues on the investment's cash flows primarily at the discount rate during its economic lifetime.

According to the traditional IRR method, the total annual profit is assumed to be reinvested at the same interest rate, meaning that the profit from this investment would be invested in something else yielding exactly the same rate of return.

If the internal rate of return differs significantly from the discount rate, being much higher or lower, use this method of calculating interest, as it is more prudent and realistic. Called Modified Internal rate of return according to the Baldwin theory (after its creator), it is abbreviated as Modified IRR in the Invest for Excel program.

Decision-making rule: *The investment is profitable when Modified IRR ≥(greater than or equal to) the required rate of return (discount factor).*

MIRR is calculated as follows:

$$\text{MIRR} = \sqrt[n]{\frac{FV(\text{positive cash flows, reinvestment rate})}{-PV(\text{negative cash flows, finance rate})}} - 1$$

n = number of periods

reinvestment rate = required rate of return =discount rate

finance rate = cost of capital = WACC = discount rate

In *Invest for Excel* is implemented same rate for positive cash flows as for negative cash flows.

4.1.1.9 Profitability Index (PI)

Definition**:** The Profitability Index is the Total Present Value (PV), divided by the sum of discounted Investments. "PI" is the abbreviation of **Profitability Index**. **Benefit-Cost Ratio** is another term used for this measure.

Decision-making rule: *An investment is profitable, when the Profitability index ≥1*.

FORMULA: Profitability index = $\frac{PV}{-C}$

C = PV of Proposed investments*, PV = Present value of all other cash flows
* Proposed investments don't include investments categorized as Reinvestments (maintenance).

Implementation in Invest for Excel:

Profitability index = $\frac{\text{PV of Free cash flow – PV of proposed investments}}{\text{PV of proposed investments}}$

4.1.1.10 Payback time, years (discounted)

Definition: Payback time refers to the number of years the investment has to generate cash flows before NPV=0.

The program calculates the payback time from the discounted net cash flow. 'Payback' is the English term for the repayment period.

Decision-making rule: *The shorter the Payback time, the better the investment is*.

This rule is, however, not straightforward. For instance, it fails to take into account any consecutive cash flows, although they might be significant for profitability. *Therefore Payback should be used only as a supplement to other measures of profitability*.

You can also see when the Payback point will be reached (break-even point), i.e. cumulative discounted cash flow becomes greater than 0. If you want to know the payback time without the effect of the discount factor, change the discount rate to zero (0) in the Basic Values screen.

Payback is calculated using NPV formula.

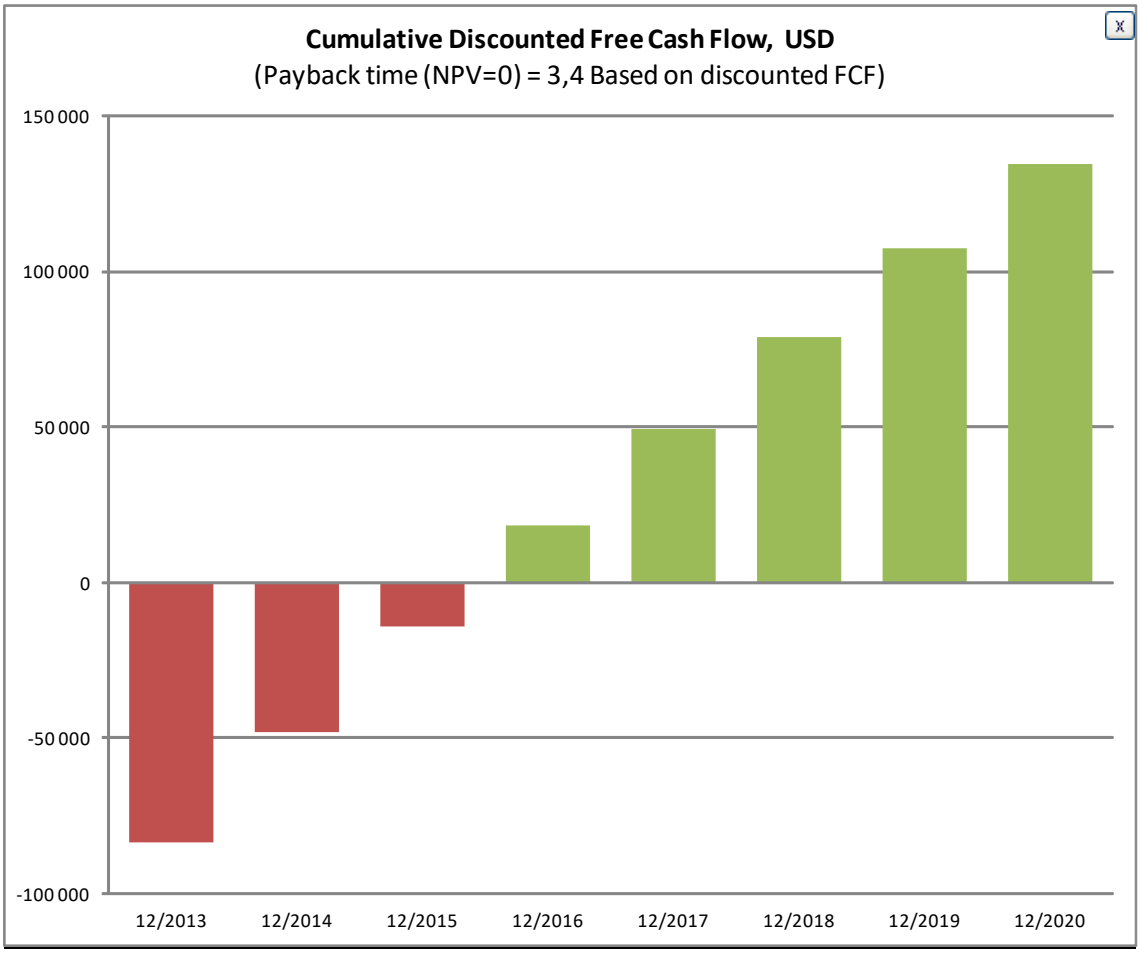
Formula: $0 = NPV = \sum_{t=0}^{N} FCF_t * (1+r)^{-t}$

FCF (t) = Free cash flow in period t,
t = period, r = discount rate per period,
N = number of periods,
For residual values t = N

Payback time, years = $\frac{\text{The number of periods (t) for which NPV = 0}}{12 \text{ / Duration of period in months}}$

In Invest for Excel payback is presented in years with one decimal. E.g. 3,6 is 3 years + 60% of 4th year (not 3 years and 6 months).

Payback can also be viewed as a chart. Click the  button.



The chart is shown on a yearly basis, regardless of used intervals. Click to close the chart.

Residual values are not included in Payback

Residual column entries and perpetuity are not included when payback is calculated. Only cash flow during the actual calculation term is taken into account.

The reason for this is that residual values are often substantial and will make the cumulative discounted cash flow positive independent of the length of the calculation term. As a result, if residual values are included in payback, the shorter the calculation term, the shorter payback will be. This misleading effect has now been eliminated.

4.1.1.11 Simple Payback, years (not discounted)

Definition: Payback time refers to the number of years the investment has to generate cash flows equal to invested cash flows without considering time value of money.

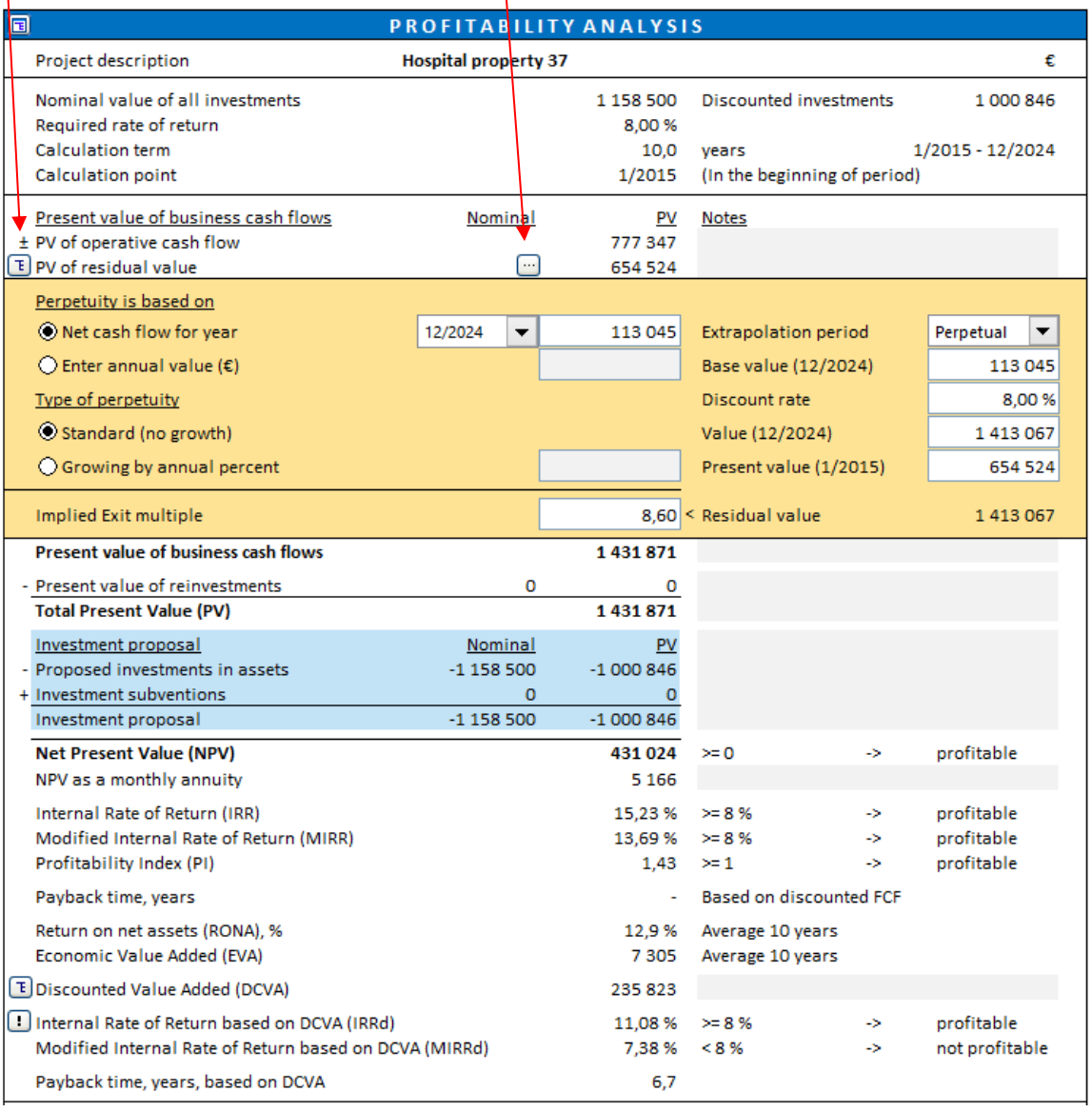
The program calculates the Simple payback from the free cash flow. 'Payback' is the English term for the repayment period.

Decision-making rule: *The shorter the Simple payback, the better the investment is*.

This rule is, however, not straightforward. For instance, it fails to take into account time value of money and any consecutive cash flows, although they might be significant for profitability. *Simple payback should be used only as a supplement to other measures of profitability*.

4.1.2 Perpetuity

In the Enterprise edition, the residual value of the investment calculation can be defined as a perpetuity value (Perpetuity can be chosen in the Residual value dialog box, ⋯ button). In this case, the perpetuity calculation can be opened (use the button) in the result table:



PROFITABILITY ANALYSIS					
Project description	**Hospital property 37**				€
Nominal value of all investments		1 158 500	Discounted investments		1 000 846
Required rate of return		8,00 %			
Calculation term		10,0	years		1/2015 - 12/2024
Calculation point		1/2015	(In the beginning of period)		
Present value of business cash flows	Nominal	PV	Notes		
± PV of operative cash flow		777 347			
PV of residual value	⋯	654 524			
Perpetuity is based on					
◉ Net cash flow for year	12/2024	113 045	Extrapolation period		Perpetual
○ Enter annual value (€)			Base value (12/2024)		113 045
Type of perpetuity			Discount rate		8,00 %
◉ Standard (no growth)			Value (12/2024)		1 413 067
○ Growing by annual percent			Present value (1/2015)		654 524
Implied Exit multiple		8,60	< Residual value		1 413 067
Present value of business cash flows		**1 431 871**			
- Present value of reinvestments	0	0			
Total Present Value (PV)		**1 431 871**			
Investment proposal	Nominal	PV			
- Proposed investments in assets	-1 158 500	-1 000 846			
+ Investment subventions	0	0			
Investment proposal	-1 158 500	-1 000 846			
Net Present Value (NPV)		**431 024**	>= 0	->	profitable
NPV as a monthly annuity		5 166			
Internal Rate of Return (IRR)		15,23 %	>= 8 %	->	profitable
Modified Internal Rate of Return (MIRR)		13,69 %	>= 8 %	->	profitable
Profitability Index (PI)		1,43	>= 1	->	profitable
Payback time, years		-	Based on discounted FCF		
Return on net assets (RONA), %		12,9 %	Average 10 years		
Economic Value Added (EVA)		7 305	Average 10 years		
Discounted Value Added (DCVA)		235 823			
Internal Rate of Return based on DCVA (IRRd)		11,08 %	>= 8 %	->	profitable
Modified Internal Rate of Return based on DCVA (MIRRd)		7,38 %	< 8 %	->	not profitable
Payback time, years, based on DCVA		6,7			

Perpetuity can be calculated A) with the net cash flow for a selected year as basis, or B) by entering the basis value for Perpetuity.

Furthermore, you can calculate A) a standard Perpetuity, or B) a growing Perpetuity. For growing perpetuity, a growth percentage should be entered. Note, that the growth percentage can also be negative, if negative growth is to be expected.

Note that the impact of Perpetuity on the result of the calculation can be substantial. Perpetuity should be used when calculating projects that are expected to go on for the foreseeable future. An example of such a calculation is a corporate acquisition calculation.

Perpetuity is not applicable on projects with clear economic lifetimes.

The formulas for calculation of perpetuity

A) Standard Perpetuity

$P = C/r$

where
P - perpetuity
C - cash flow selected for perpetuity (net cash flow for selected year or entered annual value)
r – discount rate

PV of perpetuity = $P/(1+r)^{-t}$

where
P – perpetuity
r – discount rate per period
t – period

B) Growing Perpetuity

$P = C/r-g$

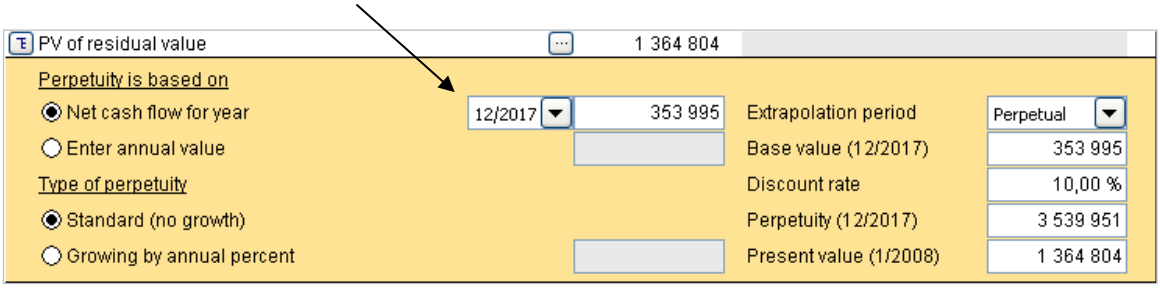
where
P - perpetuity
C - cash flow selected for the perpetuity (net cash flow for selected year or entered annual value)
r – discount rate
g - growth rate

PV of perpetuity = $P/(1+r)^{-t}$

where
P – perpetuity
r – discount rate per period
t – period

4.1.2.1 Perpetuity based on - default value

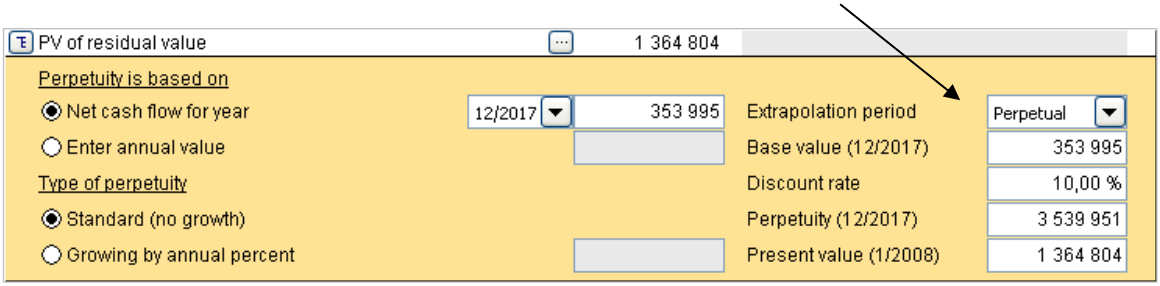
When using "Perpetuity / extrapolation" as residual value, the "Perpetuity is based on" is by default "Net cash flow for year"and the year is the last year of the calculation.



4.1.2.2 Extrapolation period

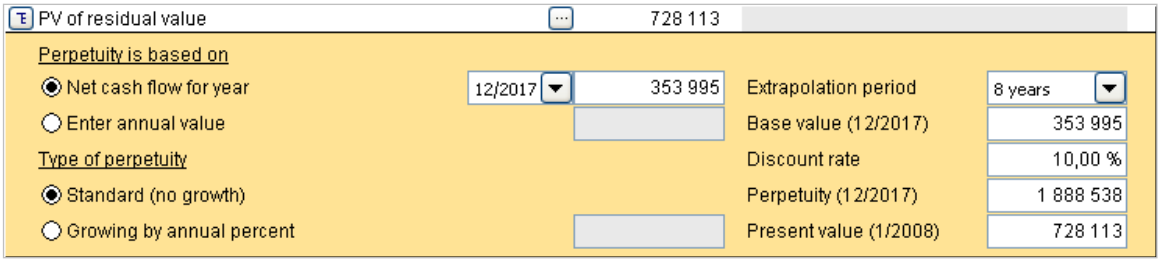
Perpetuity can be restricted to an extrapolation period of 1-100 years in addition to a perpetual period.

The standard way of calculating Perpetuity is discounting a perpetual cash flow.



You can also limit the discounted cash flow to a number of years (1-100) by using the Extrapolation term dropdown list.

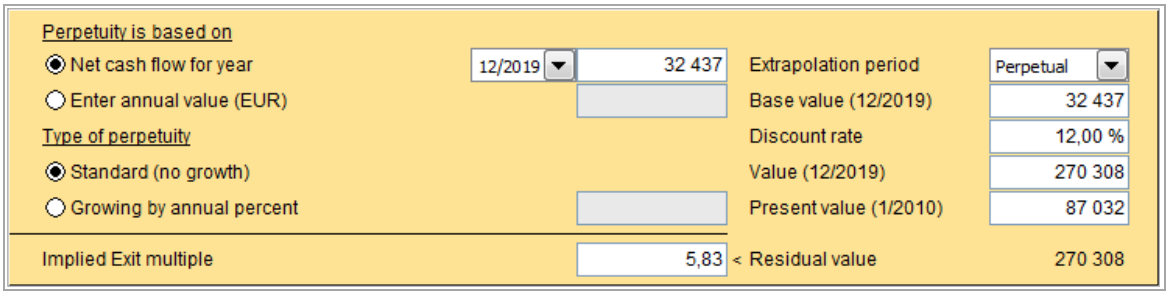
The discounted cash flow is limited to the selected number of years.



This is useful if the expected economic lifetime of the primary asset is known but you don't want to create a full cash flow forecast for that long a period. Also, in impairment testing, reporting standards can stipulate that a full forecast model should be created for a fixed number of years and the last year's cash flow should be used as base for discounted cash flows for another number of years.

4.1.2.3 Implied exit multiple

When perpetuity/extrapolation is used, an implied exit multiple is automatically calculated in the bottom of the perpetuity calculation table.



The implied exit multiple is: undiscounted residual value / last year's EBITDA.

4.1.2.4 Enterprise value and Equity value

Enterprise value and Equity value are available in Acquisition file and Business plan file Profitability analysis. Interest-bearing net debt is separated in Excess cash and non-operating assets and Interest-bearing debt.

Formulas:

Equity value = Total Present Value (PV) + Excess cash and non-operating assets - Interest-bearing debt

Enterprise value = Equity value - Excess cash and non-operating assets + Interest-bearing debt

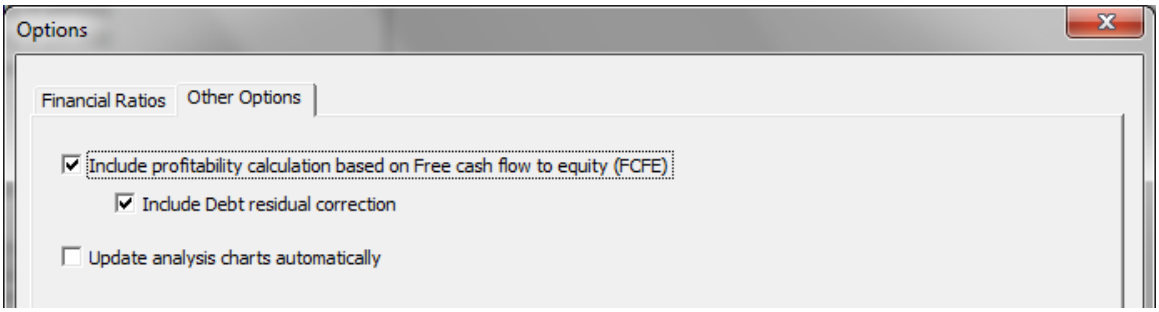
Enterprise value and Equity value ratios can be based on EBIT or EBITDA.

4.1.3 Profitability calculation based on Free cash flow to equity (FCFE)

Enterprise edition includes a break-down of free cash flow to Free cash flow to firm (FCFF) and Free cash flow to equity (FCFE).

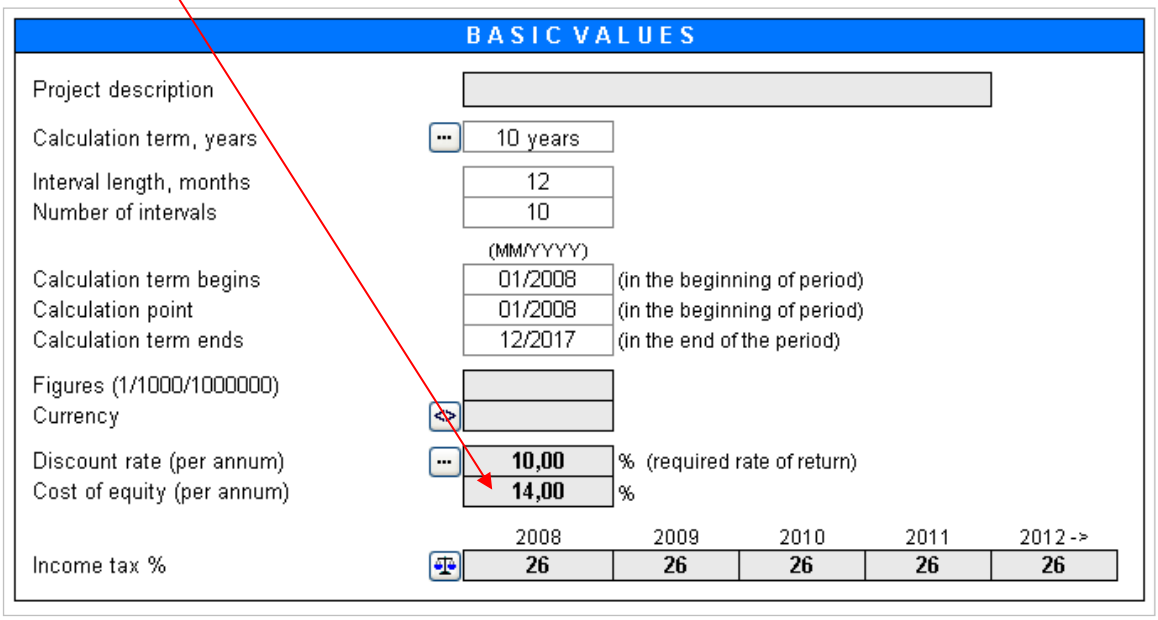
Program options

You can include FCFE in the Invest for Excel program options:



Basic values

Cost of equity is added to the Basic values table, when FCFE calculation is included in the file.



Enter the required after-tax rate of return on equity. Note that Invest for Excel doesn't make a distinction between Preferred stock and common stock. Cost of equity should be return on all equity.

Cash flow statement

When FCFE is included, the Free cash flow (FCF) is renamed to Free cash flow to firm (FCFF) and three rows are added to the Cash flow statement: Free cash flow to equity (FCFE), Discounted free cash flow to equity (DFCFE) and Cumulative discounted free cash flow to equity.

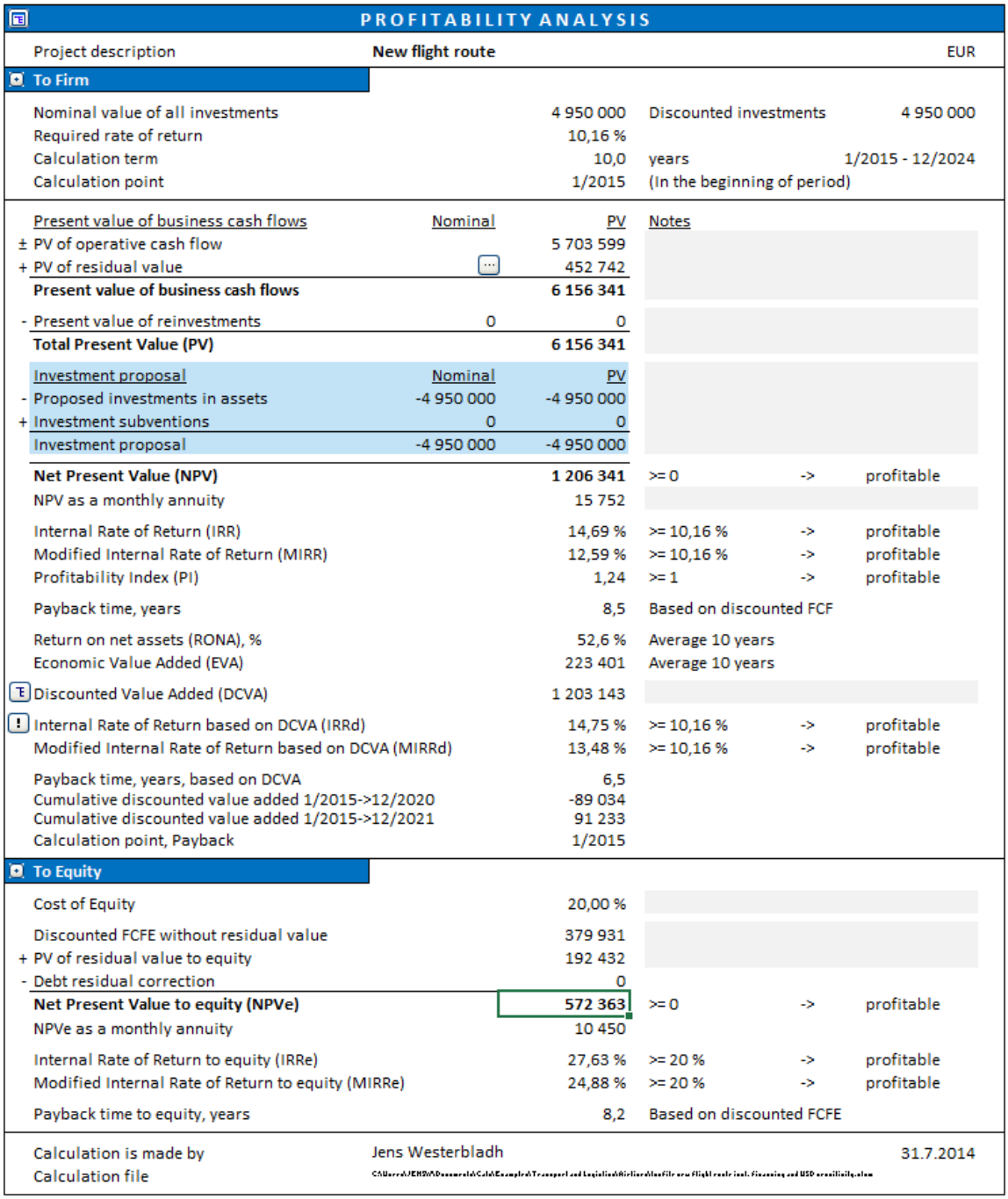
CASH FLOW STATEMENT

	1/2008	12/2008	12/2009	12/2010	12/2011	12/2012
Months per interval		12	12	12	12	12
Cash flow from operations						
Income	0	150 000	300 000	315 000	330 750	347 288
Variable costs	0	0	0	0	0	0
Fixed costs	0	0	0	0	0	0
Extraordinary income & expenses	0	0	0	0	0	0
Income tax (adjusted)	0	-13 000	-52 000	-55 900	-59 995	-64 295
Change in working capital	0	0	0	0	0	0
Cash flow from operations	**0**	**137 000**	**248 000**	**259 100**	**270 755**	**282 993**
Asset investments and realizations	-1 000 000	0	0	0	0	0
Free cash flow to firm (FCFF)	**-1 000 000**	**137 000**	**248 000**	**259 100**	**270 755**	**282 993**
Discounted free cash flow to firm (DFCFF)	-1 000 000	124 545	204 959	194 666	184 929	175 716
Cumulative discounted free cash flow to firm	-1 000 000	-875 455	-670 496	-475 830	-290 901	-115 185
Information						
Financial cash flow						
Financial income and expenses	0	-36 400	-32 663	-28 925	-25 188	-21 450
Correction of income tax for financial items	0	9 464	8 492	7 521	6 549	5 577
Long-term debt, increase (+) / decrease (-)	650 000	-65 000	-65 000	-65 000	-65 000	-65 000
Changes in short-term borrowings						
Free cash flow to equity (FCFE)	**-350 000**	**45 064**	**158 830**	**172 696**	**187 116**	**202 120**
Discounted free cash flow to equity (DFCFE)	-350 000	39 530	122 214	116 565	110 788	104 975
Cumulative discounted free cash flow to equity	-350 000	-310 470	-188 256	-71 691	39 097	144 071
Equity, increase (+) / decrease (-)	350 000	0	0	0	0	0
Total cash flow	**0**	**45 064**	**158 830**	**172 696**	**187 116**	**202 120**
Cumulative total cash flow	0	45 064	203 894	376 589	563 706	765 825

Note that Invest for Excel doesn't make a distinction between preferred stock and common stock so there's no separation of preferred dividends.

Profitability analysis

The Profitability analysis is divided in two parts when FCFE based indicators are included:



PROFITABILITY ANALYSIS

Project description	**New flight route**				EUR
To Firm					
Nominal value of all investments		4 950 000	Discounted investments		4 950 000
Required rate of return		10,16 %			
Calculation term		10,0	years		1/2015 - 12/2024
Calculation point		1/2015	(In the beginning of period)		
Present value of business cash flows	Nominal	PV	Notes		
± PV of operative cash flow		5 703 599			
+ PV of residual value		452 742			
Present value of business cash flows		**6 156 341**			
- Present value of reinvestments	0	0			
Total Present Value (PV)		**6 156 341**			
Investment proposal	Nominal	PV			
- Proposed investments in assets	-4 950 000	-4 950 000			
+ Investment subventions	0	0			
Investment proposal	-4 950 000	-4 950 000			
Net Present Value (NPV)		**1 206 341**	>= 0	->	profitable
NPV as a monthly annuity		15 752			
Internal Rate of Return (IRR)		14,69 %	>= 10,16 %	->	profitable
Modified Internal Rate of Return (MIRR)		12,59 %	>= 10,16 %	->	profitable
Profitability Index (PI)		1,24	>= 1	->	profitable
Payback time, years		8,5	Based on discounted FCF		
Return on net assets (RONA), %		52,6 %	Average 10 years		
Economic Value Added (EVA)		223 401	Average 10 years		
Discounted Value Added (DCVA)		1 203 143			
Internal Rate of Return based on DCVA (IRRd)		14,75 %	>= 10,16 %	->	profitable
Modified Internal Rate of Return based on DCVA (MIRRd)		13,48 %	>= 10,16 %	->	profitable
Payback time, years, based on DCVA		6,5			
Cumulative discounted value added 1/2015->12/2020		-89 034			
Cumulative discounted value added 1/2015->12/2021		91 233			
Calculation point, Payback		1/2015			
To Equity					
Cost of Equity		20,00 %			
Discounted FCFE without residual value		379 931			
+ PV of residual value to equity		192 432			
- Debt residual correction		0			
Net Present Value to equity (NPVe)		**572 363**	>= 0	->	profitable
NPVe as a monthly annuity		10 450			
Internal Rate of Return to equity (IRRe)		27,63 %	>= 20 %	->	profitable
Modified Internal Rate of Return to equity (MIRRe)		24,88 %	>= 20 %	->	profitable
Payback time to equity, years		8,2	Based on discounted FCFE		
Calculation is made by	Jens Westerbladh				31.7.2014
Calculation file					

Free cash flow to equity-based indicators are shown in the "To Equity" part of the table.

4.1.3.1 Debt residual correction

When free cash flow to equity based profitability indicators are calculated, the return can be too favourable if there is an outstanding long-term debt that has not been corrected for.

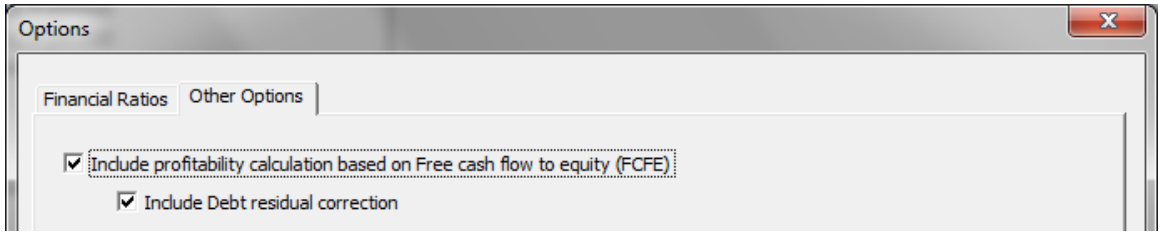
Debt residual correction for calculating Free cash flow to equity (FCFE) is calculated so that starting balance of Interest-bearing long-term debt is subtracted from ending balance before correcting FCFE.

As an example, let's we are looking at a company with an expected outstanding interest-bearing long-term debt of 45000 at the end of the calculation term. No corrections have been done to the free cash flow to equity for this debt.

BALANCE SHEET

EUR	12/2010	12/2011	12/2012	12/2013	12/2014	Residual
Long-term liabilities	78 700	69 700	60 700	49 200	49 200	49 200
Interest-bearing long-term debt	72 000	63 000	54 000	45 000	45 000	45 000
Interest-free long-term debt	1 200	1 200	1 200	1 200	1 200	1 200

If the option "Include Debt residual correction" is checked in the Options dialog box, Invest for Excel will automatically correct for this debt residual. The option is checked by default in new calculation files.



The debt residual correction is shown in the Profitability analysis on the Result sheet discounted to the beginning of the calculation term (or other selected calculation point) by the Cost of Equity (45000 discounted 5 years by 15% = 22373).

To Equity	
Cost of Equity	15,00 %
Discounted FCFE without residual value	100 782
+ PV of residual value to equity	12 429
- Debt residual correction	-22 373
Net Present Value to equity (NPVe)	**90 838**

Note that if you have corrected for the debt residual in the Residual column, you should uncheck the "Include Debt residual correction" option in the Options dialog box.

Debt residual correction is only available for calculation files of version 3.6 or newer.

4.1.4 DCVA-based profitability indicators

DCVA-based IRR (IRRd), MIRR (MIRRd) and Payback have been added to Profitability analysis.

WACC = discount rate entered in Basic values.

DCVA = sum of discounted yearly VAs with capital cost based on WACC. The yearly VAs are also disounted using WACC.

IRRd = the discount rate that gives DCVA = 0. Goal seek is applied for finding IRRd.

The cash flow used for calculating MIRRd is yearly VAs with capital cost based on IRRd. MIRRd is calculated using the MIRR function using the WACC for both positive and negative VAs.

Payback time, years, based on DCVA returns number of years from Calculation point, Payback until the time cumulative DCVA is and stays positive. Calculation point, Payback is by default the beginning of the calculation term.

IRRd and MIRRd are not calculated automatically but require manual refreshing.

Press the ! button to refresh IRRd and MIRRd.

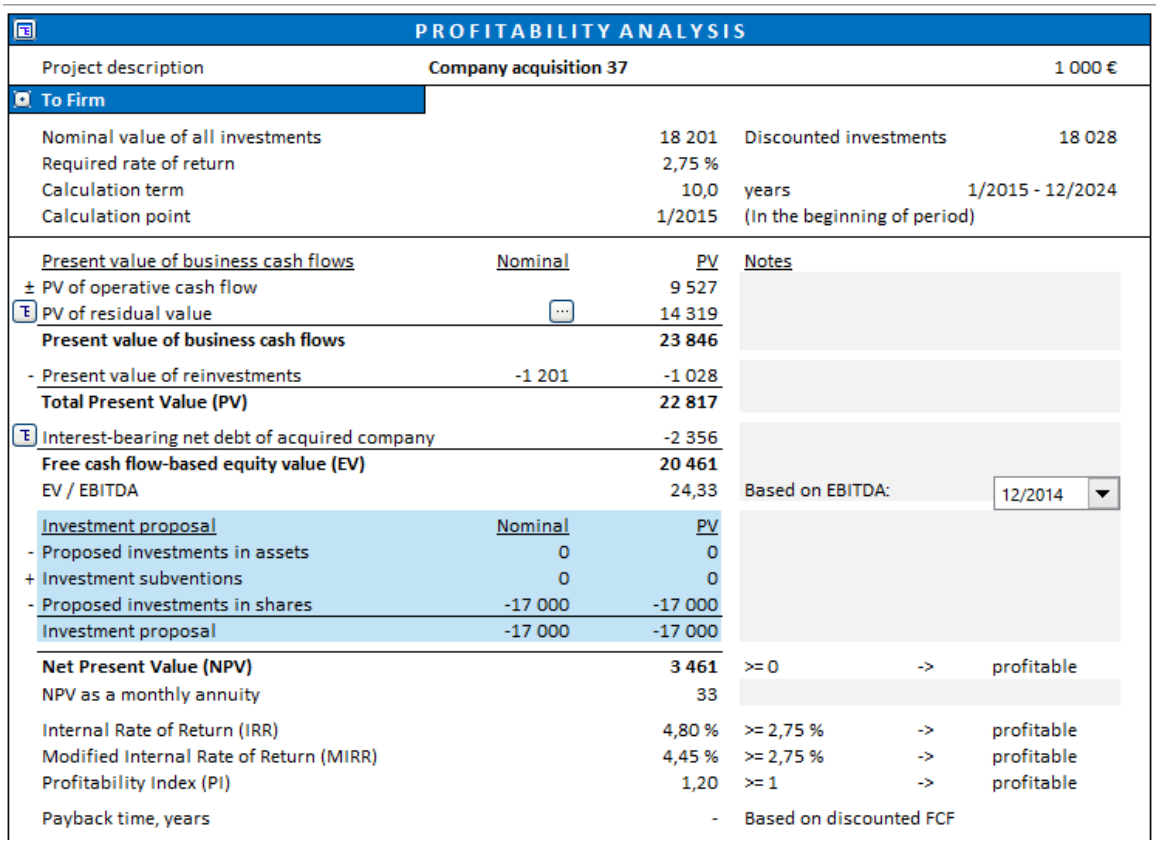
IRRd and MIRRd are refreshed automatically when:
- Profitability analysis is printed from the home screen
- Result sheet is activated and the program option "Update analysis charts automatically" is activated.

4.2 Profitability analysis in acquisition calculations

In acquisition calculations, **Interest-bearing net debt** of acquired company is subtracted from PV, and **Free cash flow-based equity value** is shown. Interest-bearing net debt of acquired company is calculated from pre-calculation term balance sheet. Definition: Cash and bank – interest bearing long-term debt – interest bearing short-term borrowings. Example: Cash and bank, 100 – interest bearing long-term debt, 120 – short-term borrowings, 60 – current portion of long-term loans, 30 = interest-bearing net debt of -110.

Note that interest-bearing net debt of acquired company changes the definition of NPV.

Proposed investments in shares are shown on a separate row in the investment proposal.



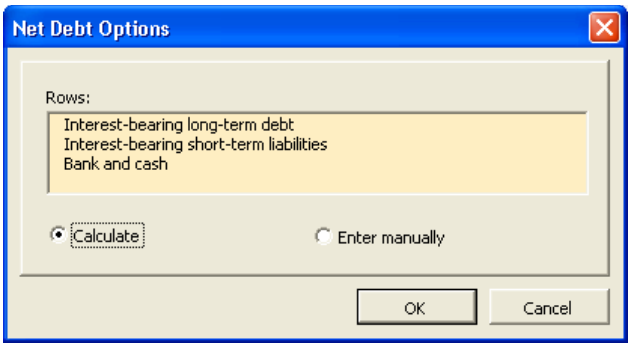
PROFITABILITY ANALYSIS					
Project description	**Company acquisition 37**				1 000 €
To Firm					
Nominal value of all investments		18 201	Discounted investments		18 028
Required rate of return		2,75 %			
Calculation term		10,0	years		1/2015 - 12/2024
Calculation point		1/2015	(In the beginning of period)		
Present value of business cash flows	Nominal	PV	Notes		
± PV of operative cash flow		9 527			
PV of residual value		14 319			
Present value of business cash flows		**23 846**			
- Present value of reinvestments	-1 201	-1 028			
Total Present Value (PV)		**22 817**			
Interest-bearing net debt of acquired company		-2 356			
Free cash flow-based equity value (EV)		**20 461**			
EV / EBITDA		24,33	Based on EBITDA:		12/2014
Investment proposal	Nominal	PV			
- Proposed investments in assets	0	0			
+ Investment subventions	0	0			
- Proposed investments in shares	-17 000	-17 000			
Investment proposal	-17 000	-17 000			
Net Present Value (NPV)		**3 461**	>= 0	->	profitable
NPV as a monthly annuity		33			
Internal Rate of Return (IRR)		4,80 %	>= 2,75 %	->	profitable
Modified Internal Rate of Return (MIRR)		4,45 %	>= 2,75 %	->	profitable
Profitability Index (PI)		1,20	>= 1	->	profitable
Payback time, years		-	Based on discounted FCF		

4.2.1 Specification of interest-bearing net debt

Specification of Interest-bearing net debt of acquired company has been added to profitability analysis in an corporate acquisition/valuation file. Enterprise edition only.

Σ	Interest-bearing net debt of acquired company	-257 000
-	Interest-bearing long-term debt	-320 000
-	Interest-bearing short-term liabilities	-45 000
+	Bank and cash	120 000
±	Dividend debt	-12 000
±		
±		

You can choose if you want any precalculation or if you want to enter all items manually.



4.3 Profitability analysis in impairment calculations

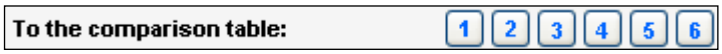
Control value is calculated in the profitability analysis in an impairment test calculation.

Impairment test	**31.12.2006**
Book value of assets (A)	705 000
Value in use (B)	612 121
Impairment loss (B - A)	**-92 879**

For more information about impairment testing see chapter 11 ‘Impairment testing and IFRS functionality’.

4.4 Comparison table

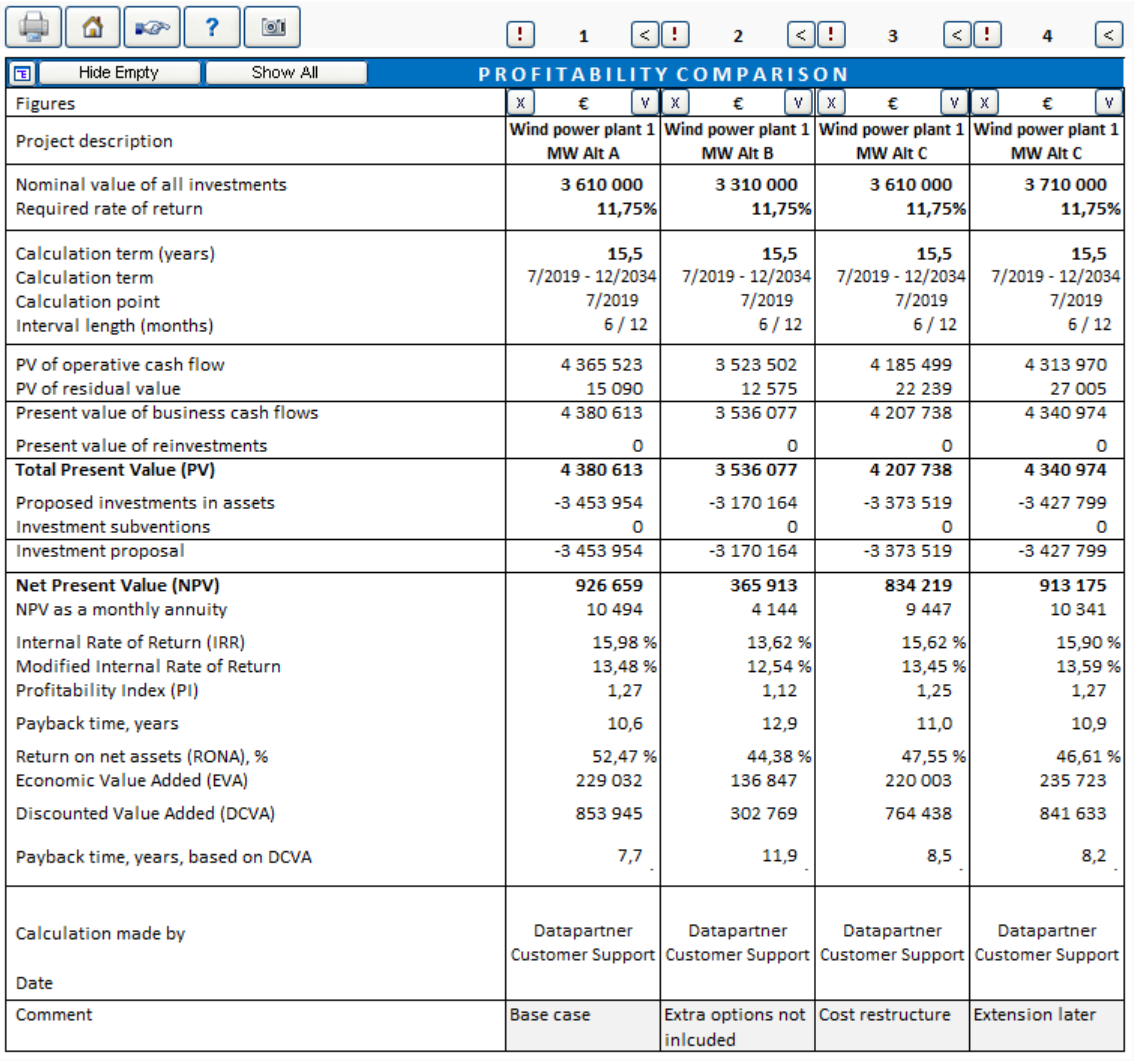
The following buttons above the Results table lead to the **Comparison Table** file:



Use these buttons to copy the result of the investment calculation to a comparison table.

If you are creating a new comparison table file you will be asked to name it and save it. Comparison Tables are in separate files, and you can use them independently.

If you cannot remember to which section (from 1 to 6) you may already have transferred data, you can safely look for a blank one. If the column already contains data, the program first makes sure that you want to overwrite it. You can compare up to six different investment alternatives:



Hide Empty | Show All | PROFITABILITY COMPARISON

Figures	1 €	2 €	3 €	4 €
Project description	Wind power plant 1 MW Alt A	Wind power plant 1 MW Alt B	Wind power plant 1 MW Alt C	Wind power plant 1 MW Alt C
Nominal value of all investments	**3 610 000**	**3 310 000**	**3 610 000**	**3 710 000**
Required rate of return	**11,75%**	**11,75%**	**11,75%**	**11,75%**
Calculation term (years)	**15,5**	**15,5**	**15,5**	**15,5**
Calculation term	7/2019 - 12/2034	7/2019 - 12/2034	7/2019 - 12/2034	7/2019 - 12/2034
Calculation point	7/2019	7/2019	7/2019	7/2019
Interval length (months)	6 / 12	6 / 12	6 / 12	6 / 12
PV of operative cash flow	4 365 523	3 523 502	4 185 499	4 313 970
PV of residual value	15 090	12 575	22 239	27 005
Present value of business cash flows	4 380 613	3 536 077	4 207 738	4 340 974
Present value of reinvestments	0	0	0	0
Total Present Value (PV)	**4 380 613**	**3 536 077**	**4 207 738**	**4 340 974**
Proposed investments in assets	-3 453 954	-3 170 164	-3 373 519	-3 427 799
Investment subventions	0	0	0	0
Investment proposal	-3 453 954	-3 170 164	-3 373 519	-3 427 799
Net Present Value (NPV)	**926 659**	**365 913**	**834 219**	**913 175**
NPV as a monthly annuity	10 494	4 144	9 447	10 341
Internal Rate of Return (IRR)	15,98 %	13,62 %	15,62 %	15,90 %
Modified Internal Rate of Return	13,48 %	12,54 %	13,45 %	13,59 %
Profitability Index (PI)	1,27	1,12	1,25	1,27
Payback time, years	10,6	12,9	11,0	10,9
Return on net assets (RONA), %	52,47 %	44,38 %	47,55 %	46,61 %
Economic Value Added (EVA)	229 032	136 847	220 003	235 723
Discounted Value Added (DCVA)	853 945	302 769	764 438	841 633
Payback time, years, based on DCVA	7,7	11,9	8,5	8,2
Calculation made by	Datapartner Customer Support	Datapartner Customer Support	Datapartner Customer Support	Datapartner Customer Support
Date				
Comment	Base case	Extra options not inlcuded	Cost restructure	Extension later

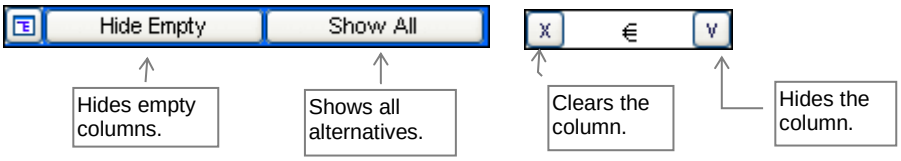
Get figures from your investment calculation by clicking the exclamation mark button in the top left corner. When you have more than one calculation open, you can choose from which calculation file you want to transfer figures to the column in question.

Please, note the following decision-making rules when comparing alternative investments:

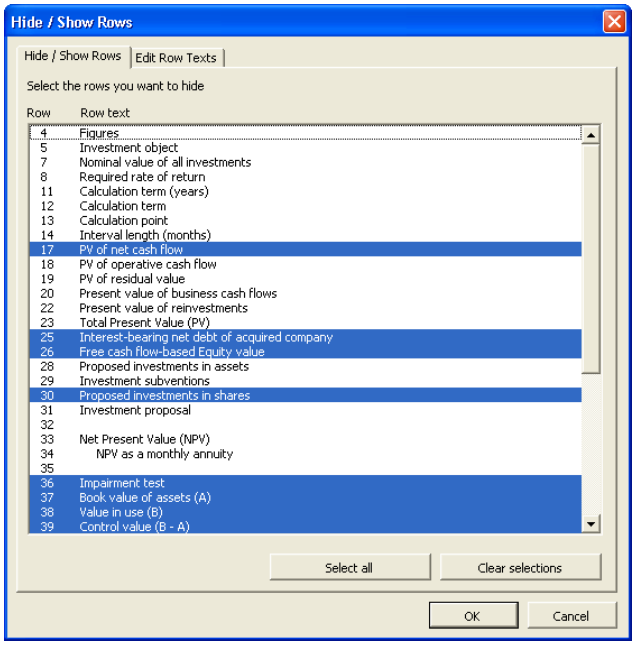
Net present value (NPV):	NPV is an indicator of how much value an investment or project adds to the firm. The higher the NPV, the better. NPV should be used together with other indicators, like IRR/MIRR/PI and Payback to get a wider perspective.
Monthly annuity:	The higher the monthly annuity, the better the investment is. Monthly annuity can be used to compare alternative calculations with different investment terms. Should not be used standalone.
Internal rate of return (IRR):	The higher IRR, the better the investment is.
Modified IRR:	The higher MIRR, the better the investment is.
Profitability Index (PI):	The higher PI, the better the investment is.
Payback time (discounted):	The shorter payback time, the better. (Can be ambiguous).

Never base a decision on one indicator only. NPV is considered the most important indicator, but when comparing different projects it doesn't necessarily reflect the size of the investments. IRR, MIRR and PI show the relative profitability and Payback shows the timing. When comparing investments of different terms, you should rather use the monthly NPV annuity than NPV. It is important that the compared calculations are based on the same assumptions, so that the comparison makes sense.

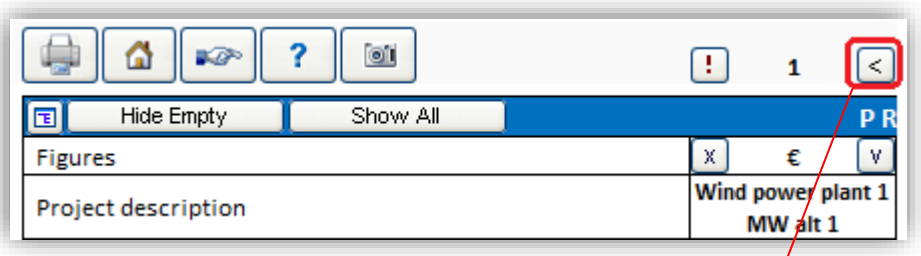
For printing purposes, use the following buttons to hide (and restore) the alternatives you want:



By clicking  button, a dialog will open where you can select rows to hide or show:



A "Back to Calculation file Profitability Comparison" button (<) is available in Comparison file Profitability Comparison for convenient return to Calculation file.



To the comparison table: 1 2 3 4 5 6 Investment proposal:

PROFITABILITY ANALYSIS

Project description	**Wind power plant 1 MW alt 1**			€
Nominal value of all investments		3 610 000	Discounted investments	3 453 954
Required rate of return		11,75 %		
Calculation term		15,5	years	7/2019 - 12/2034
Calculation point		7/2019	(In the beginning of period)	

Present value of business cash flows	Nominal	PV	Notes
± PV of operative cash flow		4 365 523	
+ PV of residual value		15 090	
Present value of business cash flows		**4 380 613**	
- Present value of reinvestments	0	0	
Total Present Value (PV)		**4 380 613**	

Investment proposal	Nominal	PV
- Proposed investments in assets	-3 610 000	-3 453 954
+ Investment subventions	0	0
Investment proposal	-3 610 000	-3 453 954

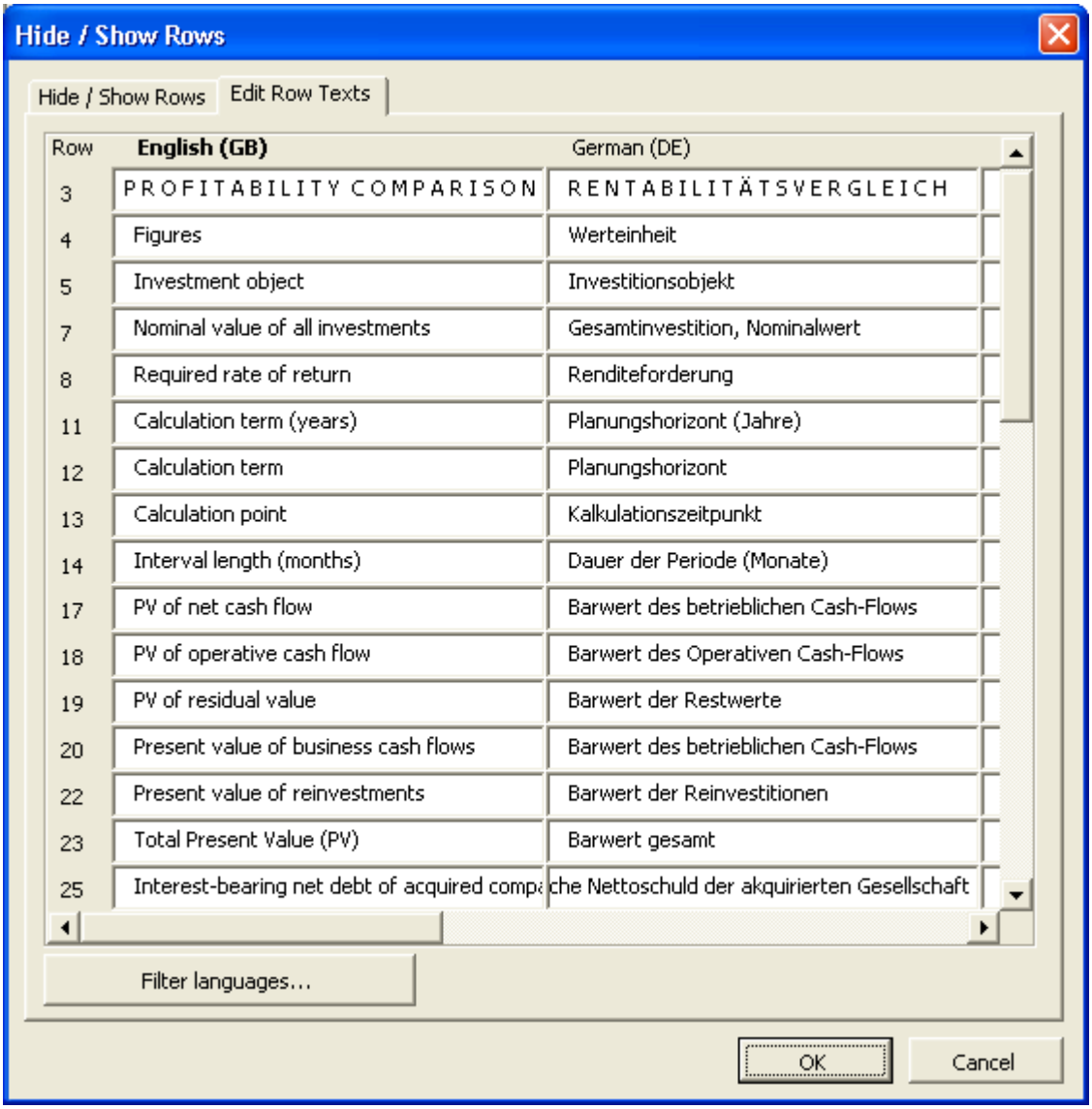
Net Present Value (NPV)	**926 659**	>= 0 ->	profitable
NPV as a monthly annuity	10 494		
Internal Rate of Return (IRR)	15,98 %	>= 11,75 % ->	profitable
Modified Internal Rate of Return (MIRR)	13,48 %	>= 11,75 % ->	profitable
Profitability Index (PI)	1,27	>= 1 ->	profitable
Payback time, years	10,6	Based on discounted FCF	
Return on net assets (RONA), %	52,5 %	Average 16 years	
Economic Value Added (EVA)	229 032	Average 16 years	
Discounted Value Added (DCVA)	853 945		
Internal Rate of Return based on DCVA (IRRd)	15,37 %	>= 11,75 % ->	profitable
Modified Internal Rate of Return based on DCVA (MIRRd)	10,92 %	< 11,75 % ->	not profitable
Payback time, years, based on DCVA	7,7		

Calculation is made by	Datapartner Customer Support
Calculation file	D:\Invest\Ver380\Documentation\WindPowerPlant385whatsnew.xlsm

4.4.1 Edit Profitability comparison texts

Profitability comparison row texts can be edited in all available languages.

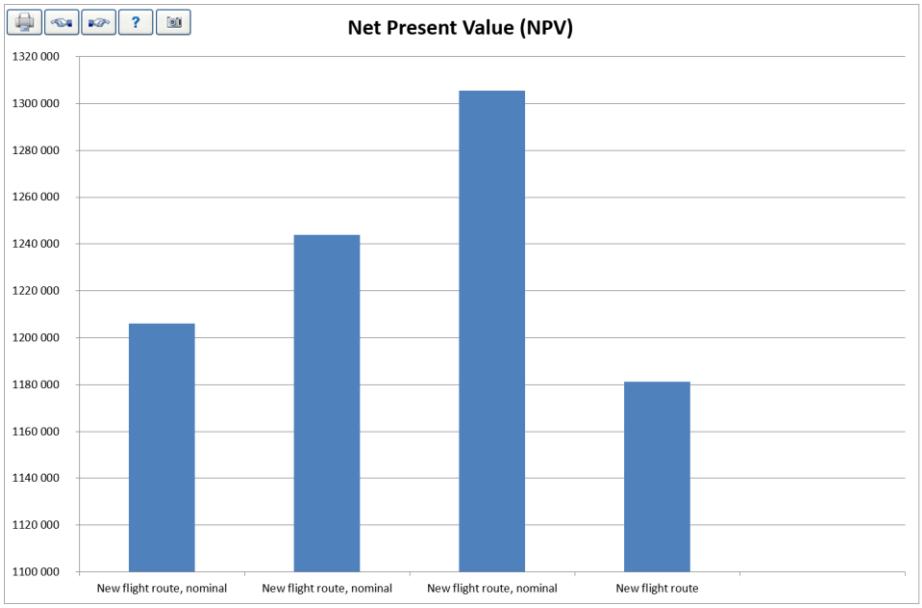
Press the button in the top left corner of the Profitability comparison table. Select the Edit Row Texts tab to edit row texts.



Use the tabs at the bottom of the page, the buttons in the Home screen, or the Invest for Excel menu, to access the charts.

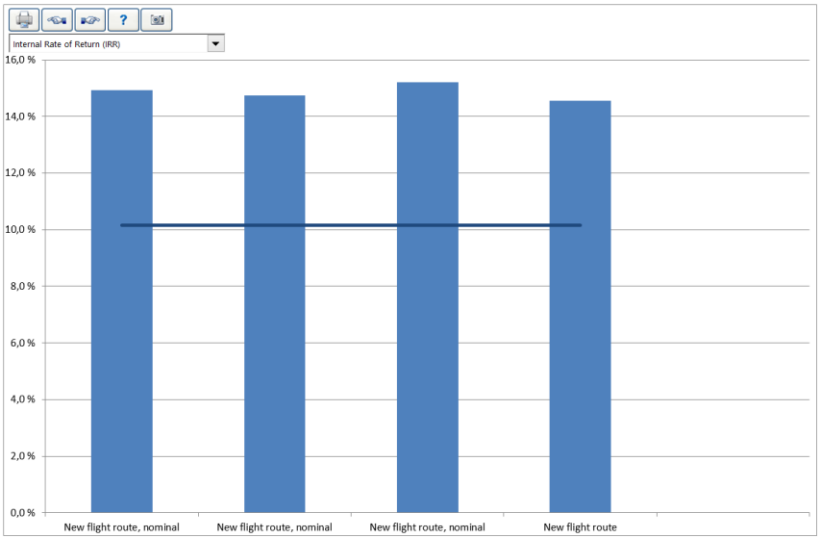
4.4.2 NPV chart

The net present values of the investment alternatives:



4.4.3 IRR chart

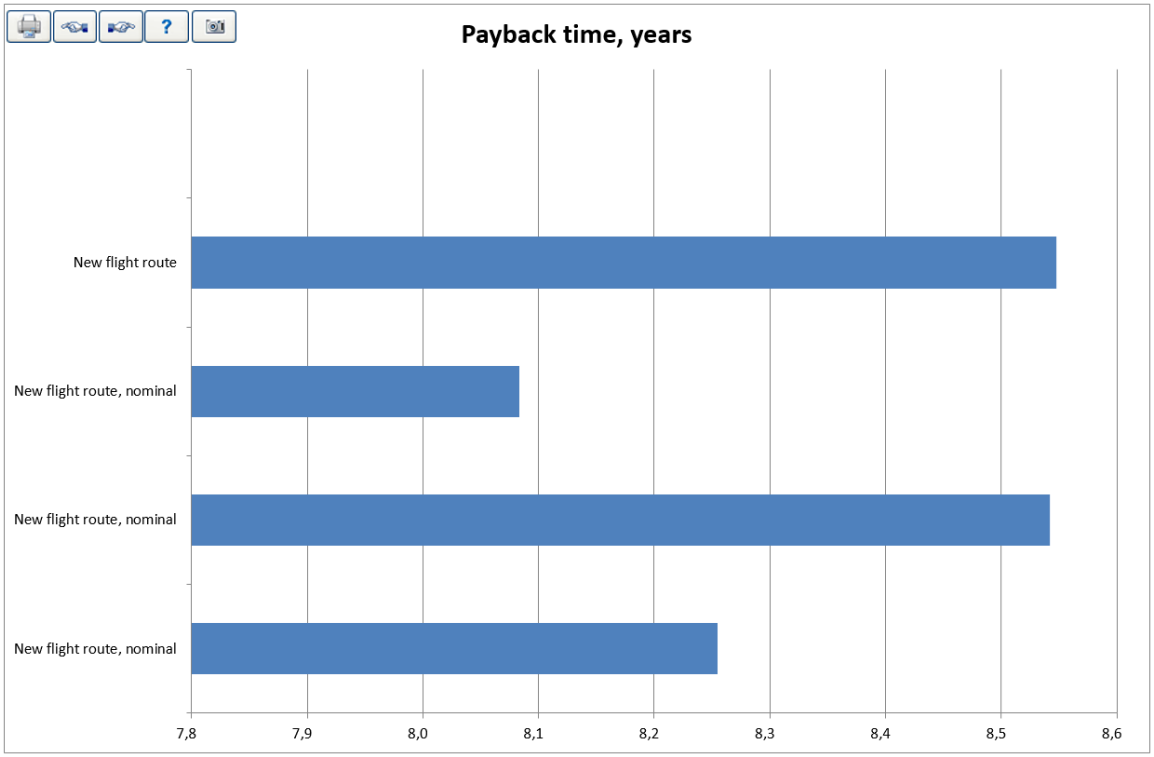
Internal rates of return on the investment alternatives. Choose conventional IRR, IRR before tax or modified IRR. The bold line marks the required rate of return of each alternative:



The higher the IRR, the better the investment is.

4.4.4 Payback chart

The payback times of investment alternatives:



The shorter payback time, the better (can sometimes be ambiguous).

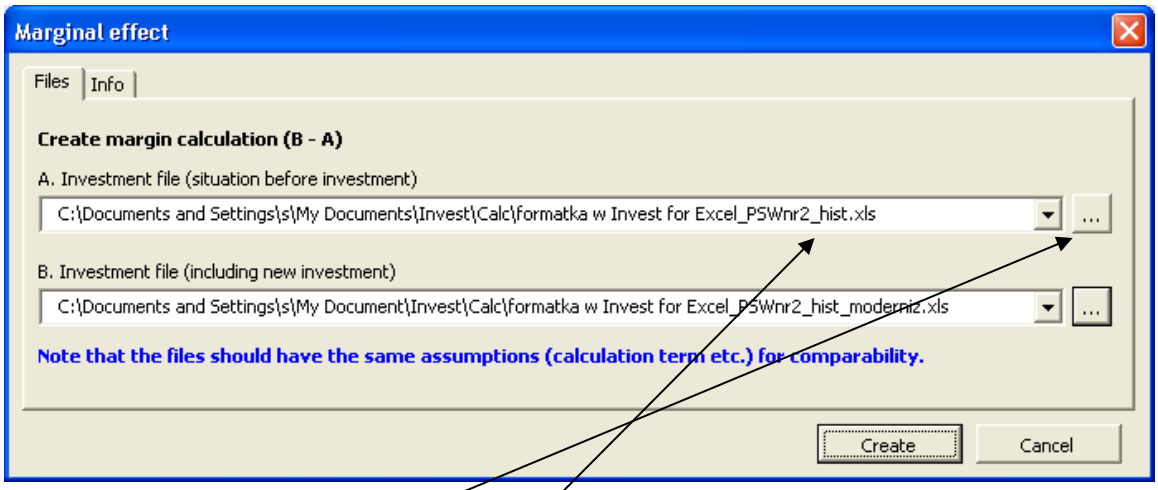
4.5 Marginal effect

You can calculate if a new investment is more profitable compared to the current situation by creating a Marginal effect calculation. Create two separate calculations of equal calculation term and with same basic assumptions (discount rate, tax percent etc.).

First, create an investment calculation describing the current situation, i.e. a 'Status quo' calculation. Enter this calculation as file A in the Marginal effect dialog.

Use the Status quo calculation as basis for the second investment calculation and add effects of the new investment. Enter this calculation as file B in the Marginal effect dialog.

You can start the Marginal effect creation from the home screen or the "Result" –menu.



You can select open calculations from the drop-down list or alternatively open an existing investment calculation from any folder with the browse button.

Start creating by pressing the 'Create' button.

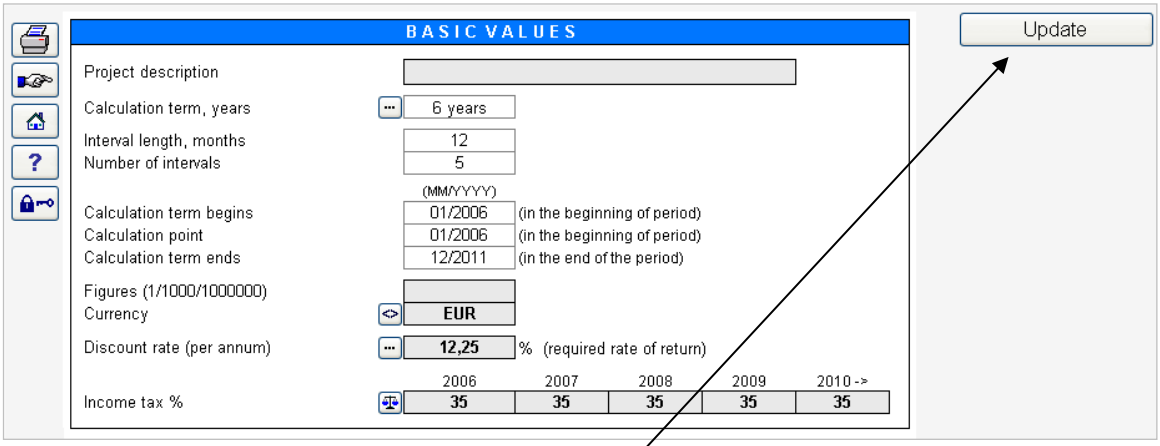
If you want to include sub rows in the Income Statement of the marginal calculation, you need to define specific template with these sub rows.

4.5.1 Assumptions used in a Marginal effect

- The source calculations have been created with the same basic assumptions (unit, currency, income tax-%, include positive tax effects and discount factor).
- Basic values and balance fixed assets grouping are written to the Marginal effect from the first source calculation, defined as "A".
- Specification rows (first level) are included if operators "*" or "/" have not been used. If operators "*" or "/" have been used, the margin value is calculated to the header row.
- Taxes are calculated using the tax percent in the basic values.
- Custom templates can be used for Marginal effects.

4.5.2 Updating a Marginal effect calculation

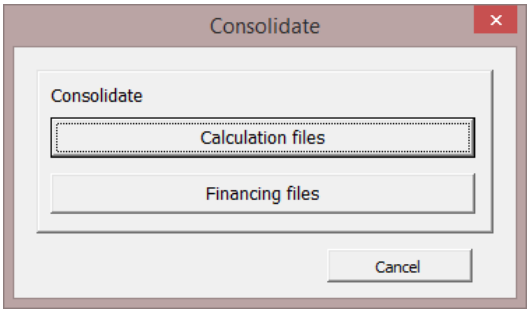
The Marginal effect works like any investment calculation, and it can be used as a starting point for a new calculation.



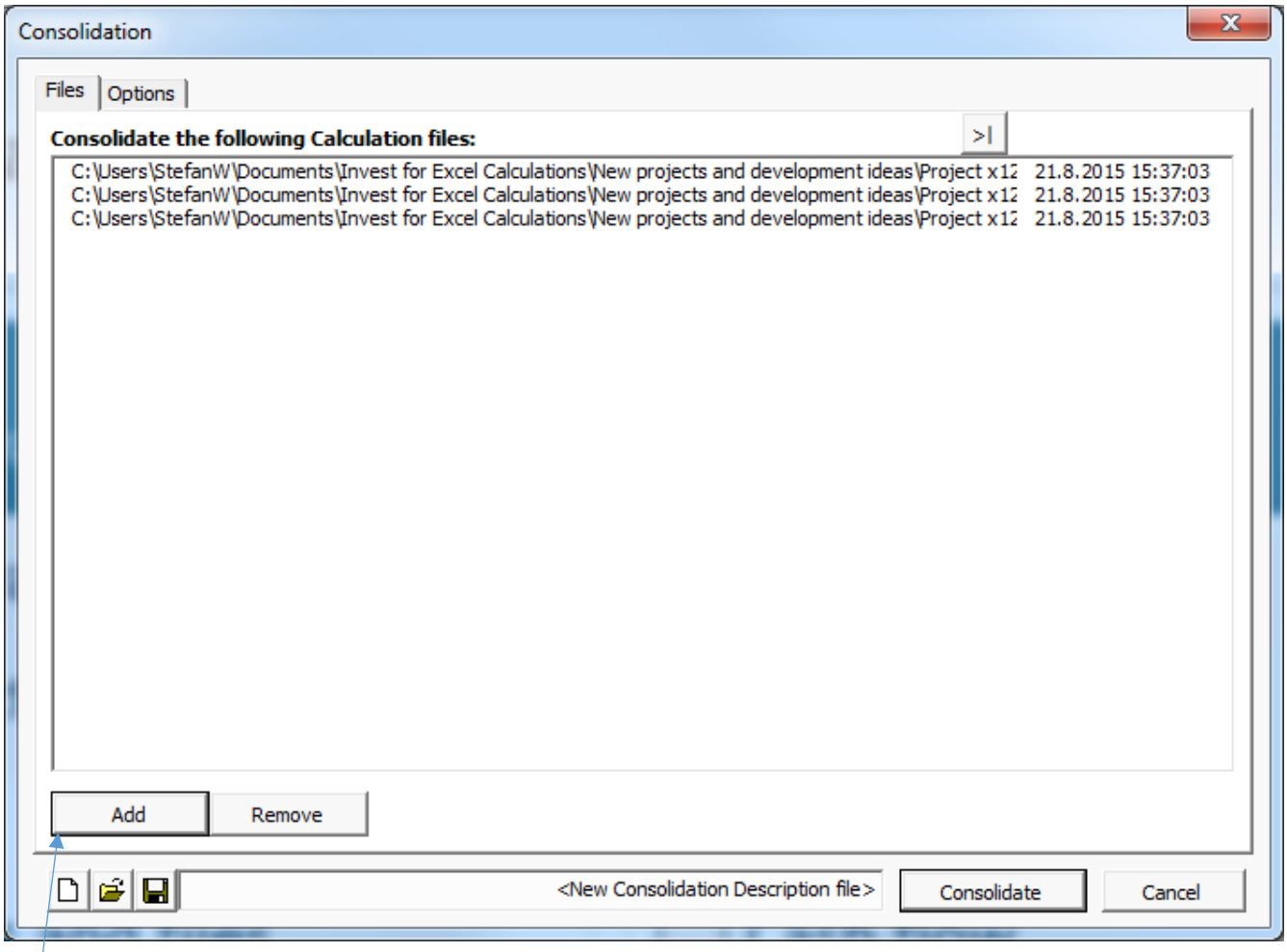
You can update the Marginal effect with the “Update” button on the basic values sheet in case the source calculations have changed. NOTE! If the calculation is updated from the source files, any manual changes will be undone.

4.6 Consolidation

The Consolidation summarizes several workbooks and creates a new workbook based on them.



First you select type of consolidation (usually 'Calculation files'):

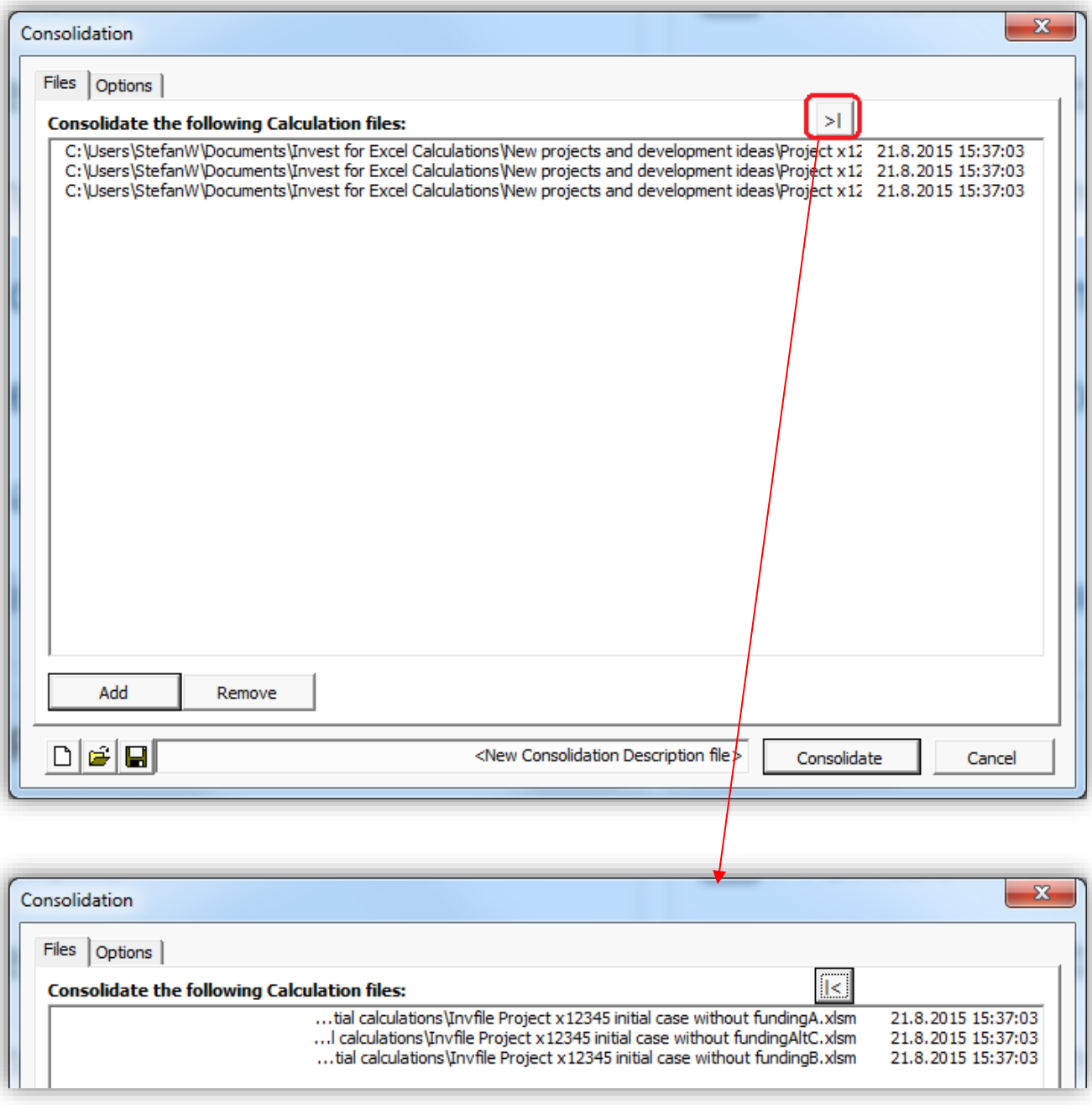


Press "Add..." to choose the files you want to consolidate.

The chosen files can be saved as a consolidation description (*.dsc) for later use. Open and save the consolidation description file with the "open" and "save" buttons:  .

The “new” button  clears the file list.

A text alignment button is available in consolidation dialog box. This is convenient when you have long file paths and file names.



Start the consolidation by pressing the ‘Consolidate’ button.

NOTE! The consolidation may, depending on the number of source files, take several minutes.

The program proposes that you name and save the new consolidation file.

4.6.1 Assumptions used in consolidation

- The source calculations have been created with the same assumptions for income tax-%, include positive tax effects and discount factor.
- Basic values are written to the consolidated file from the first source calculation.
- By default the consolidation file is created on annual basis except for the beginning and the end of the term, regardless of periods used in the source file.
- Investments are grouped by the Balance sheet fixed asset types in the investment table.
- Incomes and costs are summed to the main row level, leaving the yellow specifications- and detailed specification rows out.
- Income tax is summed from source files. Income tax option ( button in Basic values) Tax calculated automatically can be activated to calculate income tax in the consolidated file.

4.6.2 Investment summary and consolidation info

Two additional sheets are created to the consolidated file:

Investment summary

Shows Investments, Subventions, Net investment (investment+subvention), Depreciation time and Depreciation for the first four years of the consolidated files. The following fields are for entering additional information:

Field	Explanation
Cost center	Cost center or other organization id
Account	Account number
Prio	Priority
Responsibility	Responsibility coding
Info	Information field
Investment year	Year of the initial investment
Completed	Investment completed
Depr. /year	Depreciation per year
Comments	Comments

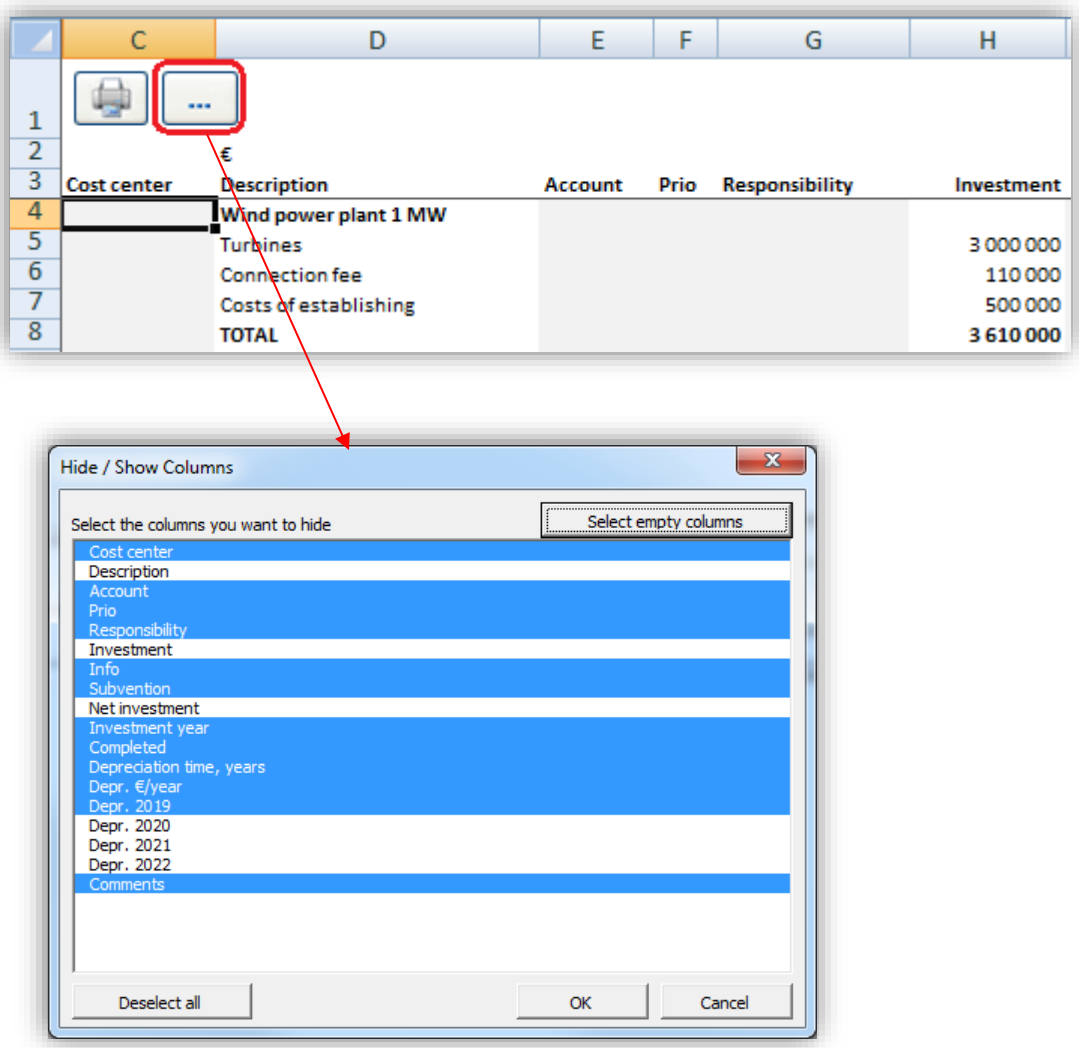
Consolidation info

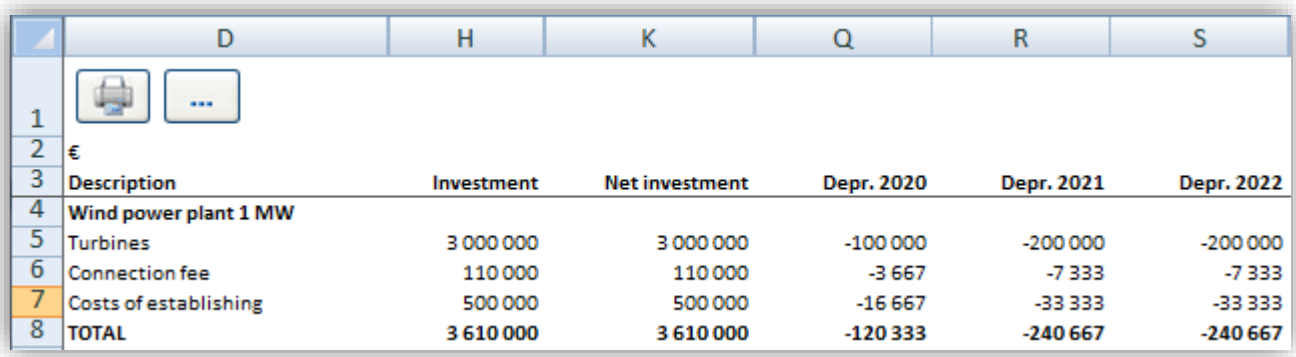
Shows Calculation file path, Description, Term, User, Date, Total investment, Discount factor, NPV, Unit, Currency of the consolidated files.

The calculation file path is a hyperlink. Clicking it will open the file.

4.6.2.1 Hiding columns

Consolidation investment summary columns can be hidden.





4.6.2.2 Depreciations according to plan

Consolidation investment summary shows depreciations according to plan when imputed depreciation is used.

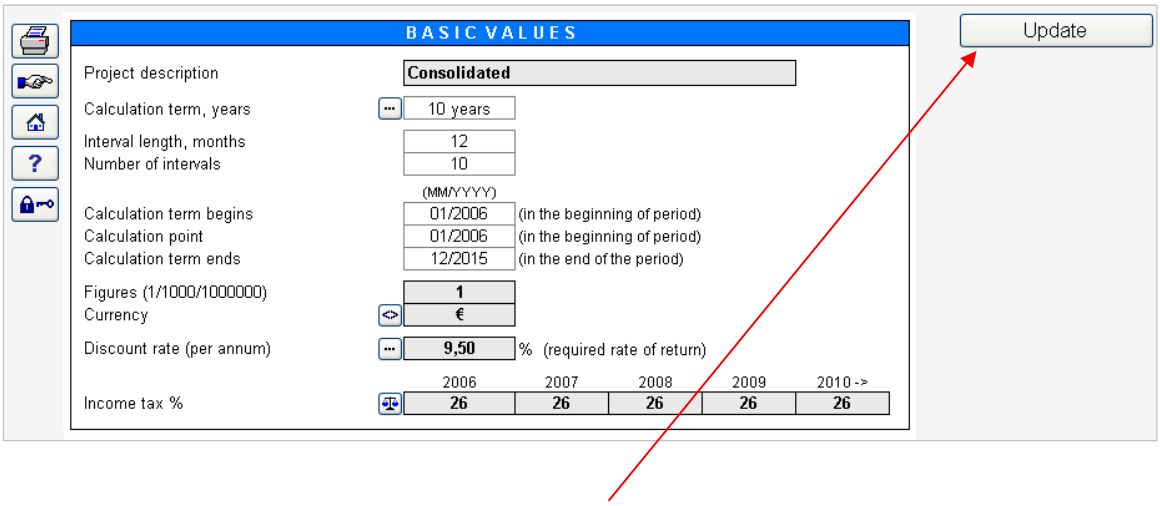
INCOME STATEMENT

€	7/2019	12/2019	12/2020	12/2021	12/2022
Months per interval		6	12	12	12
Income from sales of electricity		0	669 870	689 966	710 665
Income	**0**	**0**	**669 870**	**689 966**	**710 665**
Gross margin	**0**	**0**	**669 870**	**689 966**	**710 665**
Gross margin, %			100,0%	100,0%	100,0%
Fixed costs	0	0	-90 000	-92 700	-95 481
Operating costs			-90 000	-92 700	-95 481
EBITDA; Operating income before depreciation	**0**	**0**	**579 870**	**597 266**	**615 184**
EBITDA, %			86,6%	86,6%	86,6%
Depreciation	0	0	-120 333	-240 667	-240 667
EBIT; Operating income	**0**	**0**	**459 537**	**356 599**	**374 517**
EBIT, %			68,6%	51,7%	52,7%
EBT; Income after financing items	**0**	**0**	**459 537**	**356 599**	**374 517**
Extraordinary income and charges	0	0	0	0	0
Realization profit (-loss)	0	0	0	0	0
Income before appropriations and taxes	**0**	**0**	**459 537**	**356 599**	**374 517**
Change in appropriations	0	0	-520 333	-280 000	-184 000
Depreciation in excess of (-) / under (+) imputed	0	0	-520 333	-280 000	-184 000
Net income for the period	**0**	**0**	**-60 797**	**76 599**	**190 517**

Description	Investment	Net investment	Depr. 2020	Depr. 2021	Depr. 2022
Wind power plant 1 MW					
Turbines	3 000 000	3 000 000	-100 000	-200 000	-200 000
Connection fee	110 000	110 000	-3 667	-7 333	-7 333
Costs of establishing	500 000	500 000	-16 667	-33 333	-33 333
TOTAL	**3 610 000**	**3 610 000**	**-120 333**	**-240 667**	**-240 667**

4.6.3 Updating the consolidated file

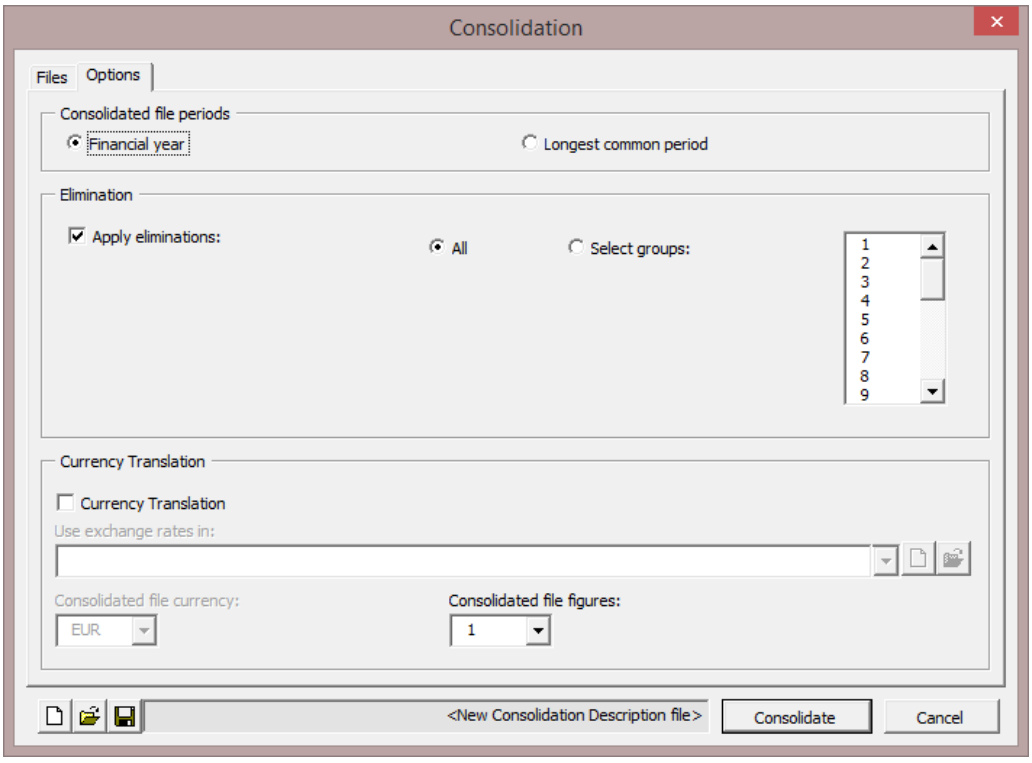
The consolidated file works like any investment calculation, and it can be used as a starting point for a new calculation.



You can update the consolidation file with the “Update” button if you make any changes to the source files. NOTE! If the calculation is updated from the source files, any manual changes will be undone.

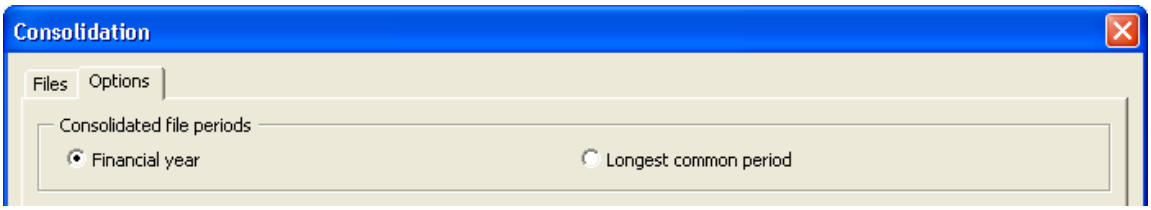
4.6.4 Consolidation Options

Pressing the ‘Options’ tab reveals more consolidation functionality:



4.6.4.1 Consolidation file periods

Periods in the consolidated file are defined in the "Options" tab.



Financial year — Periods are summed to financial years, regardless of what periodization is used in the source files.

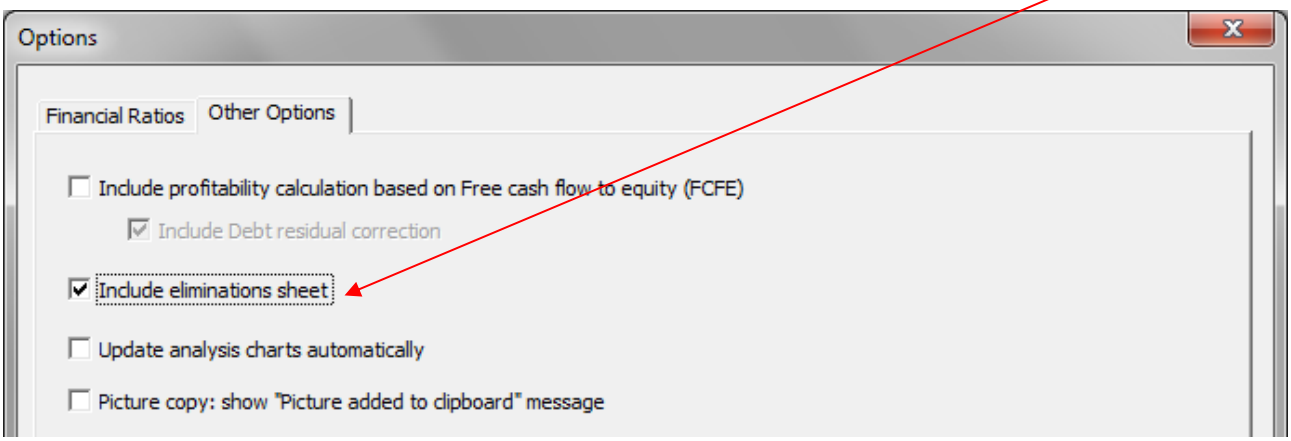
Longest common period — Source file periods define periods used in the consolidated file. If quarters are used in the source file, the consolidated file will be in quarters. If the source file periods differ, the longest common period is used. Example:

Source file A	01/2005	02/2005	03/2005	04/2005	05/2005	06/2005	09/2005
Source file B	01/2005	03/2005					09/2005
Source file C		03/2005			06/2005		09/2005
Consolidated file		**03/2005**					**09/2005**

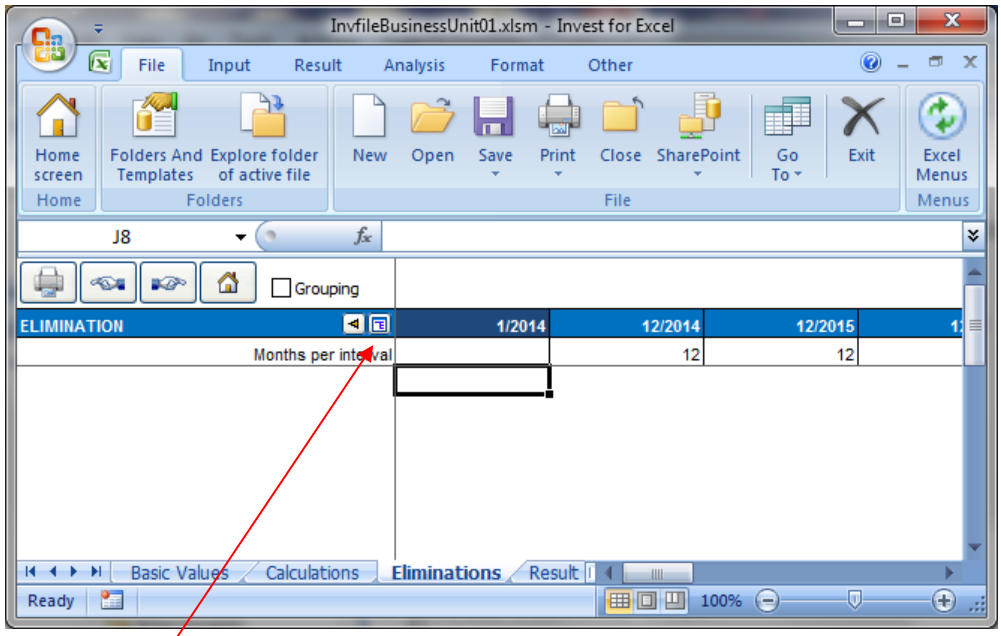
4.6.4.2 Elimination of internal transactions

Elimination is available in Enterprise edition for consolidation of calculation files. The elimination function removes the effects of inter-company transactions in a consolidation statement.

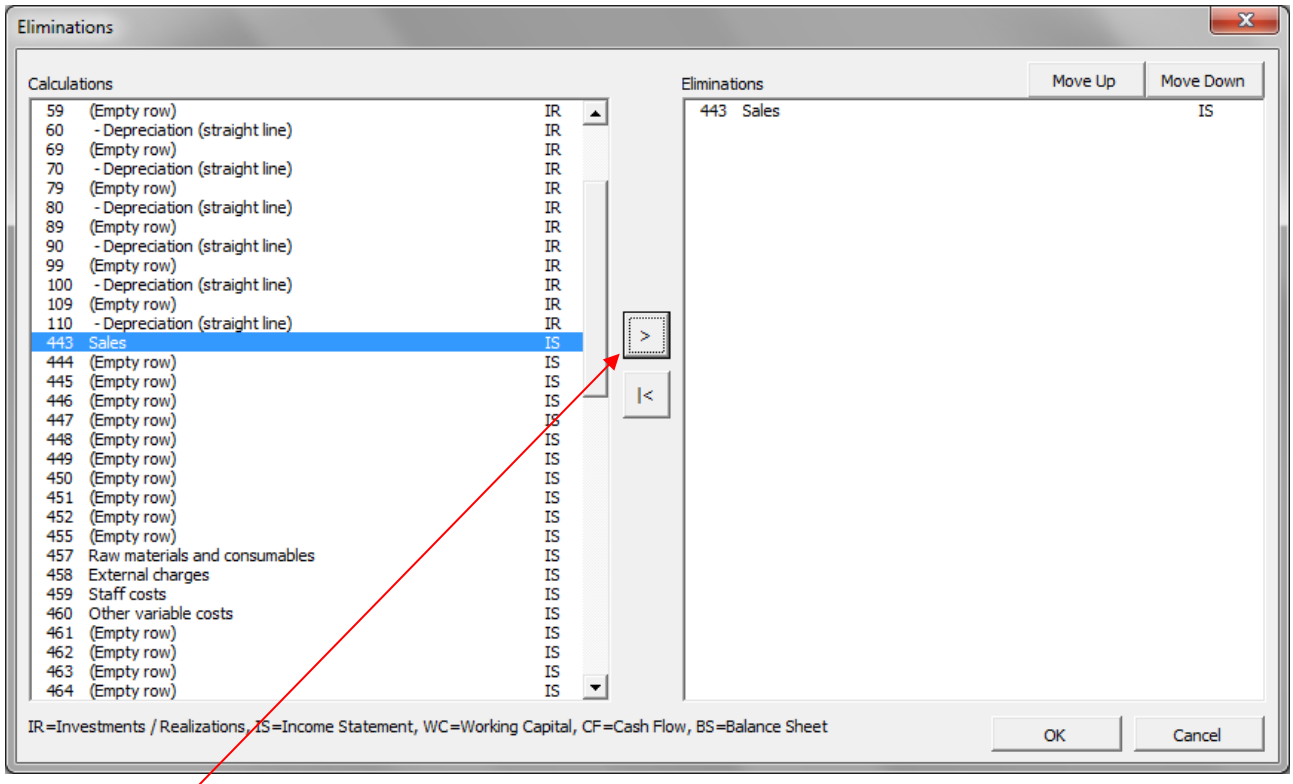
When consolidating calculation files, it is possible to apply eliminations of internal transactions. Eliminations can be specified on a separate sheet, which can be included in the Invest for Excel Options (Other options tab).



An empty Eliminations sheet is included in the calculation file.



Press the button to select the calculation row, which corresponds to the elimination you want to add. A select screen for choosing Calculation rows is shown:



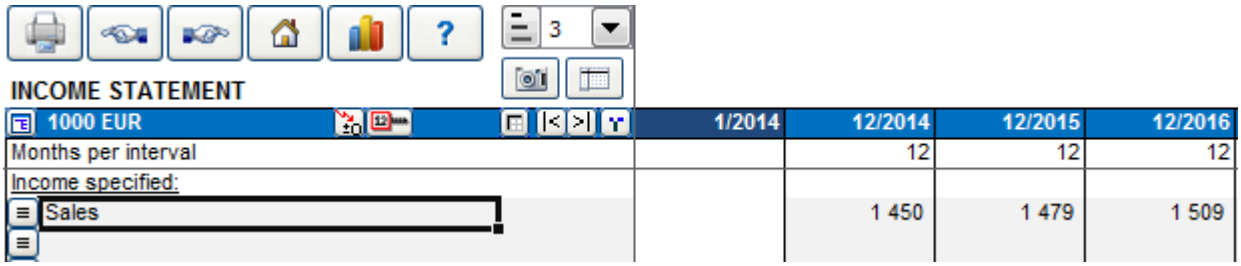
Press the > button to include one or more rows and press OK when you are done. Selected rows will be added to the sheet for entering eliminations. You can include the same row as many times as you like.

ELIMINATION	1/2014	12/2014	12/2015	12/2016
Months per interval		12	12	12
Sales	0,00	1 450,00	1 479,00	1 508,58
Elimination				
Consolidated Sales	0,00	1 450,00	1 479,00	1 508,58

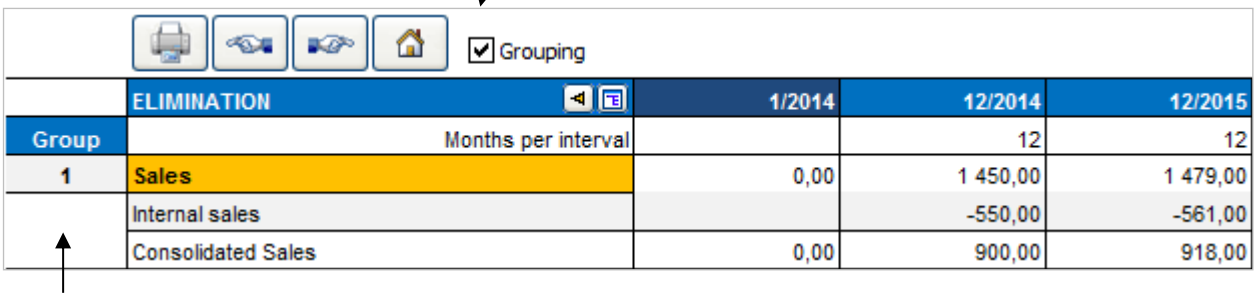
You can change the elimination row description if you like and then enter the eliminations.

ELIMINATION	1/2014	12/2014	12/2015	12/2016
Months per interval		12	12	12
Sales	0,00	1 450,00	1 479,00	1 508,58
Internal sales		-550,00	-561,00	-572,22
Consolidated Sales	0,00	900,00	918,00	936,36

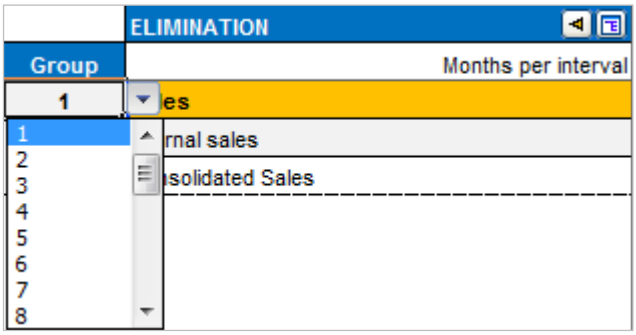
By pressing the button you can move to the corresponding row on the Calculations sheet.



You can use grouping of eliminations as a means to apply only part of entered eliminations when consolidating by checking Grouping.



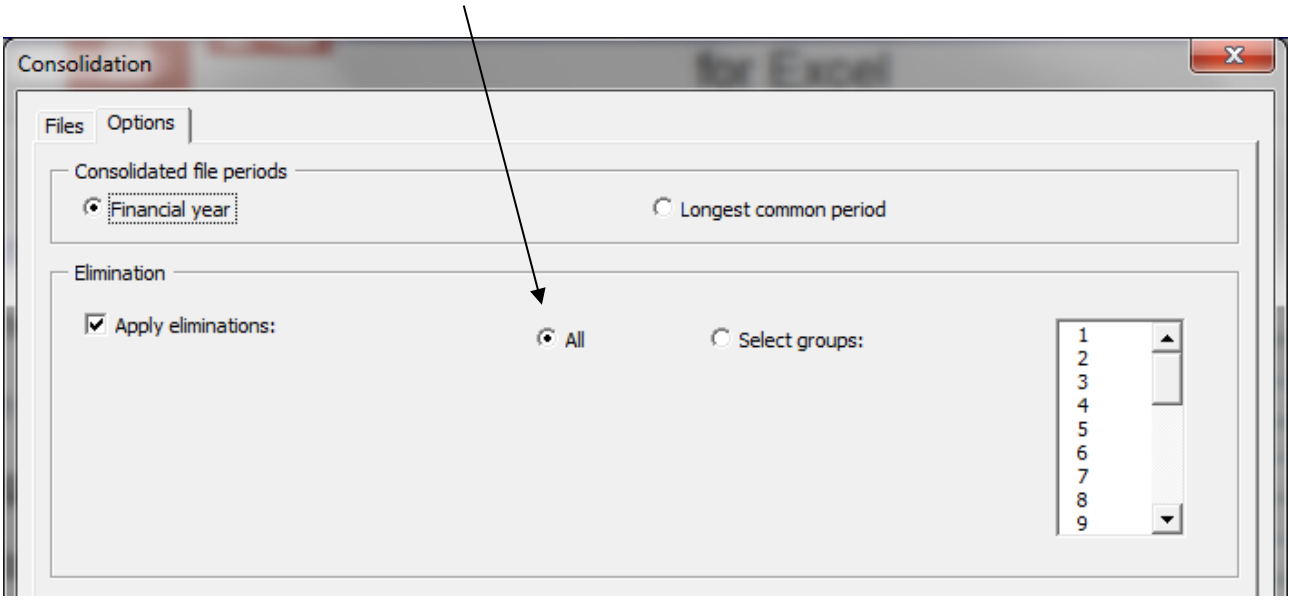
A Group column appears to left. You choose from to 25 groups of eliminations.



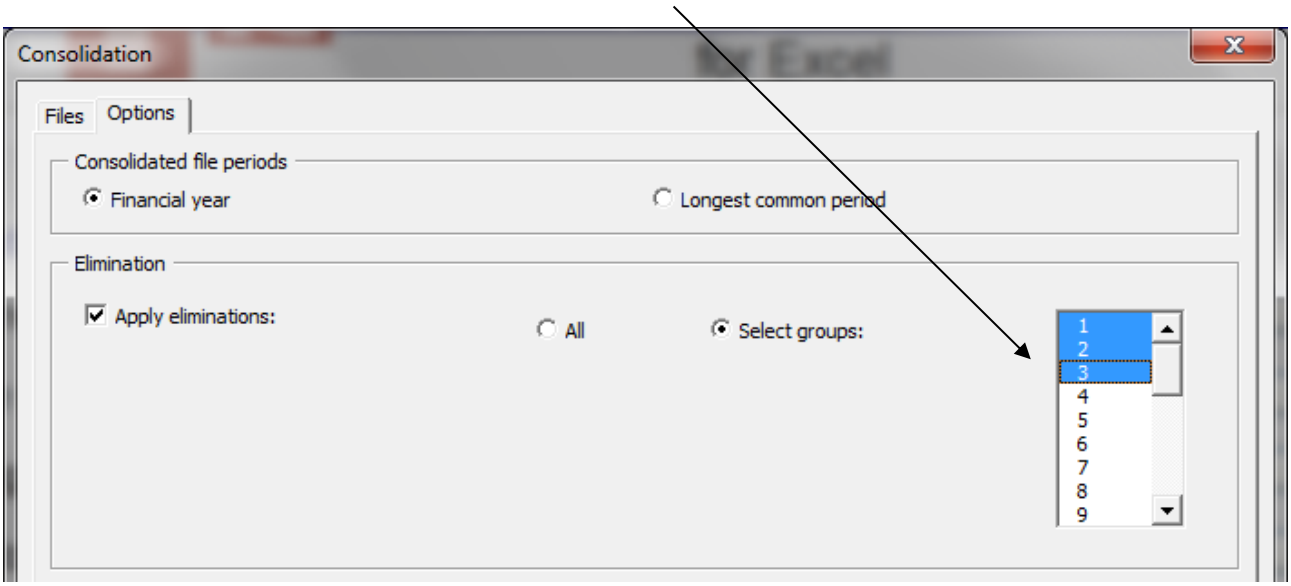
Grouping is useful when you are consolidating different parts or levels of an organisation. You could apply group 1 eliminations when consolidating from lowest level units to the an next level unit and all groups when consolidating to the highest level unit.

Note that you can include same rows several times and use different elimination groups. This way the elimination of one calculation number can be different for different consolidations.

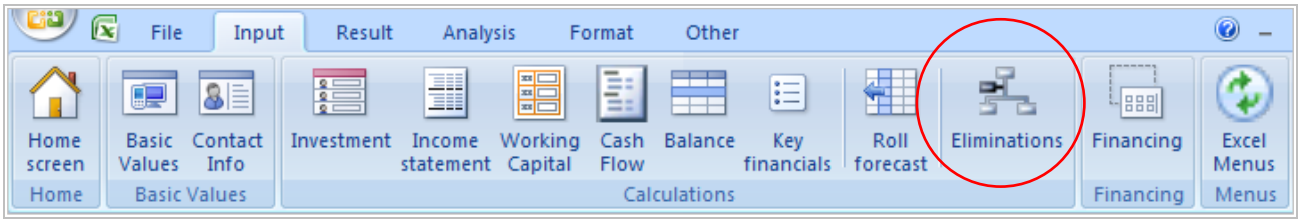
Eliminations options in consolidation are found in the Options tab of the Consolidation dialog box. By default all eliminations are applied.



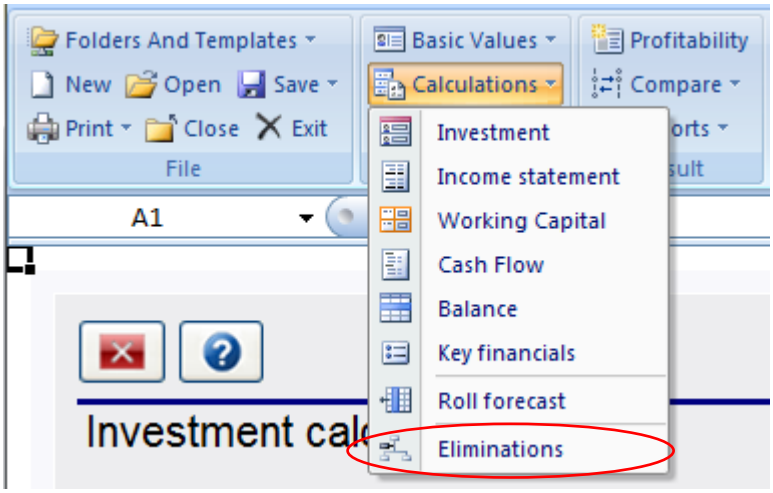
You can choose to apply only selected groups of eliminations when you are doing a partial consolidation.



In the Invest for Excel menus, Eliminations can be found in the Input page:

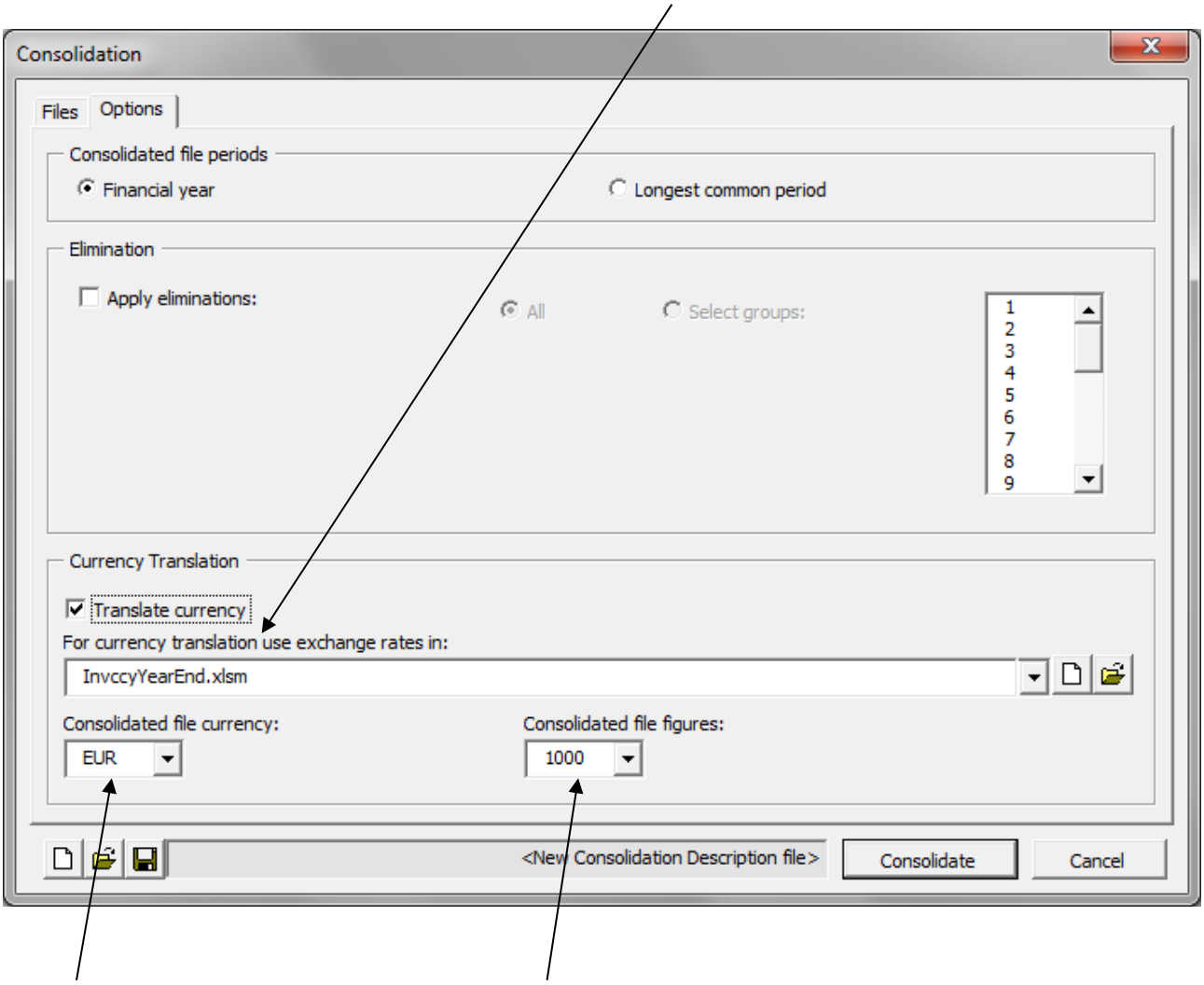


In the short menu:



4.6.4.3 Consolidation with currency translation

To consolidate with currency translation, check Translate currency in the Options tab of the Consolidation dialog box.



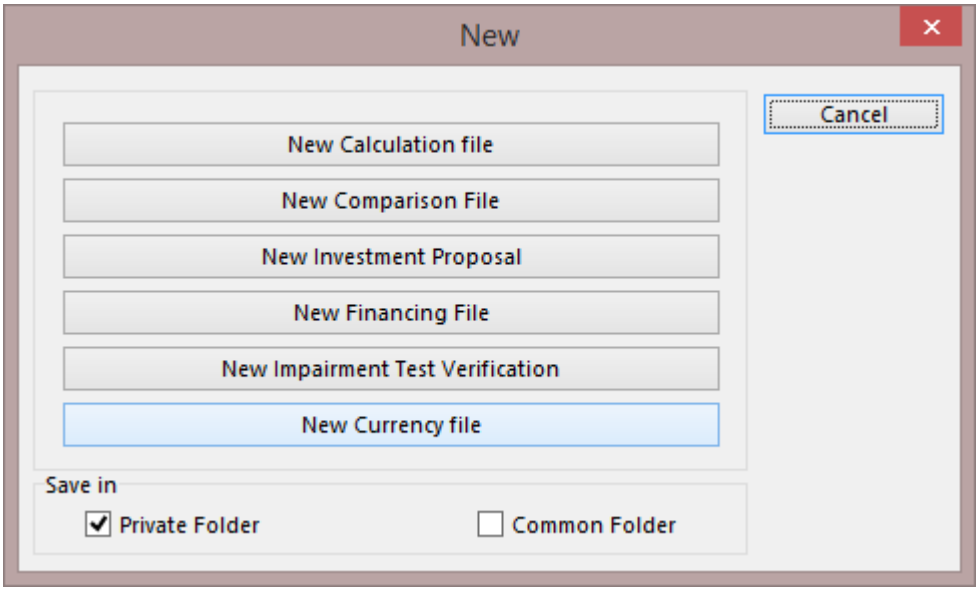
Specify the currency file to use when translating currencies and specify consolidated file currency and the unit in which to show figures.

Note that each consolidated source files must have currency specified in the basic values.

4.6.5 Currency file

Currency translation is available in Enterprise edition for consolidation of calculation files and financing files. A currency file can be used to handle currency translation rates.

To create a new Currency file, choose “New” in the Invest File menu. Choose “New Currency File” in the opening dialog box:



A new currency file while will open:

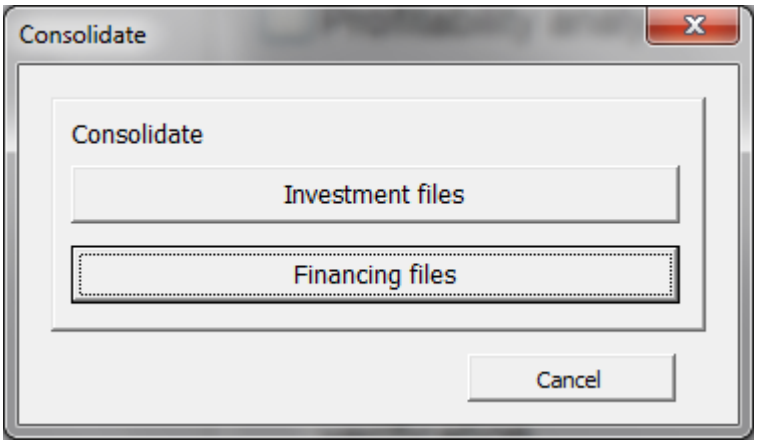
	Currency translation rates			
	Currency	Rate		Refresh date
Reference	EUR	1,000000	EUR/EUR	
	USD	1,341500	USD/EUR	13.11.2013
	JPY	133,270000	JPY/EUR	13.11.2013

You can enter the currency translation rates manually or update the rates from the European Central Bank web service by clicking the ! button. Note that all rates that are found in the European Central Bank web service will automatically be updated. *(Note that, for this to work, you need to be connected to internet and Microsoft Excel must be allowed to run internet queries.)*

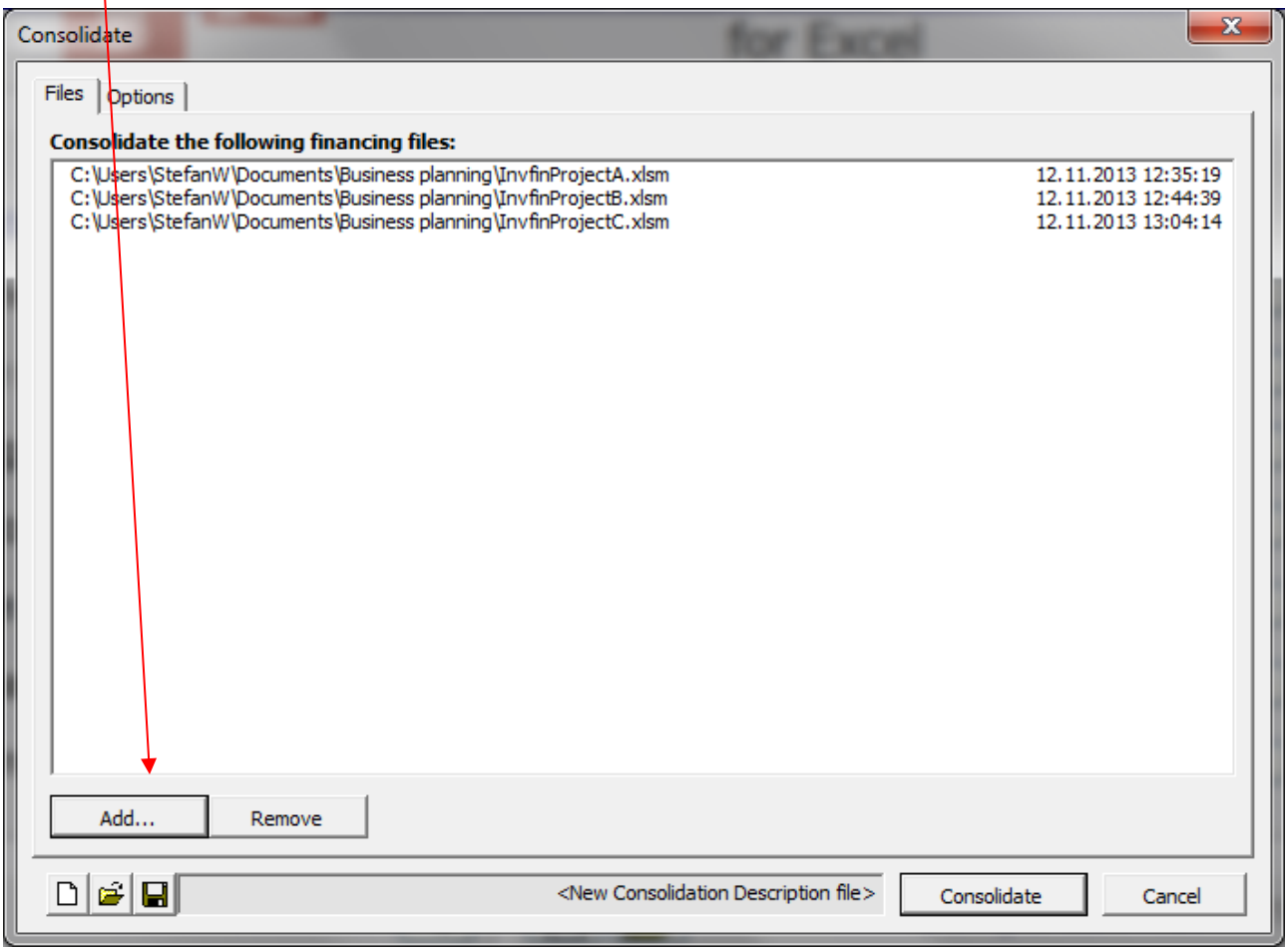
A new currency file can also be created from the Consolidation dialog boxes.

4.6.6 Consolidation of financing files

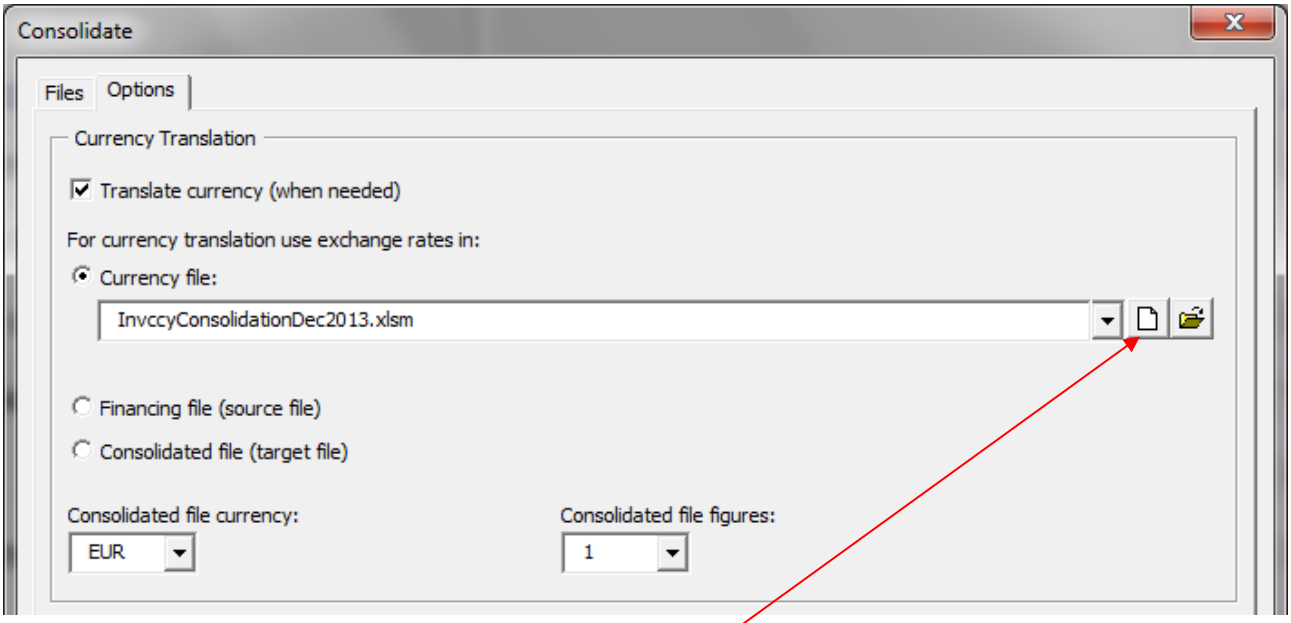
To consolidate financing files, press “Financing files” in the “Consolidate” dialog box:



Press “Add…” in the “Consolidate” dialog box to add the files you want to consolidate:



In the Options page you can choose Currency translation. Check “Translate currency”:



For currency translation you can use exchange rates in:

- a Currency file. When **new Currency file** is chosen, a new currency file is created and the rates are automatically refreshed from the European Central Bank web service. *(Note that, for this to work, you need to be connected to internet and Microsoft Excel must be allowed to run internet queries.)*
- Financing file (source file): the rates in the first financing files are used.
- Consolidated file (target file). This option can be valid when the consolidated file is updated.

Used currency rates are copied to the consolidated file.

The consolidated file will include all periods found in the source files. Example:

Source file A:

Figures:	USD	Total amount:	800 000						IRR:	6,33284 %
(All transactions		Withdrawals		Principal	Ending	Interest		Fees	Financing cash flow	
at end of month)		USD	% of total	payment	balance	Accrued	Paid	Total	Cash flow	Cumulative
Month	Totals:	800 000,00	100,00	800 000,00	0,00	259 200,00	259 200,00	8 000,00	-267 200,00	-267 200,00
0	6/2014	160 000,00	20,00	0,00	160 000,00	0,00	0,00	8 000,00	152 000,00	152 000,00
1	7/2014	0,00	0,00	0,00	160 000,00	800,00	0,00	0,00	0,00	152 000,00
2	8/2014	0,00	0,00	0,00	160 000,00	1 600,00	0,00	0,00	0,00	152 000,00
3	9/2014	160 000,00	20,00	0,00	320 000,00	2 400,00	0,00	0,00	160 000,00	312 000,00
4	10/2014	0,00	0,00	0,00	320 000,00	4 000,00	0,00	0,00	0,00	312 000,00
5	11/2014	0,00	0,00	0,00	320 000,00	5 600,00	0,00	0,00	0,00	312 000,00
6	12/2014	480 000,00	60,00	0,00	800 000,00	7 200,00	7 200,00	0,00	472 800,00	784 800,00
…										
125	11/2024	0,00	0,00	0,00	40 000,00	259 000,00	0,00	0,00	0,00	-226 000,00
126	12/2024	0,00	0,00	40 000,00	0,00	259 200,00	1 200,00	0,00	-41 200,00	-267 200,00
	Totals:	800 000,00	100,00	800 000,00	0,00	259 200,00	259 200,00	8 000,00	-267 200,00	-267 200,00

Source file B:

Figures:	MEUR	Total amount:	20						IRR:	5,94477 %
(All transactions		Withdrawals		Principal	Ending	Interest		Fees	Financing cash flow	
at end of month)		MEUR	% of total	payment	balance	Accrued	Paid	Total	Cash flow	Cumulative
Month	Totals:	20,00	100,00	20,00	0,00	2,53	7,55	0,39	-7,95	-7,95
0	9/2014	17,00	85,00	0,00	17,00	0,00	0,00	0,06	16,94	16,94
1	10/2014	0,00	0,00	0,00	17,00	0,09	0,00	0,00	0,00	16,94
2	11/2014	0,00	0,00	0,00	17,00	0,18	0,00	0,00	0,00	16,94
3	12/2014	3,00	15,00	0,35	19,65	0,27	0,03	0,02	2,61	19,55
…										

242	11/2034	0,00	0,00	0,00	0,36	2,53	0,00	0,00	0,00	-7,58
243	12/2034	0,00	0,00	0,36	0,00	2,53	0,01	0,00	-0,36	-7,95
	Totals:	20,00	100,00	20,00	0,00	2,53	7,55	0,39	-7,95	-7,95

Source file C:

Figures:	TJPY	Total amount:	200 000						IRR:	6,51404 %
(All transactions		Withdrawals		Principal	Ending	Interest		Fees	Financing cash flow	
at end of month)		TJPY	% of total	payment	balance	Accrued	Paid	Total	Cash flow	Cumulative
Month	Totals:	200 000,00	100,00	200 000,00	0,00	22 942,50	73 167,50	3 000,00	-76 167,50	-76 167,50
0	9/2014	152 000,00	76,00	0,00	152 000,00	0,00	0,00	600,00	151 400,00	151 400,00
1	10/2014	0,00	0,00	0,00	152 000,00	864,17	0,00	0,00	0,00	151 400,00
2	11/2014	0,00	0,00	0,00	152 000,00	1 728,33	0,00	0,00	0,00	151 400,00
3	12/2014	48 000,00	24,00	3 500,00	196 500,00	2 592,50	142,50	150,00	44 207,50	195 607,50
...										
182	11/2029	0,00	0,00	0,00	4 000,00	22 926,67	0,00	0,00	0,00	-72 072,50
183	12/2029	0,00	0,00	4 000,00	0,00	22 942,50	95,00	0,00	-4 095,00	-76 167,50
	Totals:	200 000,00	100,00	200 000,00	0,00	22 942,50	73 167,50	3 000,00	-76 167,50	-76 167,50

Consolidated file:

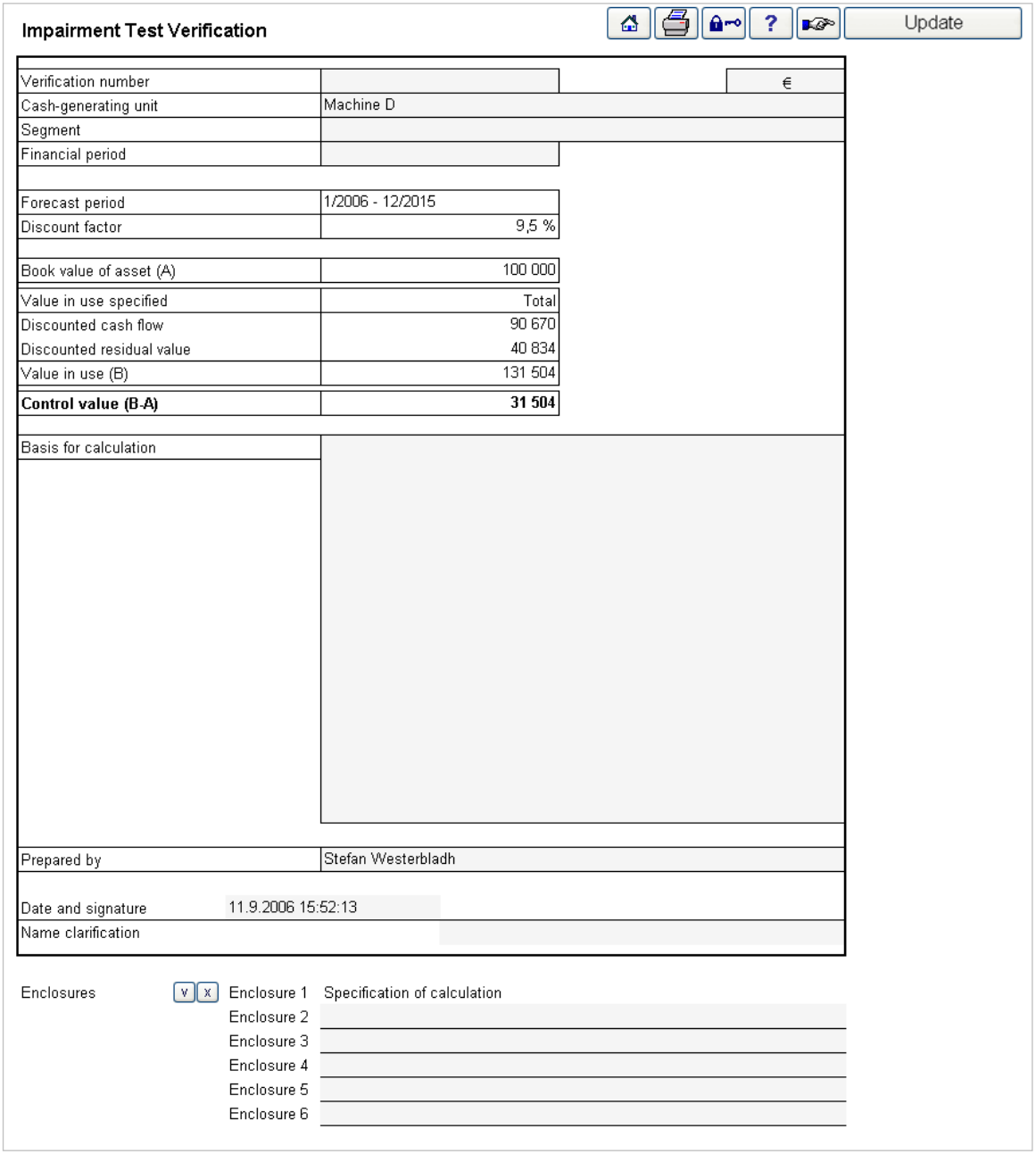
Figures:	EUR	Total amount:							IRR:	5,98952 %
(All transactions		Withdrawals		Principal	Ending	Interest		Fees	Financing cash flow	
at end of month)		EUR		payment	balance	Accrued	Paid	Total	Cash flow	Cumulative
Month	Totals:	22 097 060,21	100	22 097 060,21	0,00	2 529 280,12	8 294 013,70	421 961,52	-8 715 975,21	-8 715 975,21
0	6/2014	119 269,47	119 269	0,00	119 269,47	0,00	0,00	5 963,47	113 306,00	113 306,00
1	7/2014	0,00	0	0,00	119 269,47	596,35	0,00	0,00	0,00	113 306,00
2	8/2014	0,00	0	0,00	119 269,47	1 192,69	0,00	0,00	0,00	113 306,00
3	9/2014	18 259 811,23	18 259 811	0,00	18 379 080,71	1 789,04	0,00	64 502,14	18 195 309,09	18 308 615,09
4	10/2014	0,00	0	0,00	18 379 080,71	100 507,73	0,00	0,00	0,00	18 308 615,09
5	11/2014	0,00	0	0,00	18 379 080,71	199 226,43	0,00	0,00	0,00	18 308 615,09
6	12/2014	3 717 979,50	3 717 980	376 262,47	21 720 797,74	297 945,12	34 561,38	16 125,53	3 291 030,11	21 599 645,21
...										
245	11/2034	0,00	0	0,00	355 856,57	2 528 168,07	0,00	0,00	0,00	-8 353 446,34
246	12/2034	0,00	0	355 856,57	0,00	2 529 280,12	6 672,31	0,00	-362 528,88	-8 715 975,21
	Totals:	22 097 060,21	100	22 097 060,21	0,00	2 529 280,12	8 294 013,70	421 961,52	-8 715 975,21	-8 715 975,21

The consolidated file can easily be **updated** from the Project sheet.

4.7 Impairment test verification

An impairment test is performed (press Update) by comparing the book value of an asset (cash-generating unit) to value in use (future discounted cash flow before tax [default] + discounted residual value). A verification is produced for recording purposes. Rule:

Value in use - book value < 0 -> Impairment loss!
Value in use - book value > 0 -> No need for action.



Impairment Test Verification

Update

Verification number		€
Cash-generating unit	Machine D	
Segment		
Financial period		
Forecast period	1/2006 - 12/2015	
Discount factor	9,5 %	
Book value of asset (A)	100 000	
Value in use specified	Total	
Discounted cash flow	90 670	
Discounted residual value	40 834	
Value in use (B)	131 504	
Control value (B-A)	**31 504**	
Basis for calculation		
Prepared by	Stefan Westerbladh	
Date and signature	11.9.2006 15:52:13	
Name clarification		

Enclosures V X
Enclosure 1 Specification of calculation
Enclosure 2
Enclosure 3
Enclosure 4
Enclosure 5
Enclosure 6

The verification can be locked from modifications by pressing: 

Note! Once the file is locked it can't be unlocked.

A specification of the calculation is automatically enclosed:

Enclosure 1: Specification of calculation

Cash flow statement

€	12/2006	12/2007	12/2008	12/2009	12/2010	12/2011	12/2012	12/2013	12/2014	12/2015
Income	22 082	22 303	22 610	22 836	23 065	23 295	23 528	23 764	24 001	24 241
Variable costs	-2 871	-2 899	-2 939	-2 969	-2 998	-3 028	-3 059	-3 089	-3 120	-3 151
Fixed costs	-5 410	-5 437	-5 475	-5 502	-5 529	-5 557	-5 585	-5 613	-5 641	-5 669
Extraordinary income & expenses										
Change in working capital	-1 094	-11	-11	-11	-11	-11	-11	-12	-12	1 185
Cash flow from operations	12 707	13 956	14 185	14 355	14 526	14 699	14 873	15 050	15 229	16 606
Asset investments and realizations										100 000
Net cash flow	12 707	13 956	14 185	14 355	14 526	14 699	14 873	15 050	15 229	116 606
Discounted net cash flow	11 974	12 045	10 804	9 985	9 227	8 527	7 880	7 282	6 729	47 052
Cumulative discounted net cash flow	11 974	24 019	34 824	44 808	54 035	62 562	70 442	77 723	84 452	131 504

Cash flow changes

%		12/2006 - 12/2007	12/2007 - 12/2008	12/2008 - 12/2009	12/2009 - 12/2010	12/2010 - 12/2011	12/2011 - 12/2012	12/2012 - 12/2013	12/2013 - 12/2014	12/2014 - 12/2015
Income		+1,00 %	+1,38 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %
Variable costs		+1,00 %	+1,38 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %	+1,00 %
Fixed costs		+0,50 %	+0,69 %	+0,50 %	+0,50 %	+0,50 %	+0,50 %	+0,50 %	+0,50 %	+0,50 %

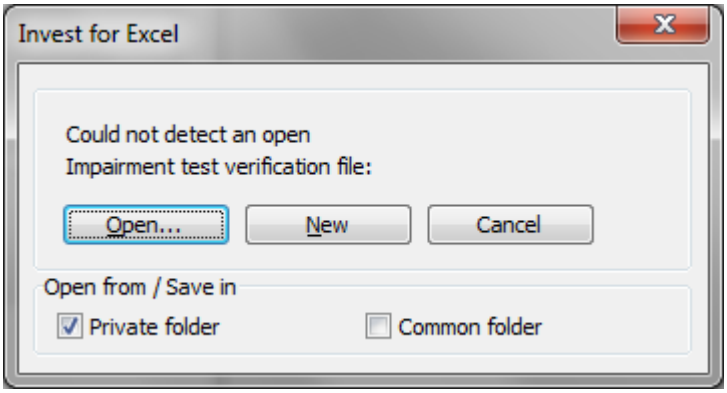
Specification of value in use

€	12/2006	12/2007	12/2008	12/2009	12/2010	12/2011	12/2012	12/2013	12/2014	12/2015	Total
Discounted net cash flow	11 974	12 045	10 804	9 985	9 227	8 527	7 880	7 282	6 729	6 218	90 670
Discounted residual										40 834	40 834
Total	11 974	12 045	10 804	9 985	9 227	8 527	7 880	7 282	6 729	47 052	131 504

To open an impairment test verification, choose one of the following three different ways: By clicking:

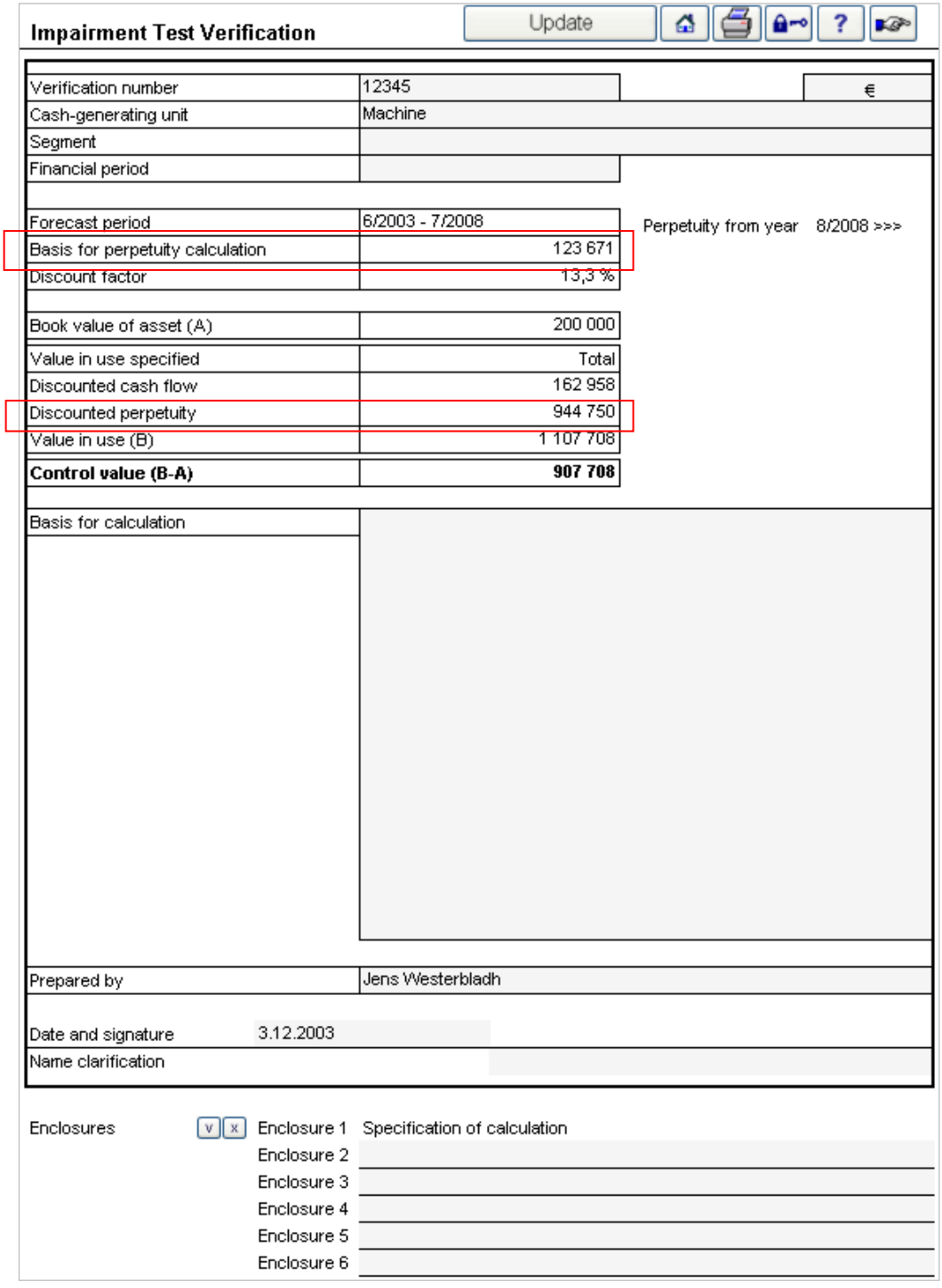
1. The impairment test button in the Home Screen.
2. The  button in the top right corner of the Result table (only impairment files).
3. By selecting it from the Invest for Excel menu:

   - File - New – Impairment test opens a new, blank verification.
   - File - Open to open a saved impairment test verification
   - Result – Impairment test, the following dialog is shown (if a file is not open):



4.7.1 Perpetuity

When perpetuity is used as residual value, additional perpetuity information is shown.



Impairment Test Verification Update

Verification number	12345	€
Cash-generating unit	Machine	
Segment		
Financial period		
Forecast period	6/2003 - 7/2008	Perpetuity from year 8/2008 >>>
Basis for perpetuity calculation	123 671	
Discount factor	13,3 %	
Book value of asset (A)	200 000	
Value in use specified	Total	
Discounted cash flow	162 958	
Discounted perpetuity	944 750	
Value in use (B)	1 107 708	
Control value (B-A)	**907 708**	

Basis for calculation

Prepared by	Jens Westerbladh
Date and signature	3.12.2003
Name clarification	

Enclosures

Enclosure 1	Specification of calculation
Enclosure 2	
Enclosure 3	
Enclosure 4	
Enclosure 5	
Enclosure 6	

When growing perpetuity is used, the growth percentage is shown in Cash flow changes.

Enclosure 1: Specification of calculation

Cash flow statement

€	12/2003	12/2004	12/2005	12/2006	12/2007	12/2008
Net income	46 208	137 787	200 480	252 805	318 787	212 896
Variable costs	-20 537	-61 239	-89 102	-112 358	-141 683	-94 621
Fixed costs	-9 093	-18 770	-19 333	-19 913	-20 510	-12 172
Extraordinary income & expenses						
Change in working capital	-10 668	-4 854	-7 063	-5 895	-7 433	-5 202
Cash flow from operations	5 910	52 924	84 982	114 640	149 161	100 901
Asset investments and realizations	-160 000					
Investment net cash flow	-154 090	52 924	84 982	114 640	149 161	100 901
Discounted net cash flow	-152 059	43 410	61 504	73 207	84 046	52 850
Cumulative discounted net cash flow	-152 059	-108 649	-47 145	26 063	110 108	162 958

Cash flow changes

%		12/2003 - 12/2004	12/2004 - 12/2005	12/2005 - 12/2006	12/2006 - 12/2007	12/2007 - 12/2008	8/2008 >>>
Net income		+73,94 %	+45,50 %	+26,10 %	+26,10 %	+14,49 %	
Variable costs		+73,94 %	+45,50 %	+26,10 %	+26,10 %	+14,49 %	
Fixed costs		+26,41 %	+3,00 %	+3,00 %	+3,00 %	+1,74 %	
Perpetuity							+2,00 %

Specification of value in use

€	12/2003	12/2004	12/2005	12/2006	12/2007	12/2008	Total
Discounted net cash flow	-152 059	43 410	61 504	73 207	84 046	52 850	162 958
Discounted residual							
Total	-152 059	43 410	61 504	73 207	84 046	52 850	162 958

4.8 Investment Proposal

The third file type of Invest for Excel contains a form ('card') for use when presenting the calculation to the investment decision-makers. It is a so-called investment proposal. Many key figures are automatically transferred from the investment calculation to this form, hence they need not be filled in manually.

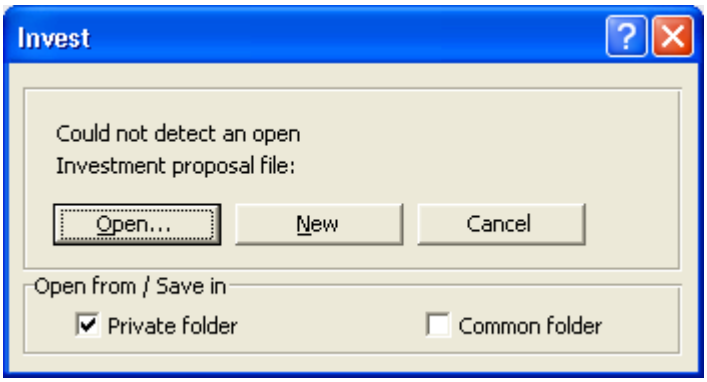
When the calculations are ready, experts in various parts of the organisation have been heard, and the matter has been discussed once more face to face with a colleague, you can print the calculation in report form. It is also possible to send the calculations as files, e.g. attached to e-mail messages.

The investment proposal contains general information about the project, the decision-making process, the persons responsible for the project, and the key figures. The investment proposal is a separate file that you can freely name, save, copy or print.

To open an investment proposal form, choose one of the following three different ways: By clicking:

1. The investment proposal button in the Home Screen.
2. The  button in the top right corner of the Result table.
3. By selecting it from the Invest for Excel menu:
   - Choose File - New - Investment Proposal (creates a new investment proposal).
   - Choose **File - Open – "Invprop XYZ"** (opens a proposal called Invprop XYZ).

When switching to non-opened Investment proposal, the following window will open up:



Now you can open either an investment proposal that you have previously prepared by clicking **Open**, or a new, blank investment proposal by selecting **New…** in the menu window. Fill in the necessary new data, edit it and print the form as your proposal. Note! The text you wrote will remain unchanged even if you use the Change Language function.

Unlike other parts of the *Invest for Excel* program, the Investment Proposal file can be edited. You can undo the protection with the Excel command (**Review-Unprotect Sheet**) and edit the existing texts, formatting the way you want. By contrast, the figures on the second page that the program updates from the investment calculation can only be changed through reprogramming. For more information, refer to Item 4.9.1 Modified Investment Proposal form.

Development	Stefan Westerbladh	12/21/2004
Department	Drawn up by	Date
Project X		
Investment object	Investment number	Project title and number

DESCRIPTION OF INVESTMENT Update

IMPLEMENTATION TERM:		Lead-time from order to commissioning of object
PROJECT BEGINS:		Project kick-off (month/year)
COMPLETION TIME:		Ready (month/year)
START-UP TIME:		Utilization of object begins (month/year)

INVESTMENT CAPITAL: 1,500,000 €

FEASIBILITY AND GROUNDS FOR THE INVESTMENT

ENVIRONMENTAL EFFECTS OF THE INVESTMENT

Person in charge | Presenter

DATE PROCESSED OR PREPARED:

Date	Initials		Date	Initials	
		EMPLOYEES			MAINTENANCE
		TECHNICAL STAFF			PRODUCTION
		CLERICAL STAFF			MATERIALS
		PERSONNEL ADMINISTRATION			QUALITY ADMIN.
		LABOUR PROTECTION ADMIN.			

Some data in the investment calculation can be copied using the Update button. If you have several investment calculations open, the program prompts you to choose one of them. The **Update** function will take a while to run.

Enter the necessary data, in other words, use the applicable parts of the form:

Department: Informative text field.

Drawn up by: Name of person, who did the investment proposal.

Date: Date when the investment proposal was made or updated.

Investment object: Informative text field on the investment.

Investment number: Numbering of the proposal.

Project name and number:
Informative text field.

Description of investment:
Informative text field. (Go to this field with the mouse).

Implementation term: Lead-time from order to commissioning of object.

Project begins: Project kick-off (month/year).

Completion time: Time when project is due for completion (month/year).

Start-up time: Utilization of object begins (month/year).

Investment capital: Sum of proposed investments.

Feasibility and grounds for the investment:
Informative text field. (Go to this field with the mouse).

Environmental effects of the investment:
Acknowledgement of effects, if any, according to corporate regulations.

Person in charge: Project Manager and person in charge.

Date processed or prepared:
Dates when the matter was handled, and the initials of the presenting persons.

Print button for printing the investment proposal.

Go to the following page of the investment proposal.

Development	Stefan Westerbladh	12/21/2004
Department	Drawn up by	Date
Project X		
Investment object	Investment number	Project title and number

CATEGORY OF INVESTMENT

- [x] Productivity investment
- [ ] Inv. for expansion & development
- [ ] Maintenance investment
- [ ] Replacement investment
- [ ] Strategic investment
- [ ] Statutory investment / fixed by law
- [x] Will be carried out as a project
- [ ] Carried out as normal work
- [ ] Associate project
- [ ]

AGREEMENT AND DECISION

Coverage of binding offers (%)		Investment proposal is valid until	
Estimated duration of project		Quotations are valid until	
Change in personnel (+/-)		Estimated start-up time	
Environment protection, share %		From decision to start-up (months)	
		From start-up to full production (months)	

Update

COST ESTIMATE		PROFITABILITY	
Proposed investments	1,500,000	Discount rate (%)	8.0 %
Net working capital	16,667	Average operating margin per annum	212,976
Interest from construction time		Internal Rate of Return (%)	16.1 %
Loss of margins		NPV excluding residual value	-214,093
Capital Requirement	1,516,667	NPV including residual value	1,005,829
		Payback time (years)	10.0
		Economic life	

SENSITIVITY ANALYSIS

	Default value	-10% (worse)	IRR	+10 % (better)	IRR
Investment capital	1,500,000	1,650,000	14.9	1,350,000	17.6 %
Operating Margin	212,976	191,678	14.7	234,274	17.5 %

BREAK-EVEN POINT	Break even	Certainty margin	Certainty margin %
Investment capital	2,755,820	1,255,820	83.7 %
Operating Margin	115,625	97,351	45.7 %

PERSON IN CHARGE

LEVEL OF APPROVAL DECISION

Date

Signature

SUPPORTERS

Date	Signature

- [ ] Accepted
- [ ] Rejected
- [ ] Postponed
- [ ] Other

Category of investment:

To choose one of the options, click the appropriate cell. Clicking adds a tick in the cell. The following are the optional investment categories:
Productivity investment, Inv. For expansion and development, maintenance investment, replacement investment, strategic investment, statutory investment / fixed by law. You can also rename a category.

Place a tick to indicate whether the investment will be carried out as a project, as normal work, or as a parallel (sidelong) project.

Agreement and decision:

Complete all applicable items, or create new headings (refer to **Protection** above).

Offers, % of investment: Enter as a percentage the proportion of investment acquisition costs that are tied to offers.

Estimated duration of project: Enter a figure representing the duration of the project in months.

Change in personnel (+/-): If the staff complement will be reduced in the course of the investment term, enter the reduction as a negative (-) of employees. Correspondingly, add employees as positive numbers (+).

Environmental protection, share %: If a part of the investment is targeted at environmental protection, indicate its proportion as a percentage of the total investment

Investment proposal is valid until: Enter the date of expiry of the investment proposal.

Quotations are valid until: Enter the date or expiry of tenders for the acquisition of the investment as proposed.

Estimated start-up time: Enter the month and year when the investment object will be taken into use.

From decision to start-up (months): Lead-time from date of investment decision to that of taking the object in use.

From start-up to full production (months): Lead-time from taking into use until investment object is in normal use (normal operating rate).

Click this button in order to update figures from investment calculation. Remember to click here, if you change the investment calculation.

Cost estimate: Capital requirement. Data can be entered in the grey cells. Other values come from the investment calculation.

Proposed investment: Sum of proposed investments from the calculation file. Note that reinvestments are not included.

Net working capital: Short term assets of first period + inventories - accounts payable.

Interest during construction time: Enter here financing costs accrued during implementation, if you want to include them in the budget.

Loss of margins: Here you can specify the disruption of other activity due to taking the investment in use. Please, note that loss of margin should also be taken into account in the investment calculation.

Profitability

The figures are copied from the investment calculation.

Discount rate: The rate of return requirement entered under Basic Values discount factor.

Average operating income before depreciation: The program calculates the average **EBITDA; operating income before depreciation** per year on the basis of the margin per period.

Internal Rate of Return (%): Is abbreviated **IRR**. It is a value taken from the Result screen representing annual income from the investment as a percentage.

NPV excluding residual value: NPV – PV of residual value.
NPV including residual value: NPV from Profitability analysis.

Payback time (years): Payback time with the discount rate of interest taken into account. Shows how long it takes before the net cash flow, as discounted to the present time with the discount rate, is positive. If you want to know the payback time without interest, change the discount rate to zero (0) in the Basic Values screen.

Economic life: Often the same as the **investment term** entered in the **Investment Term** dialogue box. If the calculation includes 'construction time', the investment calculation term is longer than the economic life of the investment object. The economic life of the investment object can, however, exceed the investment term.

Sensitivity analysis

The investment's cost of acquisition and EBTDA ±10% from the starting point.

Investment capital (Proposed investments)

1. The first column shows the sum total of the investment as added up in the investment calculation. Look under **Profitability** which internal rate of return applies, for the base case.
2. The total investment has been increased by 10% in the second column.
3. The third column shows the corresponding internal rate of return.
4. The acquisition cost is 10% lower in the fourth column, and
5. The fifth column shows the corresponding internal rate of return.

EBITDA

1. The first column shows the average **EBITDA; operating income before depreciation** per year, as obtained from the Investment calculation. Look under **Profitability,** which internal rate of return applies, for the base case.
2. The operating profit is 10% lower in the second column.
3. The third column shows the corresponding internal rate of return.
4. In the fourth column, the operating profit is 10% better, and
5. The fifth column shows the corresponding internal rate of return.

Break-even Point:

Investment capital: This is how much the investment may cost at a maximum, without the required returns having to be reduced. You also see the margin of change from the planned value to Break-Even point as a figure and a percentage.

EBITDA:
The lowest the average **EBITDA** per year the investment can bear, taking the interest rate into account. You also see the margin of change from the planned value to the Break-Even point as a figure and a percentage.

NOTE! Invest for Excel cannot always calculate the Break-Even point. How well this function works, depends on the data in the calculation.

Person in charge: Reference to the front cover of the form. Suggested responsible person.

Supporters: Persons in favour of the suggestion.
Date and signature.

Level of approval decision:
Person or body deciding on the issue.
Date, and possibly signature.

Decision: Tick one of the following boxes.

- Accepted (approved)
- Rejected (refused)
- Postponed (transferred) or
- Other (other decision).

Go to the previous page of the investment proposal.

You can order customised investment proposal forms from DataPartner. The program can use various investment proposal formats. Thus each organisation can use its own forms in conjunction with *Invest for Excel*.

4.8.1 Modified investment proposal form

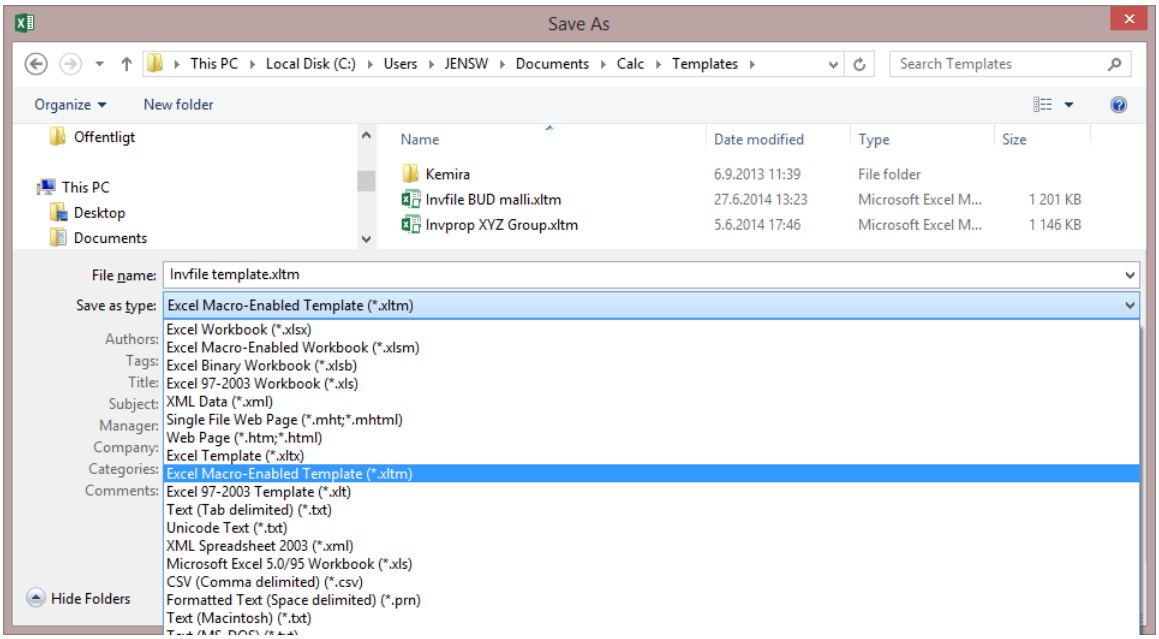
Note: The default format represents suggested contents, which can be made more applicable, if necessary.

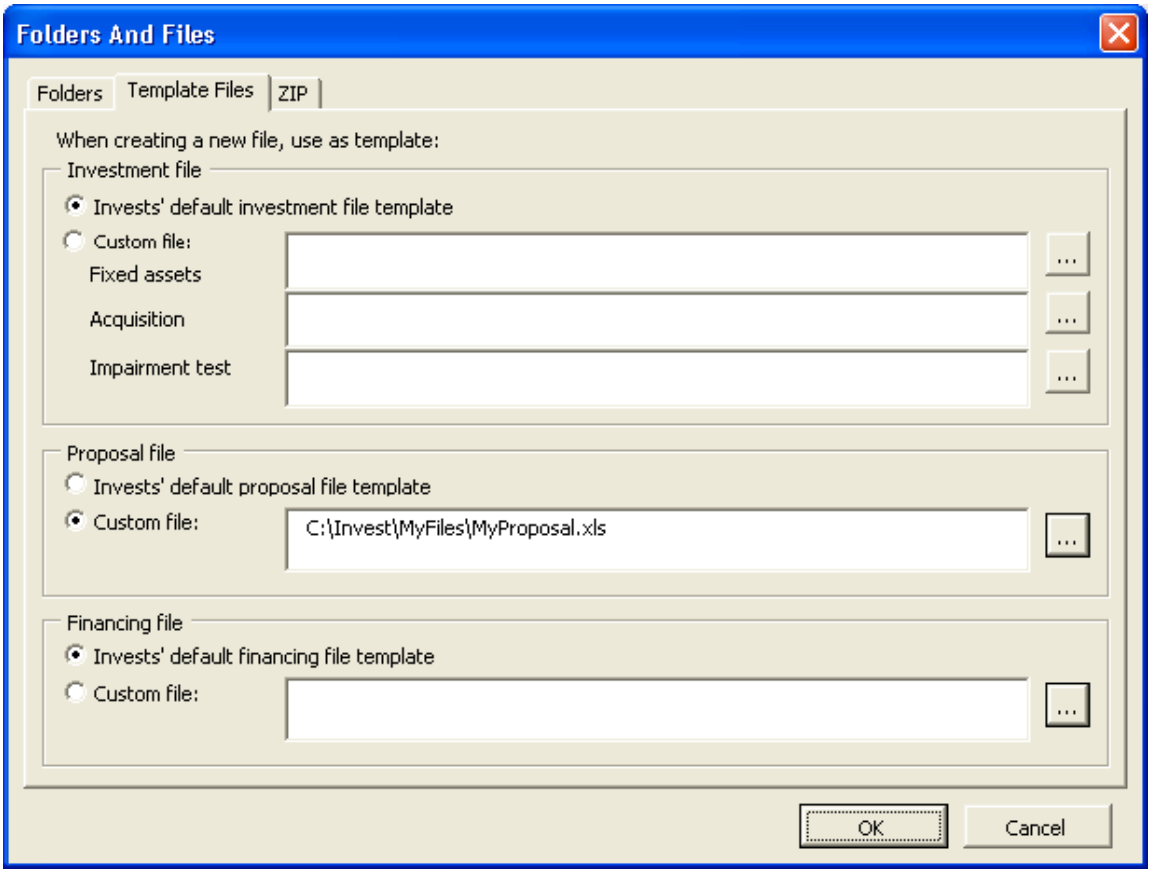
Do as follows to edit it: The investment proposal file is protected without a password. To undo the protection: Exit from the Invest for Excel menu by selecting **Other** and after that **Excel menus**. In Excel, select: *Tools, Protection, Unprotect Sheet...)*. It is an Excel workbook that you can then edit quite freely. You can rename headings, and add or delete headings and input fields, and move fields.

BUT: **1)** Note that the **Change Language** function will not work with the edited items.

2) Caution must be taken when editing the proposal form, otherwise the update function might not work as it should. Note that, if you need to make changes to this section, you can also contact Datapartner and ask for an offer for the work involved.

Remember to save the modified form as a new template. Select: **File** menu, then **Save as,** change the file type from XLSM (Excel Macro-Enabled Workbook) to XLTM (Excel Macro-Enabled Template). Give the file a name and save it in the folder you prefer. See chapter 2.1.3 template files for more information about using templates.

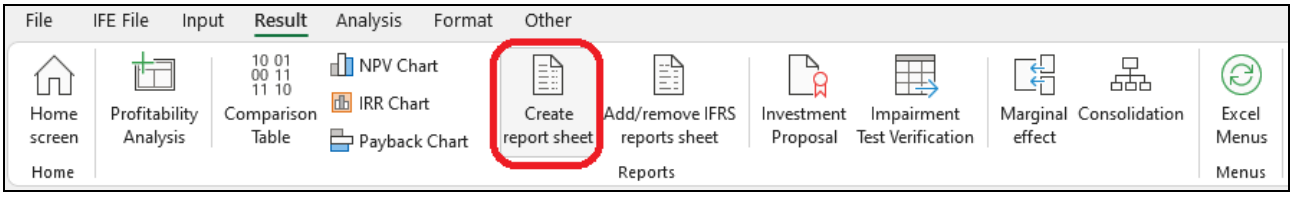




To return to the Invest for Excel menu, select the Invest for Excel option added to Excel's menu. To access your modified form, go to Invest for Excel's **File menu,** select **Folders and Files.** Select the **Template Files** tab and select the template you want.

4.9 Create report sheet

This function requires Invest for Excel Pro or Enterprise Edition.



Report sheets can easily be created from “Calculations” sheet and “Result” sheet. Numbers are updated but rows or columns stay as are when creating the report. The reports are unprotected and fully editable.

4.9.1 Report based on “Calculations” sheet

Let’s make a report from the “Machine” example file investments and income.

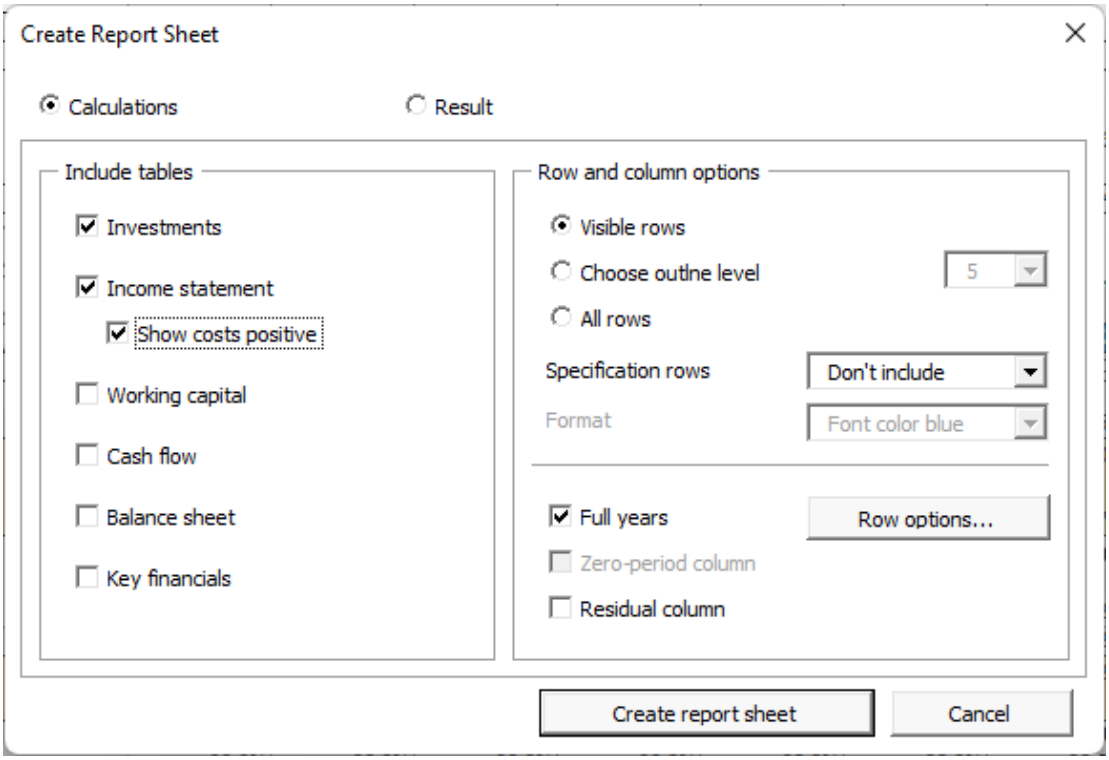
INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	Depr.-%	1	1	1	1	12	12	12	12	12	(12/2026)
1 **Alpha Machine 37**		**-1 000 000**									**100 000**
Depreciation (declining balance)	25,00%		-20 833	-20 833	-20 833	-234 375	-175 781	-131 836	-98 877	-74 158	
Book value		1 000 000	979 167	958 333	937 500	703 125	527 344	395 508	296 631	222 473	0
2 **Production hall**		**-500 000**	**-500 000**	**-350 000**	**-350 000**						**400 000**
Depreciation (straight line)	4,00%	-1 667	-3 333	-4 500	-5 667	-68 000	-68 000	-68 000	-68 000	-68 000	
Book value		498 333	995 000	1 340 500	1 684 833	1 616 833	1 548 833	1 480 833	1 412 833	1 344 833	0
3 **Maintenance**							**-90 000**		**-45 000**		**22 500**
Depreciation (straight line)	25,00%						-22 500	-22 500	-33 750	-33 750	
Book value		0	0	0	0	0	67 500	45 000	56 250	22 500	0
4											**0**
Depreciation (straight line)											
Book value		0	0	0	0	0	0	0	0	0	0
Investments		**-1 500 000**	**-500 000**	**-350 000**	**-350 000**	**0**	**-90 000**	**0**	**-45 000**	**0**	
Realizations		0	0	0	0	0	0	0	0	0	1 589 806
Depreciation		-1 667	-24 167	-25 333	-26 500	-302 375	-266 281	-222 336	-200 627	-175 908	
Realization profit (+) / loss (-)		0	0	0	0	0	0	0	0	0	-1 067 306
Book value		1 498 333	1 974 167	2 298 833	2 622 333	2 319 958	2 143 677	1 921 341	1 765 714	1 589 806	0

INCOME STATEMENT

Euro	9/2021	10/2021	11/2021	12/2021	12/2022	12/2023	12/2024	12/2025	12/2026	Residual
Months per interval	1	1	1	1	12	12	12	12	12	(12/2026)
Income specified:										
Sales	630 000	640 745	651 673	662 788	9 742 982	11 935 153	14 620 563	17 910 189	21 939 982	
+ Capacity / month	6 000	6 000	6 000	6 000	72 000	72 000	72 000	72 000	72 000	
* Utilization rate	30,0 %	30,6 %	31,1 %	31,7 %	39,7 %	49,6 %	62,0 %	77,4 %	96,8 %	
* Price / meter	350,00	349,41	348,82	348,24	341,27	334,45	327,76	321,20	314,78	
Income	**630 000**	**640 745**	**651 673**	**662 788**	**9 742 982**	**11 935 153**	**14 620 563**	**17 910 189**	**21 939 982**	**0**
Other operating income										
Variable costs	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	0
Raw materials and consumables	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	
+ Other variable costs	-441 000	-448 521	-456 171	-463 952	-6 820 087	-8 354 607	-10 234 394	-12 537 132	-15 357 987	
Variable cost-%	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	70,0 %	
Gross margin	**189 000**	**192 223**	**195 502**	**198 836**	**2 922 895**	**3 580 546**	**4 386 169**	**5 373 057**	**6 581 995**	**0**
Gross margin, %	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	30,0%	
Other fixed costs	-200 000	-200 000	-200 000	-200 000	-2 400 000	-2 400 000	-2 400 000	-2 400 000	-2 400 000	
EBITDA; Operating income before depreciation	**-11 000**	**-7 777**	**-4 498**	**-1 164**	**522 895**	**1 180 546**	**1 986 169**	**2 973 057**	**4 181 995**	**0**
Depreciation	-1 667	-24 167	-25 333	-26 500	-302 375	-266 281	-222 336	-200 627	-175 908	0
EBIT; Operating income	**-12 667**	**-31 943**	**-29 831**	**-27 664**	**220 520**	**914 265**	**1 763 833**	**2 772 430**	**4 006 087**	**0**
Financing income and expenses	0	0	0	0	0	0	0	0	0	0
Financing income and expenses										
Financing income and expenses Financing file										
EBT; Income after financing items	**-12 667**	**-31 943**	**-29 831**	**-27 664**	**220 520**	**914 265**	**1 763 833**	**2 772 430**	**4 006 087**	**0**
Extraordinary income and charges	0	0	0	0	0	0	0	0	0	-1 067 306
Realization profit (-loss)	0	0	0	0	0	0	0	0	0	-1 067 306
Other extraordinary income (-charges)										
Income before appropriations and taxes	**-12 667**	**-31 943**	**-29 831**	**-27 664**	**220 520**	**914 265**	**1 763 833**	**2 772 430**	**4 006 087**	**-1 067 306**
Change in appropriations										
Appropriations, increase (-) / decrease (+)										
Income tax	0	0	0	0	-61 745	-255 994	-493 873	-776 280	-1 121 704	0
Net income for the period	**-12 667**	**-31 943**	**-29 831**	**-27 664**	**158 774**	**658 271**	**1 269 960**	**1 996 149**	**2 884 382**	**-1 067 306**
Return on net assets (RONA), %	-	-	-	**-2,8%**	**6,2%**	**26,0%**	**48,9%**	**73,6%**	**99,3%**	**-54,9%**
Value Added (VA)	-	-	-	**-420 336**	**-152 280**	**350 757**	**954 634**	**1 666 426**	**2 531 271**	**-1 067 306**
Discounted Value Added (DCVA)	-	-	-	**-408 746**	**-136 166**	**288 406**	**721 782**	**1 158 580**	**1 618 263**	**-682 338**
Cumulative Discounted Value Added	0	0	0	-408 746	-544 912	-256 506	465 276	1 623 856	3 242 119	2 559 781

We want the same rows but on a yearly basis without specification rows.



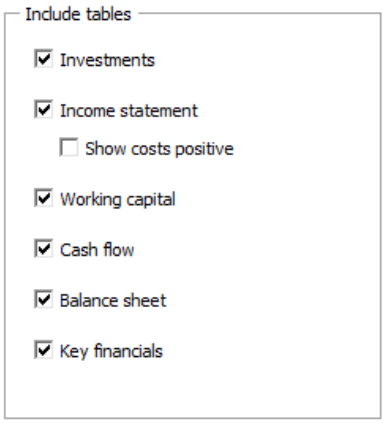
This will give us a report that we can freely edit and format on a new worksheet. **Note!** The report will not change when rows or columns are added to the calculation.

Alpha Machine 37							
INVESTMENTS (-) / REALIZATIONS (+)							
Euro		**12/2021**	**12/2022**	**12/2023**	**12/2024**	**12/2025**	**12/2026**
Months per interval	Depr.-%	4	12	12	12	12	12
1 **Alpha Machine 37**		**-1 000 000**	**0**	**0**	**0**	**0**	**0**
Depreciation (declining balance)	**25,00%**	-62 500	-234 375	-175 781	-131 836	-98 877	-74 158
Book value		937 500	703 125	527 344	395 508	296 631	222 473
2 **Production hall**		**-1 700 000**	**0**	**0**	**0**	**0**	**0**
Depreciation (straight line)	**4,00%**	-15 167	-68 000	-68 000	-68 000	-68 000	-68 000
Book value		1 684 833	1 616 833	1 548 833	1 480 833	1 412 833	1 344 833
3 **Maintenance**		**0**	**0**	**-90 000**	**0**	**-45 000**	**0**
Depreciation (straight line)	**25,00%**	0	0	-22 500	-22 500	-33 750	-33 750
Book value		0	0	67 500	45 000	56 250	22 500
4		**0**	**0**	**0**	**0**	**0**	**0**
Depreciation (straight line)	**0,00%**	0	0	0	0	0	0
Book value		0	0	0	0	0	0
Investments		**-2 700 000**	**0**	**-90 000**	**0**	**-45 000**	**0**
Realizations		0	0	0	0	0	0
Depreciation		-77 667	-302 375	-266 281	-222 336	-200 627	-175 908
Realization profit (+) / loss (-)		0	0	0	0	0	0
Book value		2 622 333	2 319 958	2 143 677	1 921 341	1 765 714	1 589 806

INCOME STATEMENT							
Euro		**12/2021**	**12/2022**	**12/2023**	**12/2024**	**12/2025**	**12/2026**
Months per interval		4	12	12	12	12	12
Income specified:							
Sales		2 585 206	9 742 982	11 935 153	14 620 563	17 910 189	21 939 982
Income		**2 585 206**	**9 742 982**	**11 935 153**	**14 620 563**	**17 910 189**	**21 939 982**
Other operating income		0	0	0	0	0	0
Variable costs		1 809 644	6 820 087	8 354 607	10 234 394	12 537 132	15 357 987
Raw materials and consumables		1 809 644	6 820 087	8 354 607	10 234 394	12 537 132	15 357 987
Gross margin		**775 562**	**2 922 895**	**3 580 546**	**4 386 169**	**5 373 057**	**6 581 995**
Gross margin, %		30,0%	30,0%	30,0%	30,0%	30,0%	30,0%
Other fixed costs		800 000	2 400 000	2 400 000	2 400 000	2 400 000	2 400 000
EBITDA; Operating income before depreciation		**-24 438**	**522 895**	**1 180 546**	**1 986 169**	**2 973 057**	**4 181 995**
Depreciation		77 667	302 375	266 281	222 336	200 627	175 908
EBIT; Operating income		**-102 105**	**220 520**	**914 265**	**1 763 833**	**2 772 430**	**4 006 087**
Financing income and expenses		0	0	0	0	0	0
Financing income and expenses		0	0	0	0	0	0
Financing income and expenses Financing file		0	0	0	0	0	0
EBT; Income after financing items		**-102 105**	**220 520**	**914 265**	**1 763 833**	**2 772 430**	**4 006 087**
Extraordinary income and charges		0	0	0	0	0	0
Realization profit (-loss)		0	0	0	0	0	0
Other extraordinary income (-charges)		0	0	0	0	0	0
Income before appropriations and taxes		**-102 105**	**220 520**	**914 265**	**1 763 833**	**2 772 430**	**4 006 087**
Change in appropriations		0	0	0	0	0	0
Appropriations, increase (-) / decrease (+)		0	0	0	0	0	0
Income tax		0	61 745	255 994	493 873	776 280	1 121 704
Net income for the period		**-102 105**	**158 774**	**658 271**	**1 269 960**	**1 996 149**	**2 884 382**
Return on net assets (RONA), %		**-2,8%**	**6,2%**	**26,0%**	**48,9%**	**73,6%**	**99,3%**
Value Added (VA)		**-420 336**	**-152 280**	**350 757**	**954 634**	**1 666 426**	**2 531 271**
Discounted Value Added (DCVA)		**-408 746**	**-136 166**	**288 406**	**721 782**	**1 158 580**	**1 618 263**
Cumulative Discounted Value Added		-408 746	-544 912	-256 506	465 276	1 623 856	3 242 119

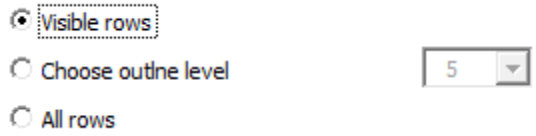
4.9.2 Include tables

You can choose which tables you want to include. For income statement you can choose to show cost as positive numbers.



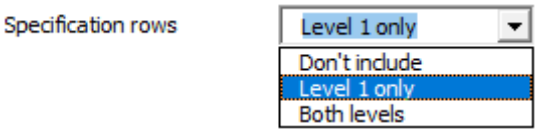
4.9.3 Row and column options

You can choose to include the rows that are currently visible on the Calculations sheet (Visible rows), include rows based on outline level or include all available rows.



The included rows will vary depending on calculation file type. Note that you can easily delete any rows that you don't need from the report sheet.

You can choose to include specification rows either level 1 or both levels:



For format you can choose Font color blue or Calculations sheet format.

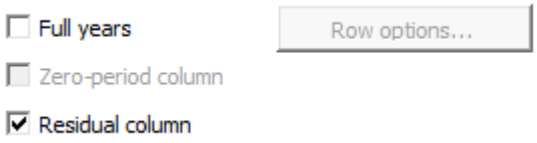
Font color blue:

	Sales	630 000
+	Capacity / month	6 000
•	Utilization rate	30,0 %
•	Price / meter	350,00

Calculations format:

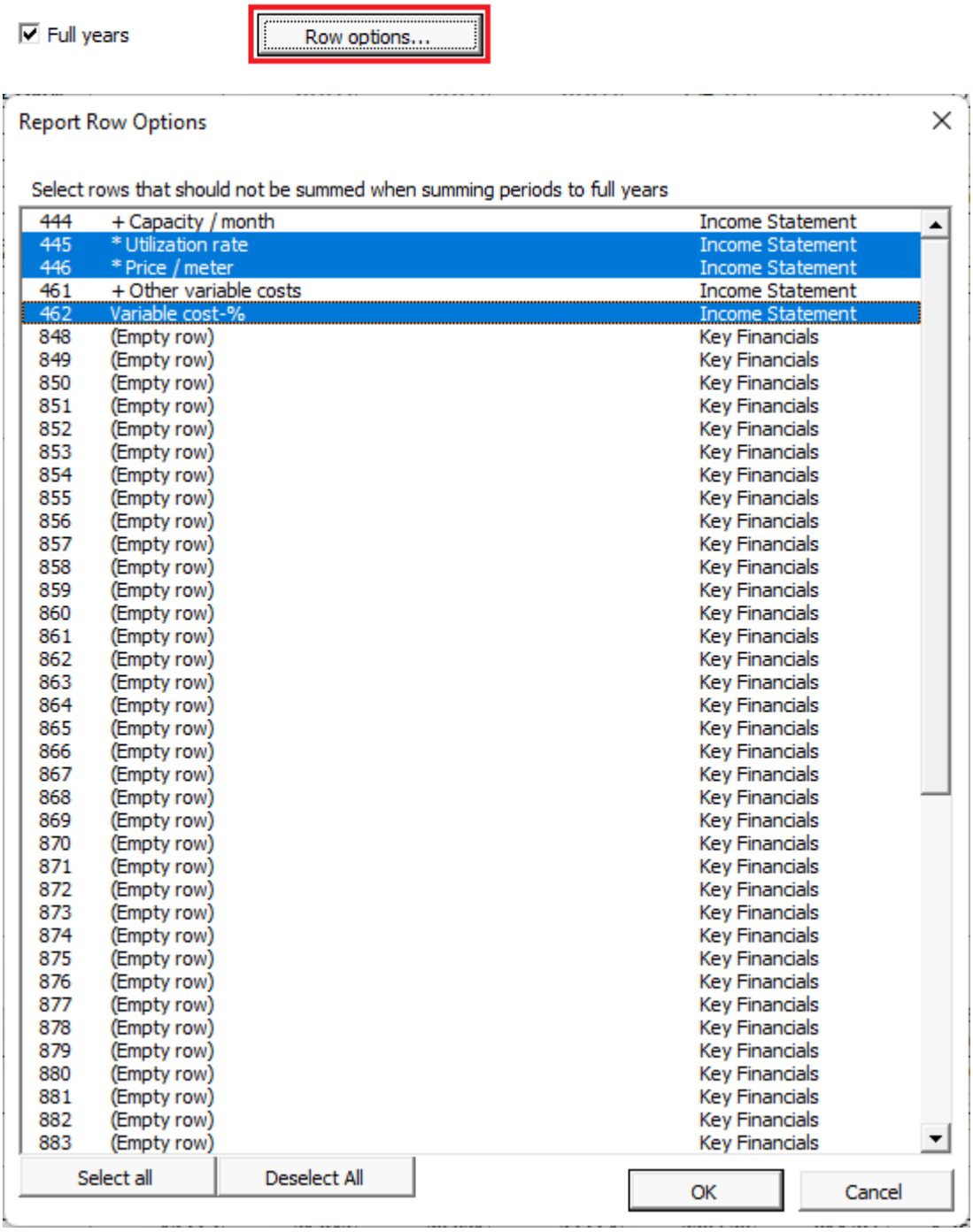
	Sales	630 000
+	Capacity / month	6 000
•	Utilization rate	30,0 %
•	Price / meter	350,00

For columns you can choose to include columns as they are or to sum to full years.



If zero-period column and residual columns are included in the calculation, you can choose to include them or not. If zero-period column is not included, it will be summed to the first period. If residual column is not included, it is left out from the report.

If you choose to sum to full years, you should select any rows that should not be summed.



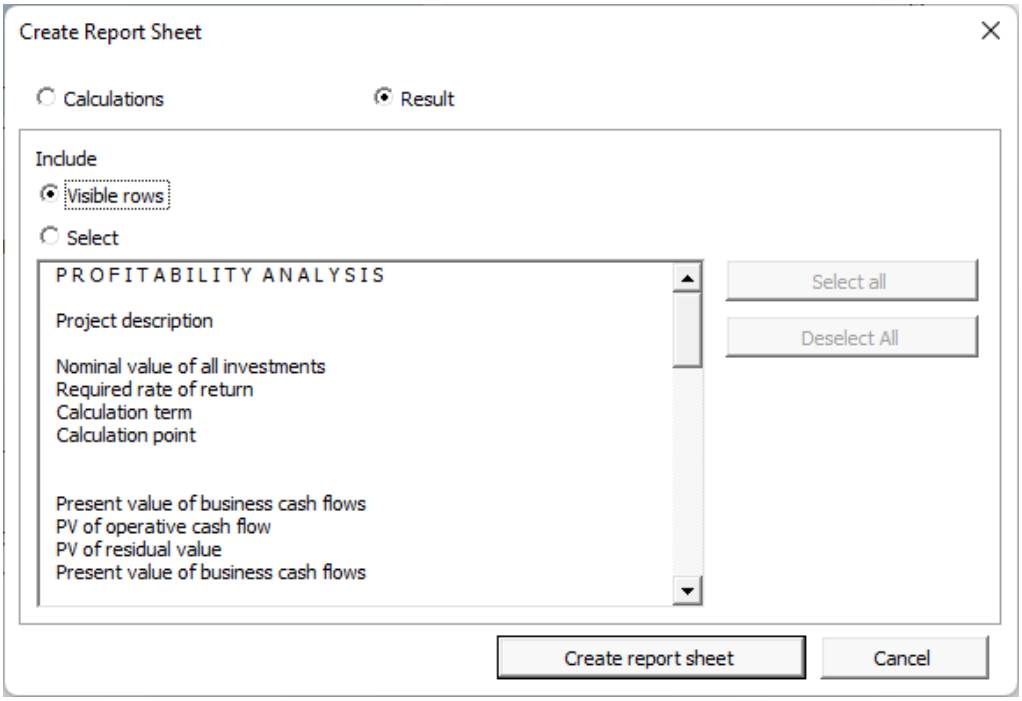
4.9.4 Report based on "Result" sheet

Let's now make report from the "Machine" example file's Result sheet:

PROFITABILITY ANALYSIS

Project description		**Alpha Machine 37**			Euro
Nominal value of all investments			2 835 000	Discounted investments	2 770 984
Required rate of return			8,75 %		
Calculation term			5,3	years	9/2021 - 12/2026
Calculation point			9/2021	(In the beginning of period)	
Present value of business cash flows		Nominal	PV	Notes	
± PV of operative cash flow			3 602 422		
+ PV of residual value	...	3 118 731	1 993 832		
Present value of business cash flows			**5 596 254**		
- Present value of reinvestments		0	0		
Total Present Value (PV)			**5 596 254**		
Investment proposal		Nominal	PV		
- Proposed investments in assets		-2 835 000	-2 770 984		
+ Investment subventions		0	0		
Investment proposal		-2 835 000	-2 770 984		
Net Present Value (NPV)			**2 825 270**	>= 0 ->	profitable
NPV as a monthly annuity			54 945		
Internal Rate of Return (IRR)			24,33 %	>= 8,75 % ->	profitable
Modified Internal Rate of Return (MIRR)			20,97 %	>= 8,75 % ->	profitable
Profitability Index (PI)			2,02	>= 1 ->	profitable
Payback time, years			4,8	Based on discounted FCF	

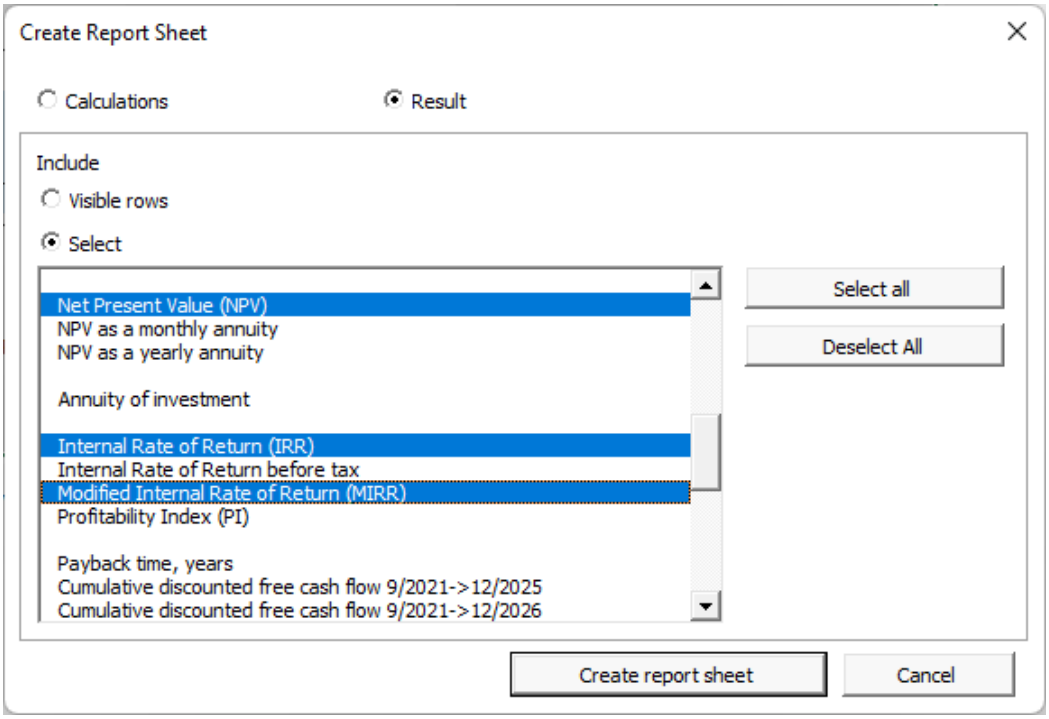
Let's simply include visible rows:



PROFITABILITY ANALYSIS

Project description	**Alpha Machine 37**				Euro
Nominal value of all investments		2 835 000	Discounted investments		2 770 984
Required rate of return		8,75 %			
Calculation term		5,3	years		9/2021 - 12/2026
Calculation point		9/2021	(In the beginning of period)		
Present value of business cash flows	Nominal	PV	Notes		
± PV of operative cash flow		3 602 422			
+ PV of residual value	3 118 731	1 993 832			
Present value of business cash flows		**5 596 254**			
- Present value of reinvestments	0	0			
Total Present Value (PV)		**5 596 254**			
Investment proposal	Nominal	PV			
- Proposed investments in assets	-2 835 000	-2 770 984			
+ Investment subventions	0	0			
Investment proposal	-2 835 000	-2 770 984			
Net Present Value (NPV)		**2 825 270**	>= 0	->	profitable
NPV as a monthly annuity		54 945			
Internal Rate of Return (IRR)		24,33 %	>= 8,75 %	->	profitable
Modified Internal Rate of Return (MIRR)		20,97 %	>= 8,75 %	->	profitable
Profitability Index (PI)		2,02	>= 1	->	profitable
Payback time, years		4,8	Based on discounted FCF		

You can also select rows you want to include.



PROFITABILITY ANALYSIS				
Net Present Value (NPV)	**613 969**	>= 0	->	profitable
Internal Rate of Return (IRR)	1350,09 %	>= 0 %	->	profitable
Modified Internal Rate of Return (MIRR)	47,58 %	>= 0 %	->	profitable

5 Analysis

Sensitivity analyses are aimed at reducing the uncertainty in the evaluation of investments. Usually sensitivity analyses are calculations for studying how alternative assumptions in the various variables affect profitability. The analyses can be used for studying when an investment becomes unprofitable or which assumptions make a difference between two profitable alternatives with regard to their profitability.

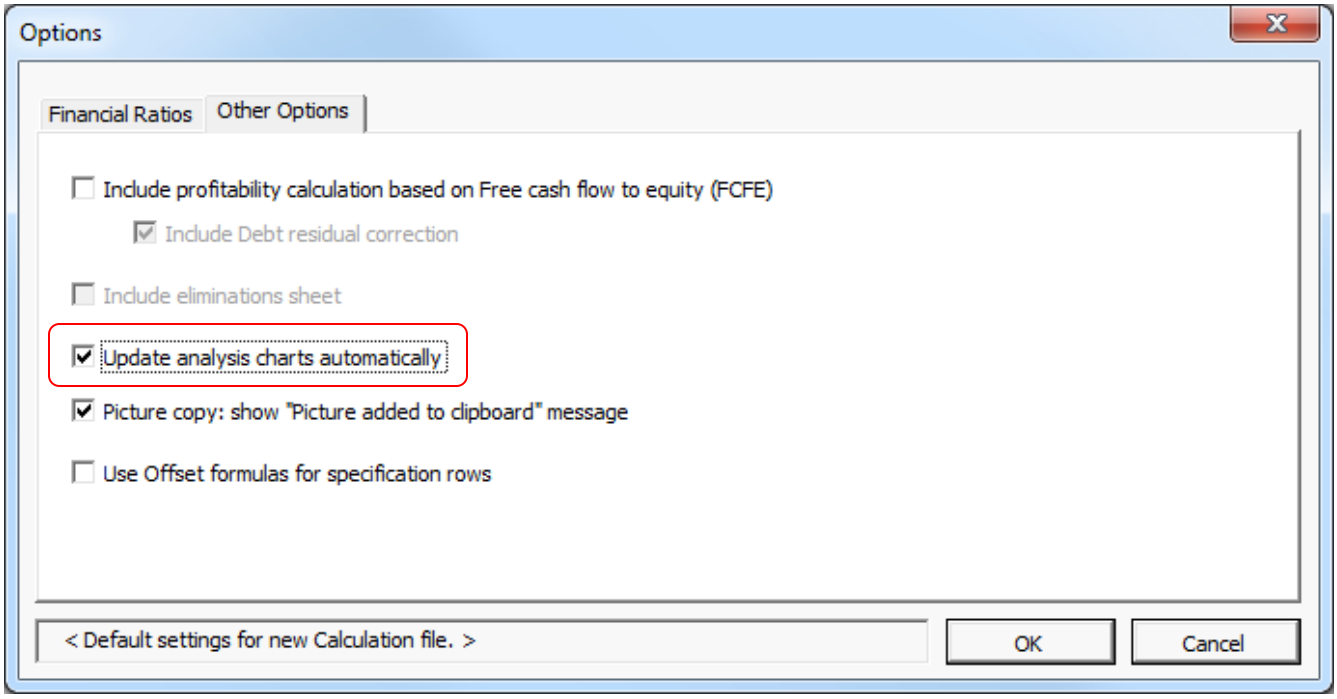
Sensitivity analyses give an idea how the profitability of an investment project is affected by changing certain basic assumptions or values (e.g. the acquisition cost increases by 10%, or variable costs decrease by 5%). You can do sensitivity testing freely using these tables and study the changes. Your testing will not change the actual calculations.

The analysis can be done separately for each parameter. They change equally much over the whole investment term. In order to check the changes in a variable for certain periods only (or to simulate simultaneous changes in several parameters), enter the changes in the actual Investment calculation.

Combinations of two or more variables may lead to completely different results. One way is to conduct the analysis using one variable at a time and identify a few variables that affect profitability the most. After this, you can feed the most critical variables into the investment calculation.

5.1 Update charts automatically

Charts can be updated automatically or manually (default). It's possible to set automatically update from Invest for Excel options (Menu: Other – Options):



When automatic update is activated, every analysis on a sheet is updated when the sheet is activated. Note that this updating takes some time.

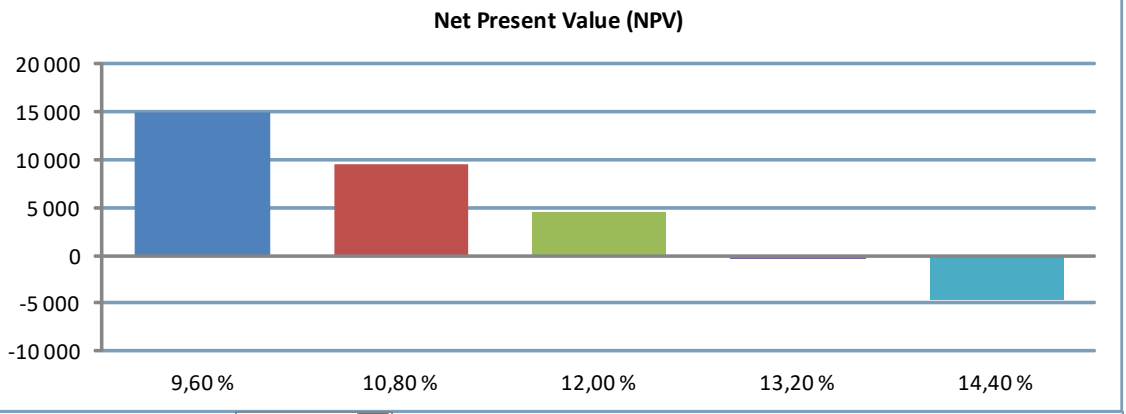
5.2 Discount factor analysis

You can analyse the discount rate's impact on profitability by entering alternative discount rates. A ±10% and ±20% change in the discount rate is shown as default.

Enter the analysis values and then click on the ! button to the left. Note that the analysis requires manual updating by pressing this button.

Discount factor's impact on profitability

Discount factor	9,60 %	10,80 %	12,00 %	13,20 %	14,40 %
Change, %	-20,0 %	-10,0 %	0,0 %	+10,0 %	+20,0 %
Net Present Value (NPV)	14 910	9 545	4 557	-88	-4 419
Change, %	+227,2 %	+109,5 %	0,0 %	-101,9 %	-197,0 %



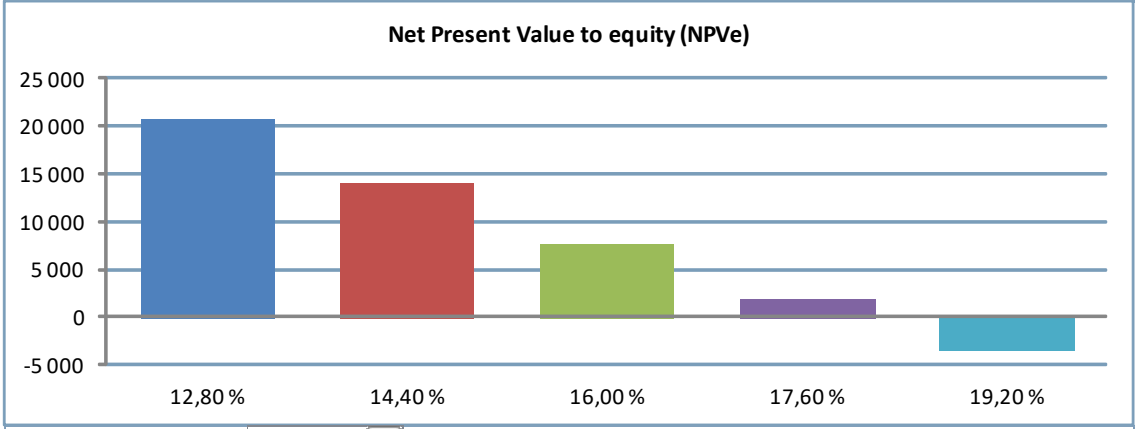
Key financials	12/2013	9,60 %	10,80 %	12,00 %	13,20 %	14,40 %
EBITDA; Operating income before deprec		21 660	21 660	21 660	21 660	21 660
EBITDA, %		67,7%	67,7%	67,7%	67,7%	67,7%
EBIT; Operating income, USD		11 660	11 660	11 660	11 660	11 660
EBIT, %		36,4%	36,4%	36,4%	36,4%	36,4%
Return on net assets (RONA), %		12,3 %	12,3 %	12,3 %	12,3 %	12,3 %
Economic Value Added (EVA), USD		-492	-1 632	-2 772	-3 912	-5 052

The analysis can be done for Net Present Value, Profitability Index (PI), Discounted Value Added (DCVA), Payback time, years and Simple payback time, years. Additionally, up to six key financial ratios (including user-created ratios) can be included for a selected period.

When Free cash flow to equity is included in the calculation, Net Present Value to equity, Payback time to equity, years and Simple payback time to equity, years can also be analysed. Change in Cost of equity is used for these profitability ratios.

Discount factor's impact on profitability

Discount factor	9,60 %	10,80 %	12,00 %	13,20 %	14,40 %
Change, %	-20,0 %	-10,0 %	0,0 %	+10,0 %	+20,0 %
Cost of equity	**12,80 %**	**14,40 %**	**16,00 %**	**17,60 %**	**19,20 %**
Change, %	-20,0 %	-10,0 %	0,0 %	+10,0 %	+20,0 %
Net Present Value to equity (NPVe)	20 751	13 891	7 625	1 891	-3 367
Change, %	+172,1 %	+82,2 %	0,0 %	-75,2 %	-144,2 %



Key financials	12/2013	12,80 %	14,40 %	16,00 %	17,60 %	19,20 %
EBITDA; Operating income before deprec		21 660	21 660	21 660	21 660	21 660
EBITDA, %		67,7%	67,7%	67,7%	67,7%	67,7%
EBIT; Operating income, USD		11 660	11 660	11 660	11 660	11 660
EBIT, %		36,4%	36,4%	36,4%	36,4%	36,4%
Return on net assets (RONA), %		12,3 %	12,3 %	12,3 %	12,3 %	12,3 %
Economic Value Added (EVA), USD		-492	-1 632	-2 772	-3 912	-5 052

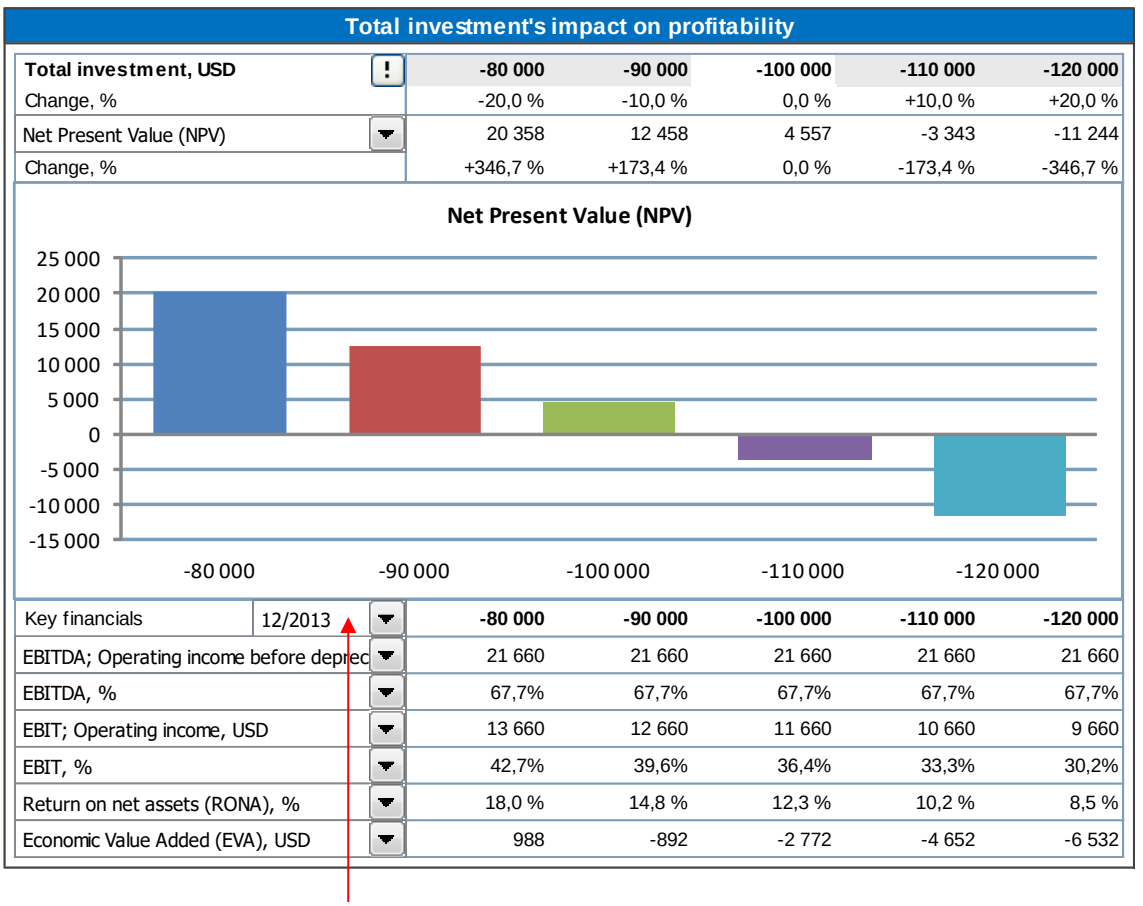
5.3 Total investment analysis

You can analyse the total investment's impact on profitability by entering alternative amounts of investment capital. The program shows the impact of a ±10% and ±20% change as default. Change the default values and then click on the ! button to the left (only the click updates the values).

The question to ask here is: What happens to profitability, if we can manage the same investment with a lesser capital outlay, or what excesses can we go to without compromising our profitability target?

The changes in the total investment are an average, i.e. the possible distribution ratio between machines and buildings is maintained.

From the drop down list, choose alternatively: 'Net Present Value (NPV)', 'Internal Rate of Return (IRR)', 'Internal rate of return before tax', 'Modified Internal Rate of Return (MIRR)', 'Profitability Index (PI)', 'Discounted Value Added (DCVA)', 'Payback time, years' or 'Simple Payback time, years' as the profitability measure. Note that Payback is limited to the calculation term.



Total investment's impact on profitability

Total investment, USD	-80 000	-90 000	-100 000	-110 000	-120 000
Change, %	-20,0 %	-10,0 %	0,0 %	+10,0 %	+20,0 %
Net Present Value (NPV)	20 358	12 458	4 557	-3 343	-11 244
Change, %	+346,7 %	+173,4 %	0,0 %	-173,4 %	-346,7 %

Key financials	12/2013	-80 000	-90 000	-100 000	-110 000	-120 000
EBITDA; Operating income before deprec		21 660	21 660	21 660	21 660	21 660
EBITDA, %		67,7%	67,7%	67,7%	67,7%	67,7%
EBIT; Operating income, USD		13 660	12 660	11 660	10 660	9 660
EBIT, %		42,7%	39,6%	36,4%	33,3%	30,2%
Return on net assets (RONA), %		18,0 %	14,8 %	12,3 %	10,2 %	8,5 %
Economic Value Added (EVA), USD		988	-892	-2 772	-4 652	-6 532

Beneath the bar chart is another drop down list from which you can choose the period for the financial statement's key figures you want to analyse. The table shows how the change affects the *Operating Income*, *Return on Net Assets* and *Economic Value Added*. *Operating Result* comes from the *Operating Profit (cumulative financial year)* row in the Income statement.

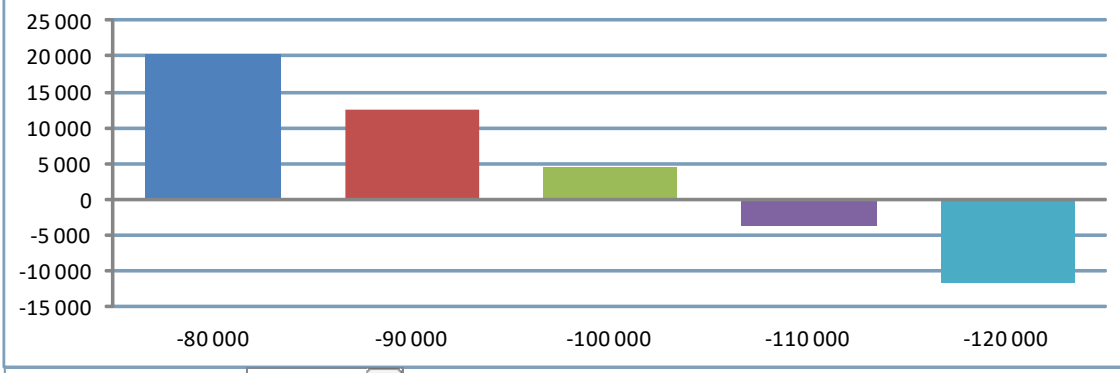
5.4 Income analysis

You can see the effect that changes in the total income has on profitability. The program shows the impact of a ±10% and ±20% change as default. The default percentage can be changed freely. When you enter a change in income as a percentage (e.g. +5 or –5), remember to click the button ! to the left of the figures, as only the click updates the values.

From the drop down list, choose alternatively: 'Net Present Value (NPV)', 'Internal Rate of Return (IRR)', 'Internal rate of return before tax', 'Modified Internal Rate of Return (MIRR)', 'Profitability Index (PI)', 'Discounted Value Added (DCVA)', 'Payback time, years' or 'Simple Payback time, years' as the profitability measure. Note that Payback is limited to the calculation term.

Total investment's impact on profitability

Total investment, USD	-80 000	-90 000	-100 000	-110 000	-120 000
Change, %	-20,0 %	-10,0 %	0,0 %	+10,0 %	+20,0 %
Net Present Value (NPV)	20 358	12 458	4 557	-3 343	-11 244
Change, %	+346,7 %	+173,4 %	0,0 %	-173,4 %	-346,7 %



Key financials	12/2013	-80 000	-90 000	-100 000	-110 000	-120 000
EBITDA; Operating income before deprec		21 660	21 660	21 660	21 660	21 660
EBITDA, %		67,7%	67,7%	67,7%	67,7%	67,7%
EBIT; Operating income, USD		13 660	12 660	11 660	10 660	9 660
EBIT, %		42,7%	39,6%	36,4%	33,3%	30,2%
Return on net assets (RONA), %		18,0 %	14,8 %	12,3 %	10,2 %	8,5 %
Economic Value Added (EVA), USD		988	-892	-2 772	-4 652	-6 532

Beneath the bar chart is another drop down list from which you can choose the period for the financial statement's key figures you want to analyse. The table shows how the change affects the *Operating Result*, *Return on Net Assets* and *Economic Value Added*. *Operating Result* comes from the *Operating Profit (cumulative financial year)* row in the Income statement.

5.5 Variable costs analysis

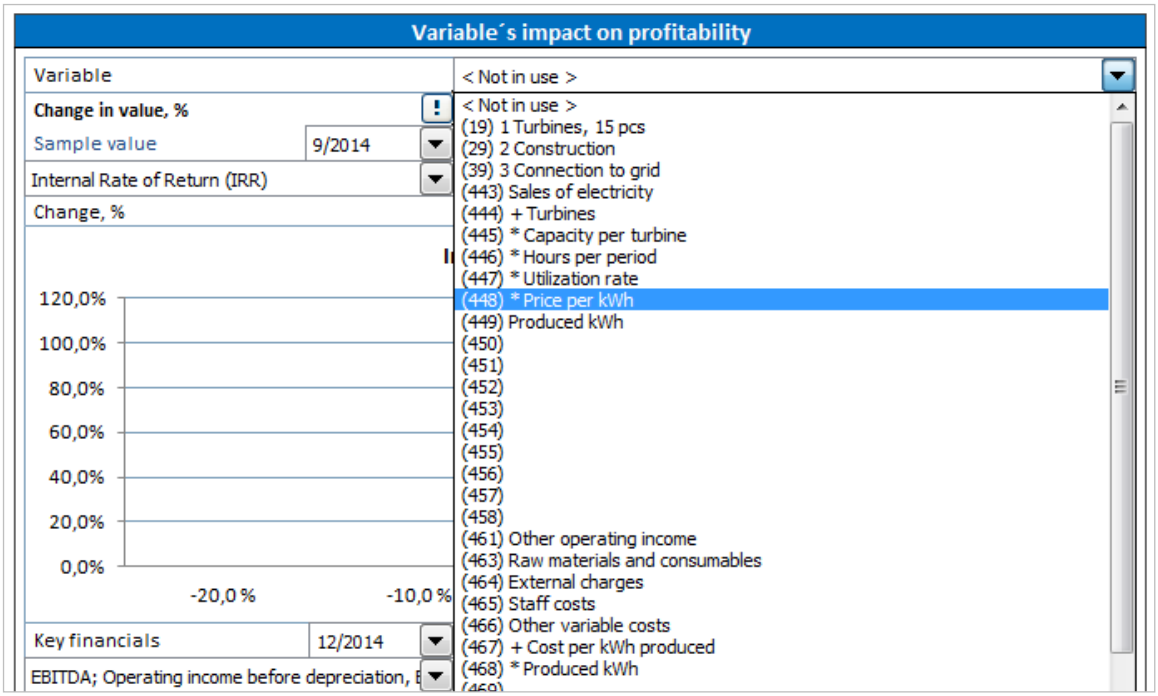
Refer to Item 5.4. Income analysis. Here you simulate the effect of changes in variable costs.

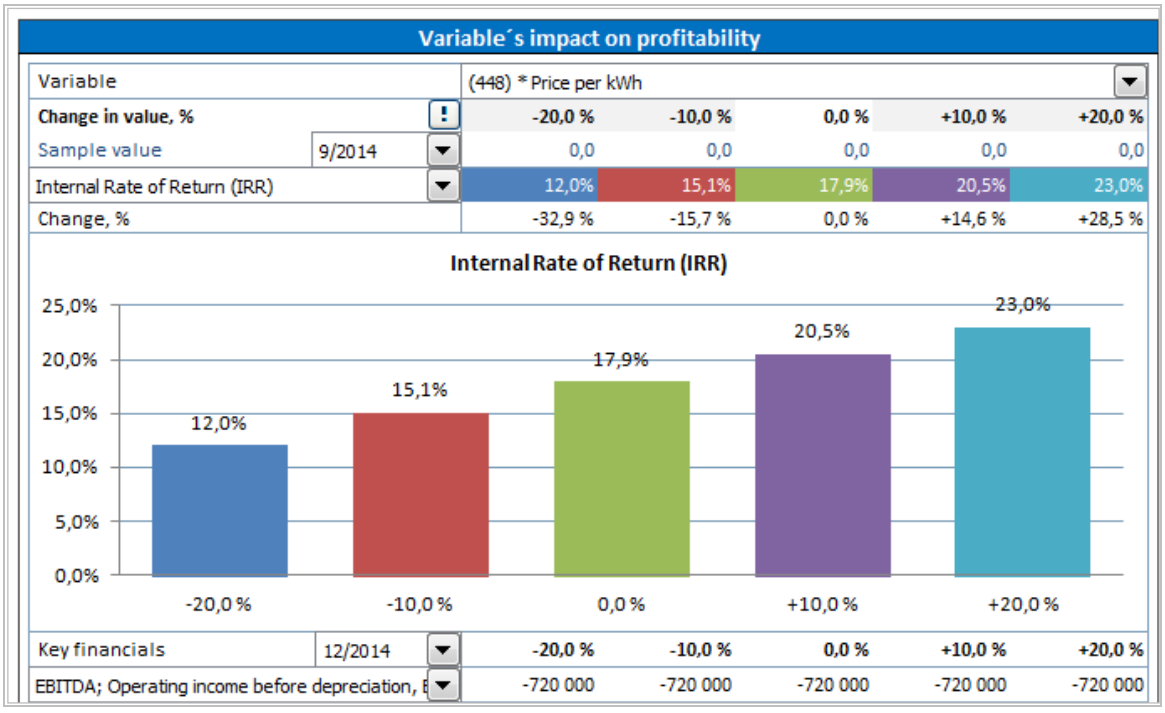
5.6 Fixed costs analysis

Refer to Item 5.4. Income analysis. Here you simulate the effect of changes in fixed costs.

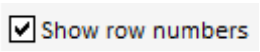
5.7 Income variable analyses

You can create up to 6 Income variable analyses. An Income variable can be selected from Investment rows, Income rows, Variable cost rows or fixed cost rows. Example:



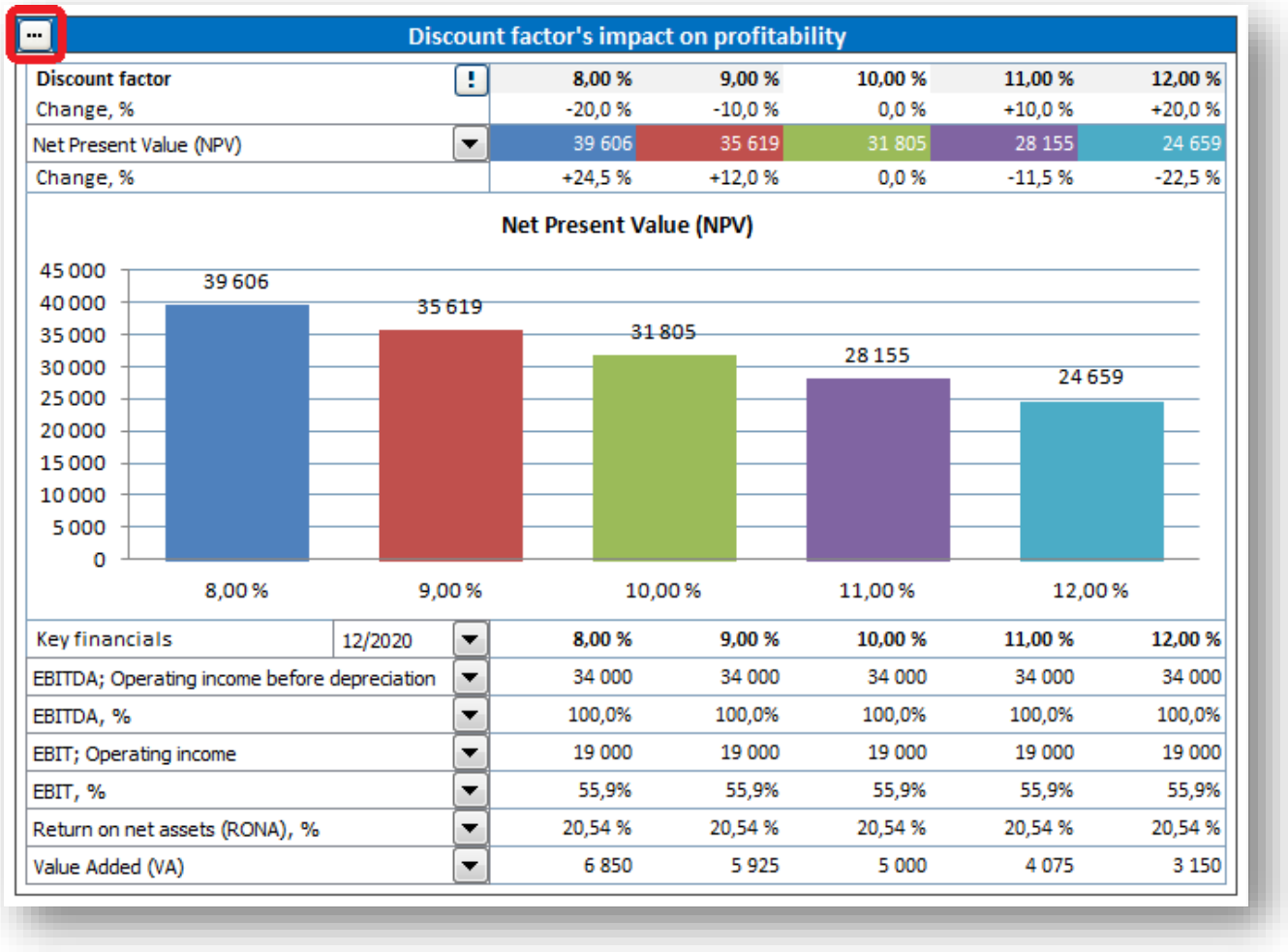


You can choose if you want to include row numbers in the dropdown lists with the check button beside the analysis:



5.8 Hide/unhide Key financials in Analyses

Press the ... button in the upper left of an analysis to hide/unhide Key financial rows in analyses.

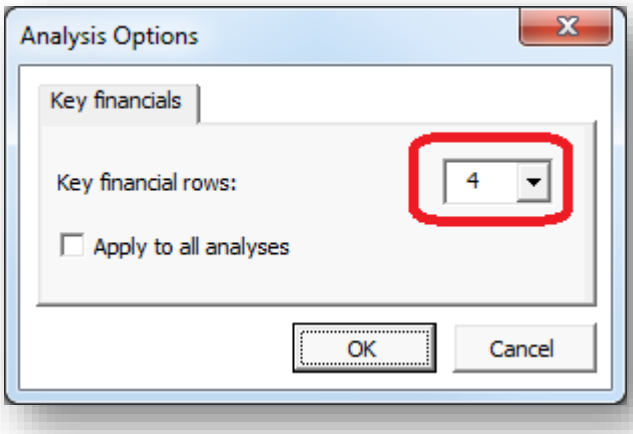


Discount factor's impact on profitability

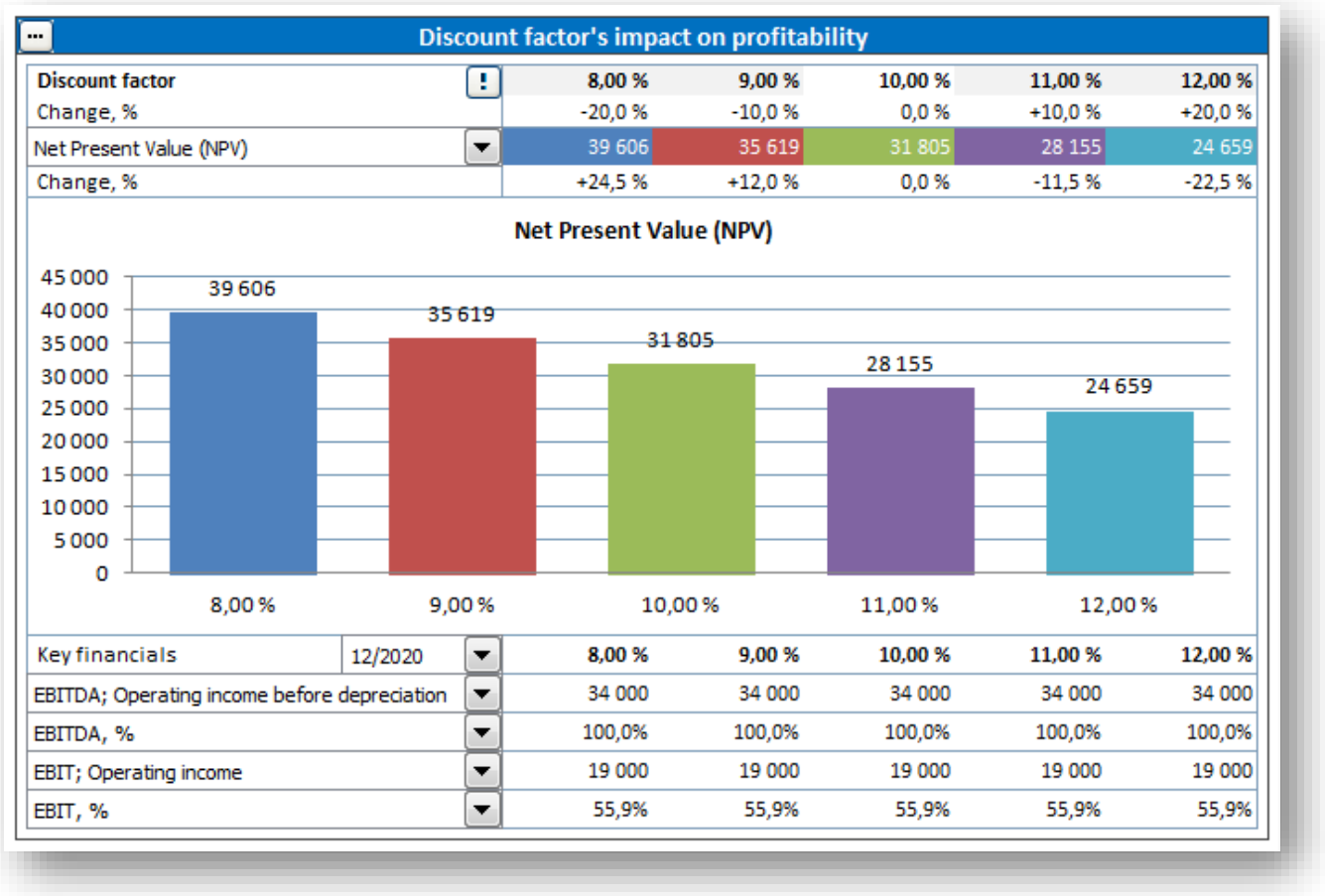
Discount factor	8,00 %	9,00 %	10,00 %	11,00 %	12,00 %
Change, %	-20,0 %	-10,0 %	0,0 %	+10,0 %	+20,0 %
Net Present Value (NPV)	39 606	35 619	31 805	28 155	24 659
Change, %	+24,5 %	+12,0 %	0,0 %	-11,5 %	-22,5 %

Key financials	12/2020	8,00 %	9,00 %	10,00 %	11,00 %	12,00 %
EBITDA; Operating income before depreciation		34 000	34 000	34 000	34 000	34 000
EBITDA, %		100,0%	100,0%	100,0%	100,0%	100,0%
EBIT; Operating income		19 000	19 000	19 000	19 000	19 000
EBIT, %		55,9%	55,9%	55,9%	55,9%	55,9%
Return on net assets (RONA), %		20,54 %	20,54 %	20,54 %	20,54 %	20,54 %
Value Added (VA)		6 850	5 925	5 000	4 075	3 150

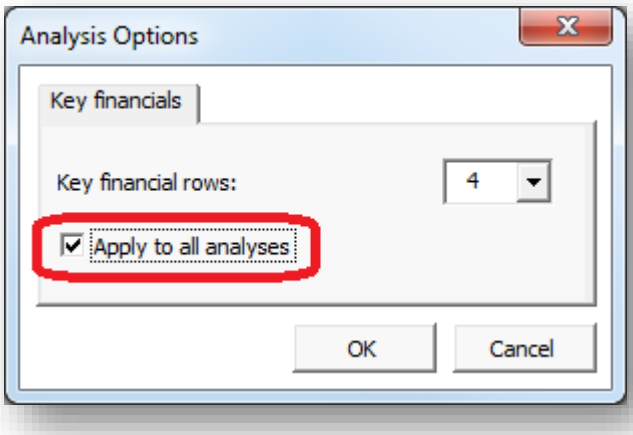
Choose number of rows to include.



Unwanted rows are hidden.



You can choose to apply the settings on all analyses by checking “Apply to all analysis”.



5.9 Monte Carlo simulation

Monte Carlo simulation can be used to evaluate the risk of one or more variables of a project. Random numbers are entered in the variable cell(s) to calculate the distribution of result values. Variables are expected to have a normal distribution, i.e. any value in the specified range between minimum and maximum value is valid.

As an example, one big uncertainty of a wind power plant could be the selling price of electricity.

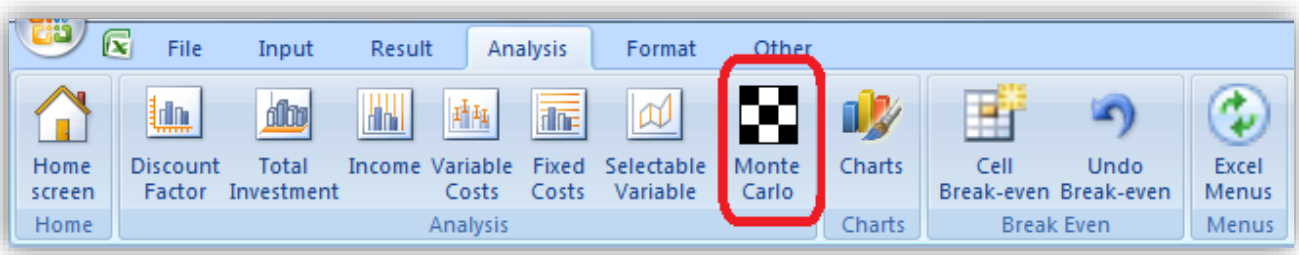
INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation	Depr.-%	7/2017	12/2017	12/2018	12/2019	12/2020	12/2021
Months per interval			6	12	12	12	12
1 **Turbines**		-600 000	-2 400 000				
Depreciation (straight line)	6,67%			-200 000	-200 000	-200 000	-200 000
Book value		600 000	3 000 000	2 800 000	2 600 000	2 400 000	2 200 000
2 **Connection fee**		-22 000	-88 000				
Depreciation (straight line)	6,67%			-7 333	-7 333	-7 333	-7 333
Book value		22 000	110 000	102 667	95 333	88 000	80 667
3 **Costs of establishing**		-100 000	-400 000				
Depreciation (straight line)	6,67%			-33 333	-33 333	-33 333	-33 333
Book value		100 000	500 000	466 667	433 333	400 000	366 667
Investments		-722 000	-2 888 000	0	0	0	0
Realizations		0	0	0	0	0	0
Depreciation		0	0	-240 667	-240 667	-240 667	-240 667
Realization profit (+) / loss (-)		0	0	0	0	0	0
Book value		722 000	3 610 000	3 369 333	3 128 667	2 888 000	2 647 333

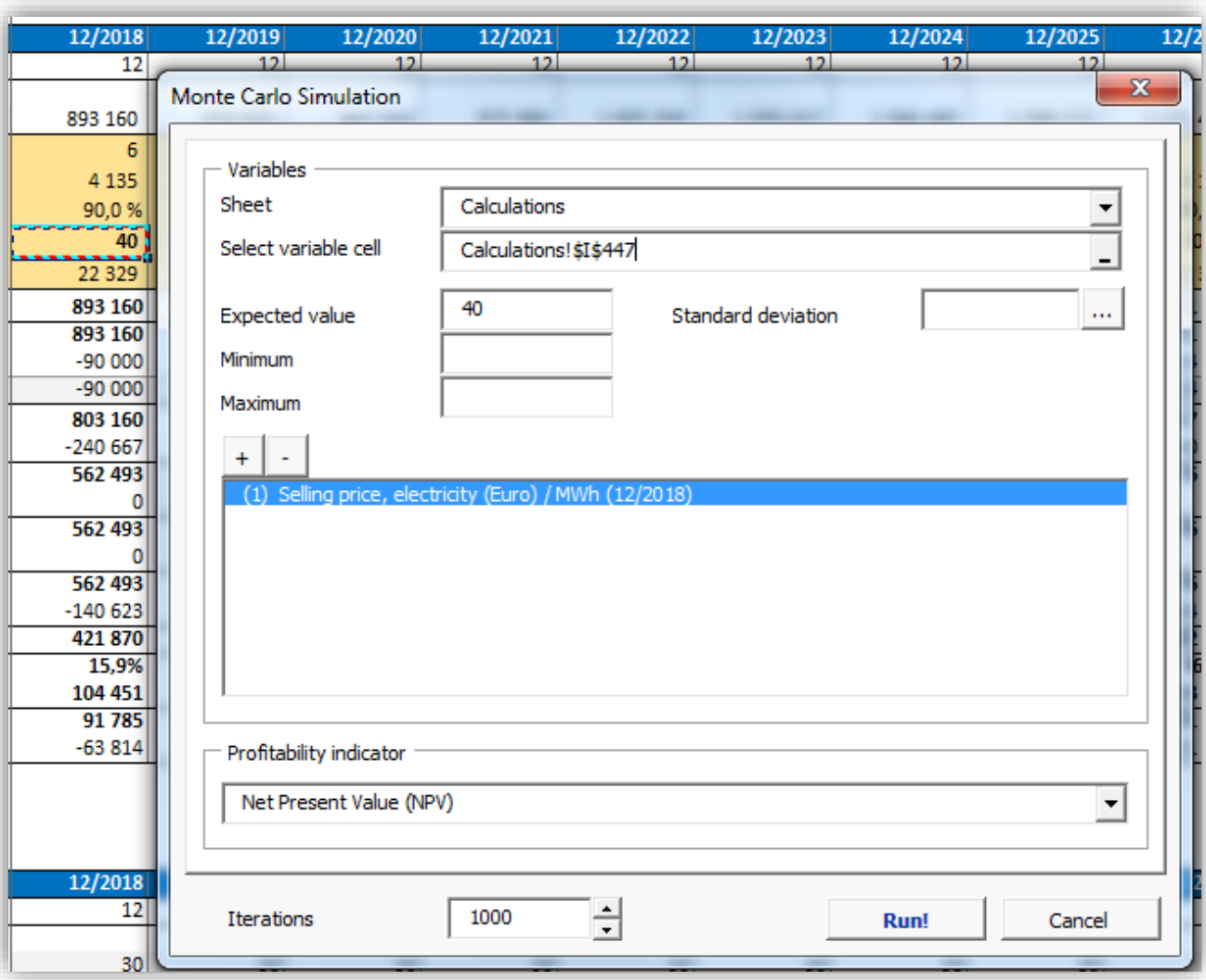
INCOME STATEMENT

€	7/2017	12/2017	12/2018	12/2019	12/2020	12/2021
Months per interval		6	12	12	12	12
Income specified:						
Electricity income		0	893 160	919 955	947 553	975 980
+ Turbines			6	6	6	6
• Capacity (MWh) turbine / year			4 135	4 135	4 135	4 135
• Utilization rate			90,0 %	90,0 %	90,0 %	90,0 %
• **Selling price, electricity (Euro) / MWh**			40	41,20	42,44	43,71
Production, MWh			22 329	22 329	22 329	22 329
Income	0	0	893 160	919 955	947 553	975 980
Gross margin	0	0	893 160	919 955	947 553	975 980
Fixed costs	0	0	-90 000	-92 700	-95 481	-98 345
Operational costs			-90 000	-92 700	-95 481	-98 345
EBITDA; Operating income before depreciation	0	0	803 160	827 255	852 072	877 635
Depreciation	0	0	-240 667	-240 667	-240 667	-240 667
EBIT; Operating income	0	0	562 493	586 588	611 406	636 968

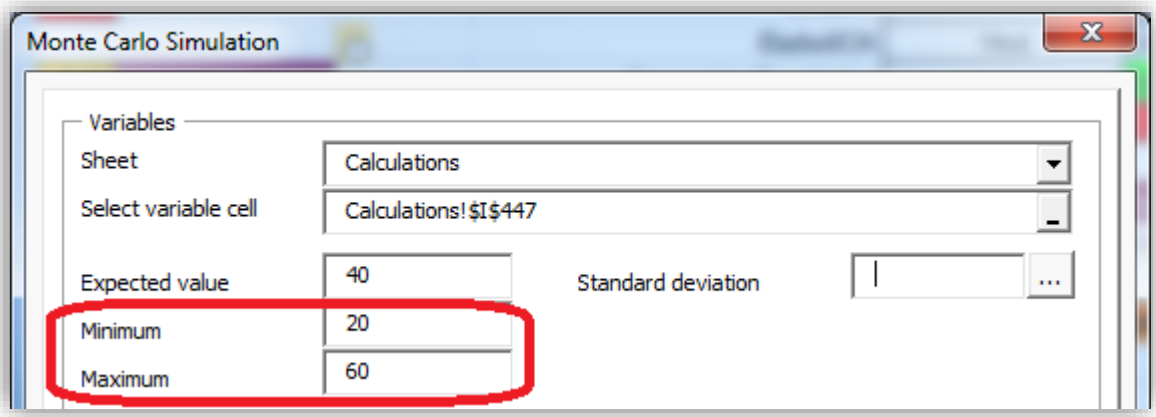
When we have the calculation made so that future selling price is dependent of first year's price, we can use Monte Carlo simulation to evaluate the risk. Press "Monte Carlo" in the "Analysis" section of the Invest for Excel ribbon menu to create a Monte Carlo simulation.



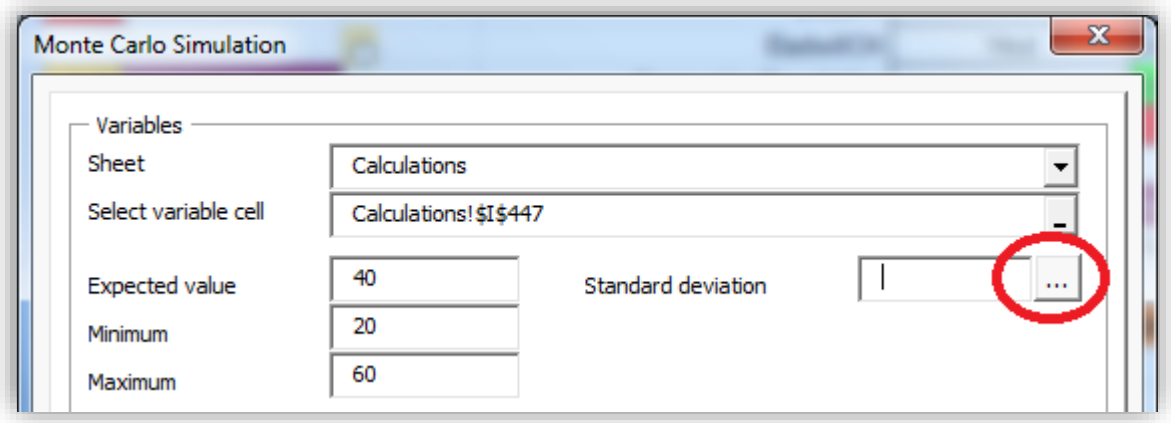
Select the first year's selling price cell from the "Calculations" sheet.



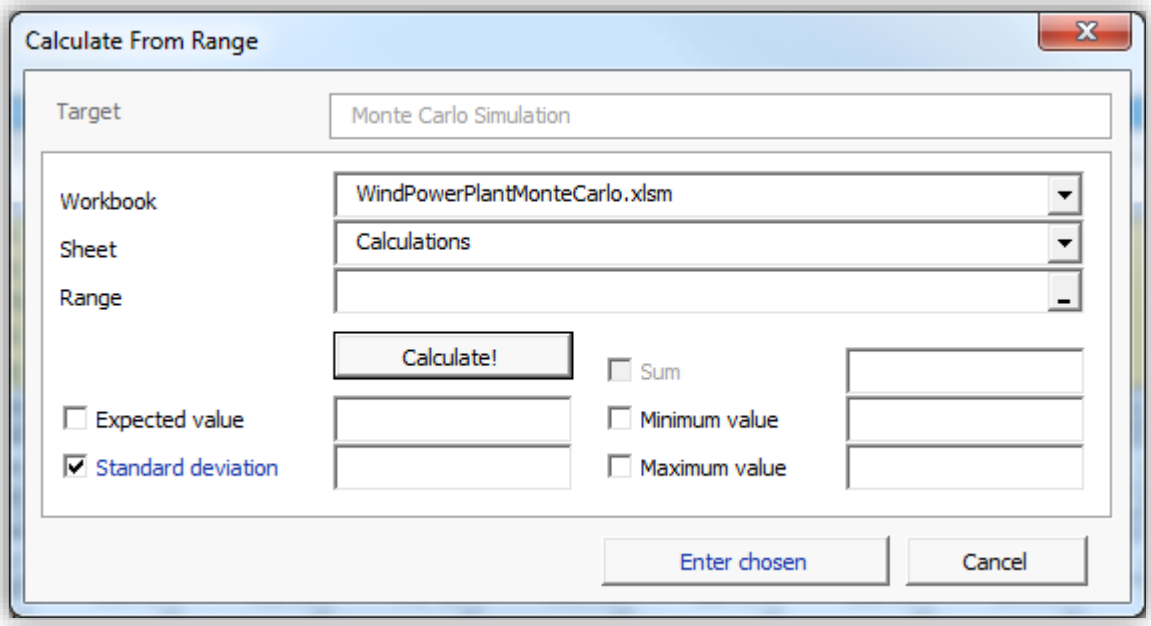
The cell value becomes the expected value. Enter minimum and maximum value for the selling price of electricity. We assume the price could go as down as 20 and as high as 60 in 2018.



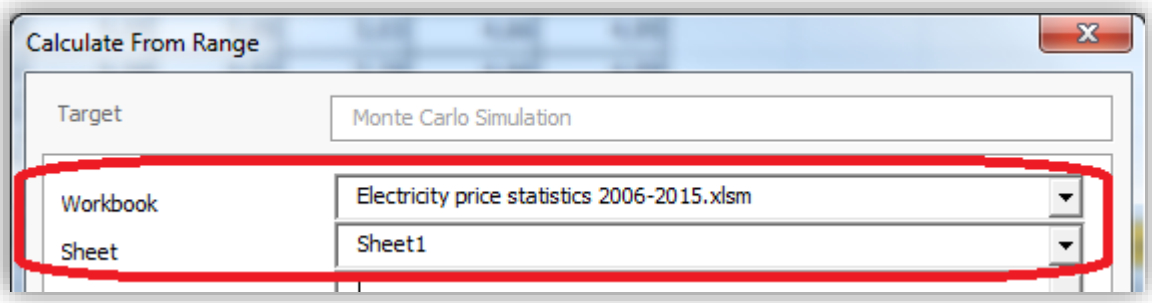
Let's assume that we don't know what the standard deviation of the selling price of electricity could be, but we have found statistical data of previous year's prices. We can easily calculate the standard deviation from this data. Press the "..." button by the standard deviation box.



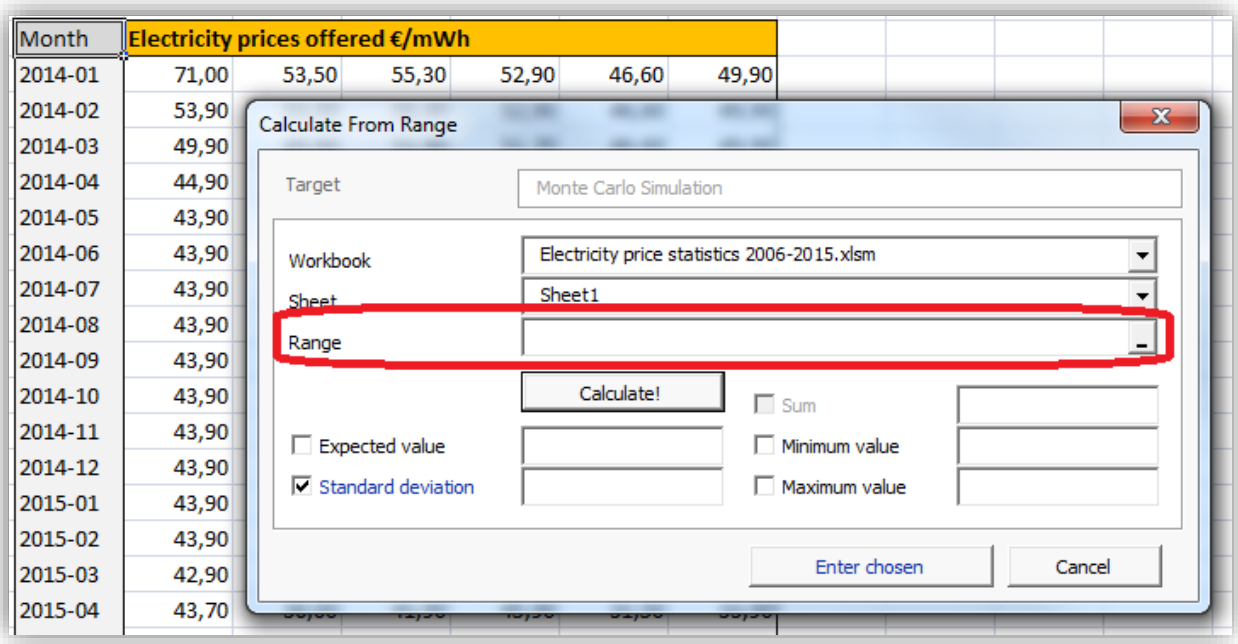
A dialog box for calculating standard deviation from a range of values is shown.

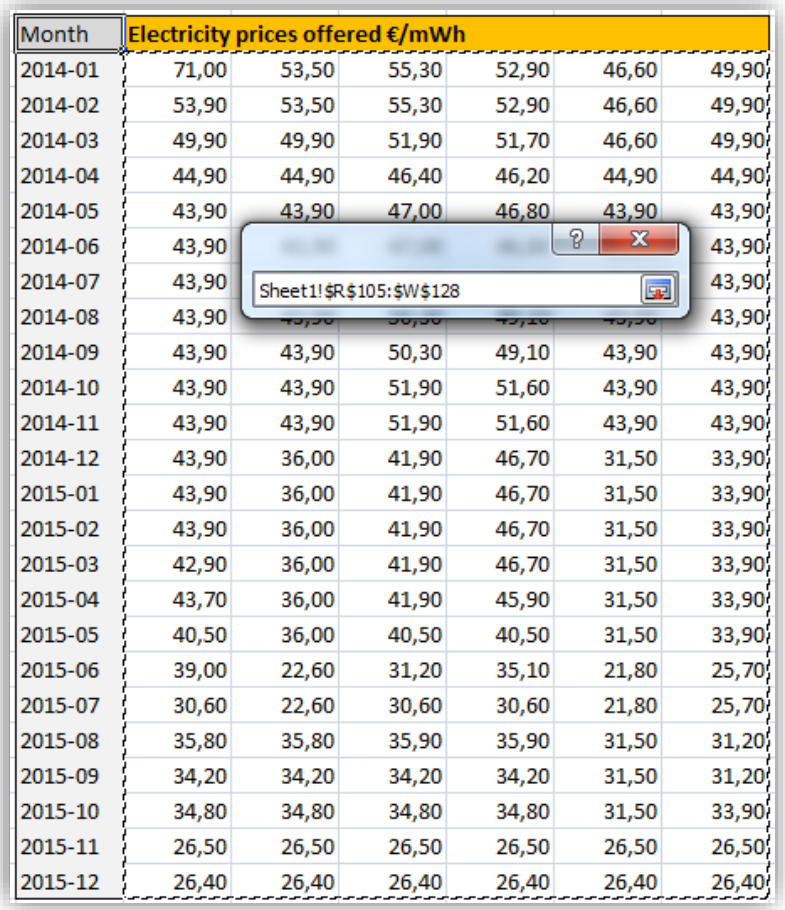


Choose the workbook and sheet with the price data.



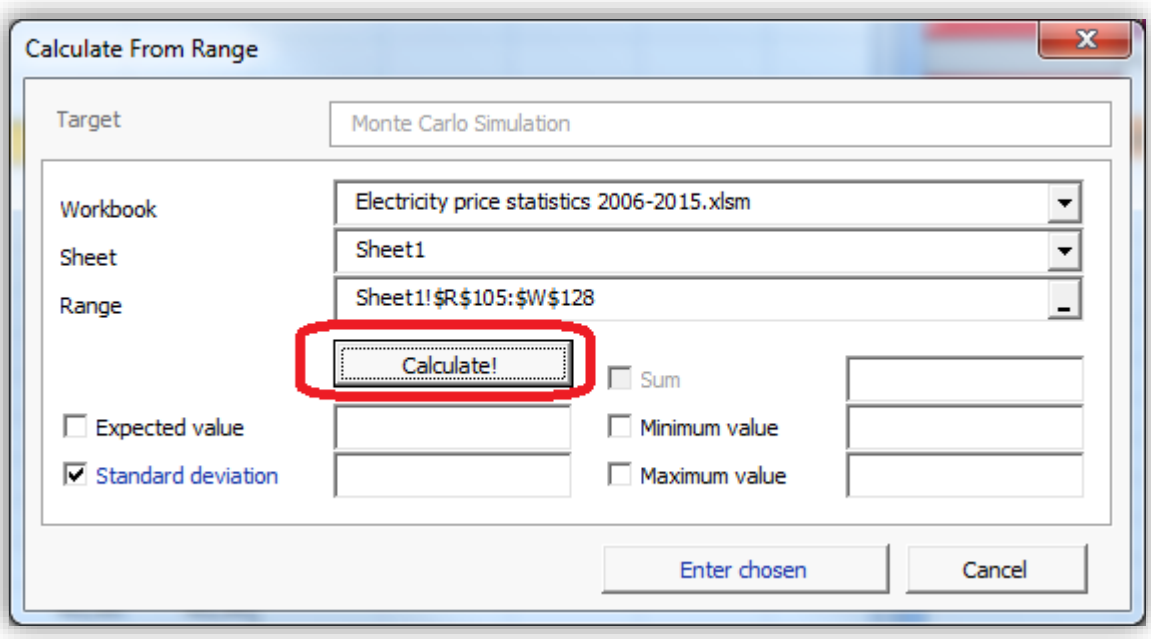
Put the cursor in the range field and select the range with the data from the sheet.



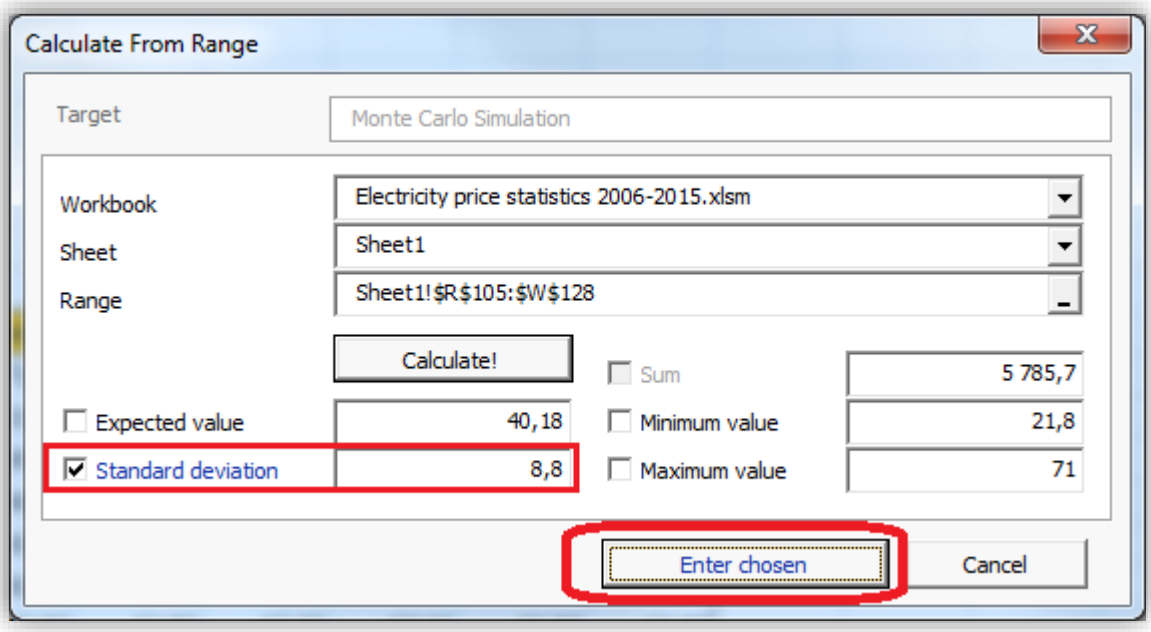


Month	Electricity prices offered €/mWh					
2014-01	71,00	53,50	55,30	52,90	46,60	49,90
2014-02	53,90	53,50	55,30	52,90	46,60	49,90
2014-03	49,90	49,90	51,90	51,70	46,60	49,90
2014-04	44,90	44,90	46,40	46,20	44,90	44,90
2014-05	43,90	43,90	47,00	46,80	43,90	43,90
2014-06	43,90					43,90
2014-07	43,90					43,90
2014-08	43,90					43,90
2014-09	43,90	43,90	50,30	49,10	43,90	43,90
2014-10	43,90	43,90	51,90	51,60	43,90	43,90
2014-11	43,90	43,90	51,90	51,60	43,90	43,90
2014-12	43,90	36,00	41,90	46,70	31,50	33,90
2015-01	43,90	36,00	41,90	46,70	31,50	33,90
2015-02	43,90	36,00	41,90	46,70	31,50	33,90
2015-03	42,90	36,00	41,90	46,70	31,50	33,90
2015-04	43,70	36,00	41,90	45,90	31,50	33,90
2015-05	40,50	36,00	40,50	40,50	31,50	33,90
2015-06	39,00	22,60	31,20	35,10	21,80	25,70
2015-07	30,60	22,60	30,60	30,60	21,80	25,70
2015-08	35,80	35,80	35,90	35,90	31,50	31,20
2015-09	34,20	34,20	34,20	34,20	31,50	31,20
2015-10	34,80	34,80	34,80	34,80	31,50	33,90
2015-11	26,50	26,50	26,50	26,50	26,50	26,50
2015-12	26,40	26,40	26,40	26,40	26,40	26,40

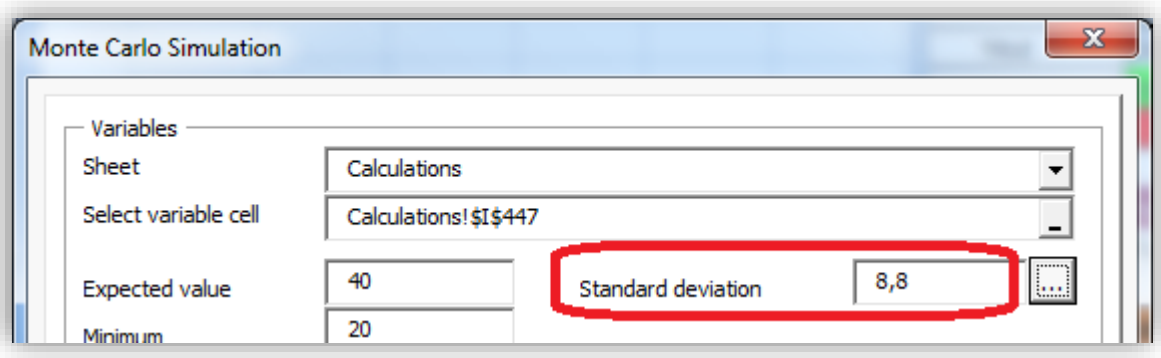
Press the “Calculate” button to calculate standard deviation.



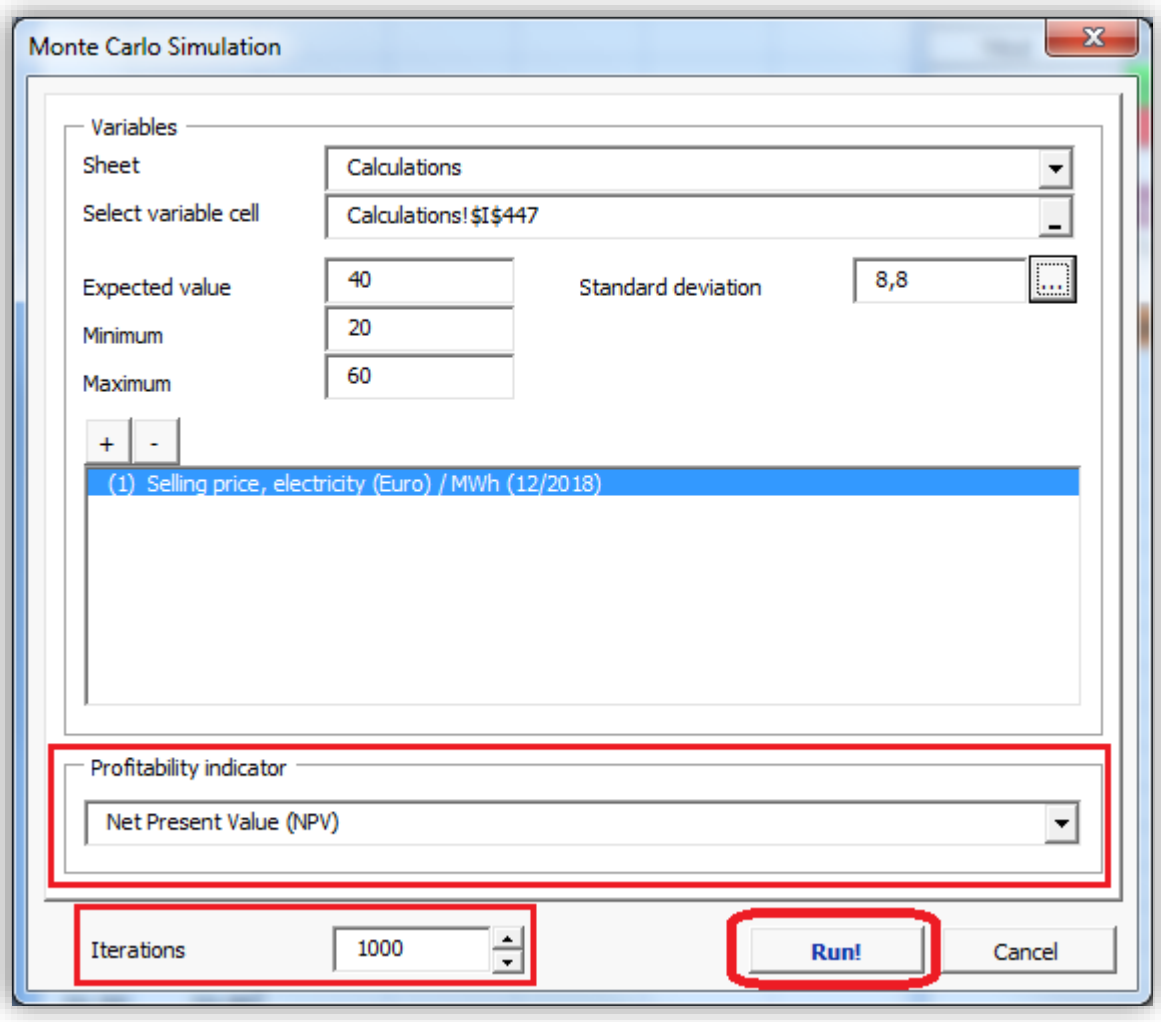
Standard deviation is calculated along with other supporting info.



We could choose to use other calculated values as well simply by checking the boxes in front of the text, but since the values are in line with what we already have specified, we will only include the Standard deviation. Press the “Enter chosen” button to enter the Standard deviation in the Monte Carlo Simulation form.

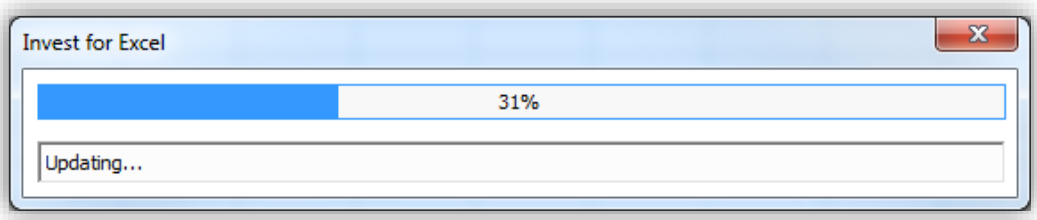


We could add more variables to the same simulation by pressing then "+" button, but we will keep this simulation simple and simulate selling price of electricity only.

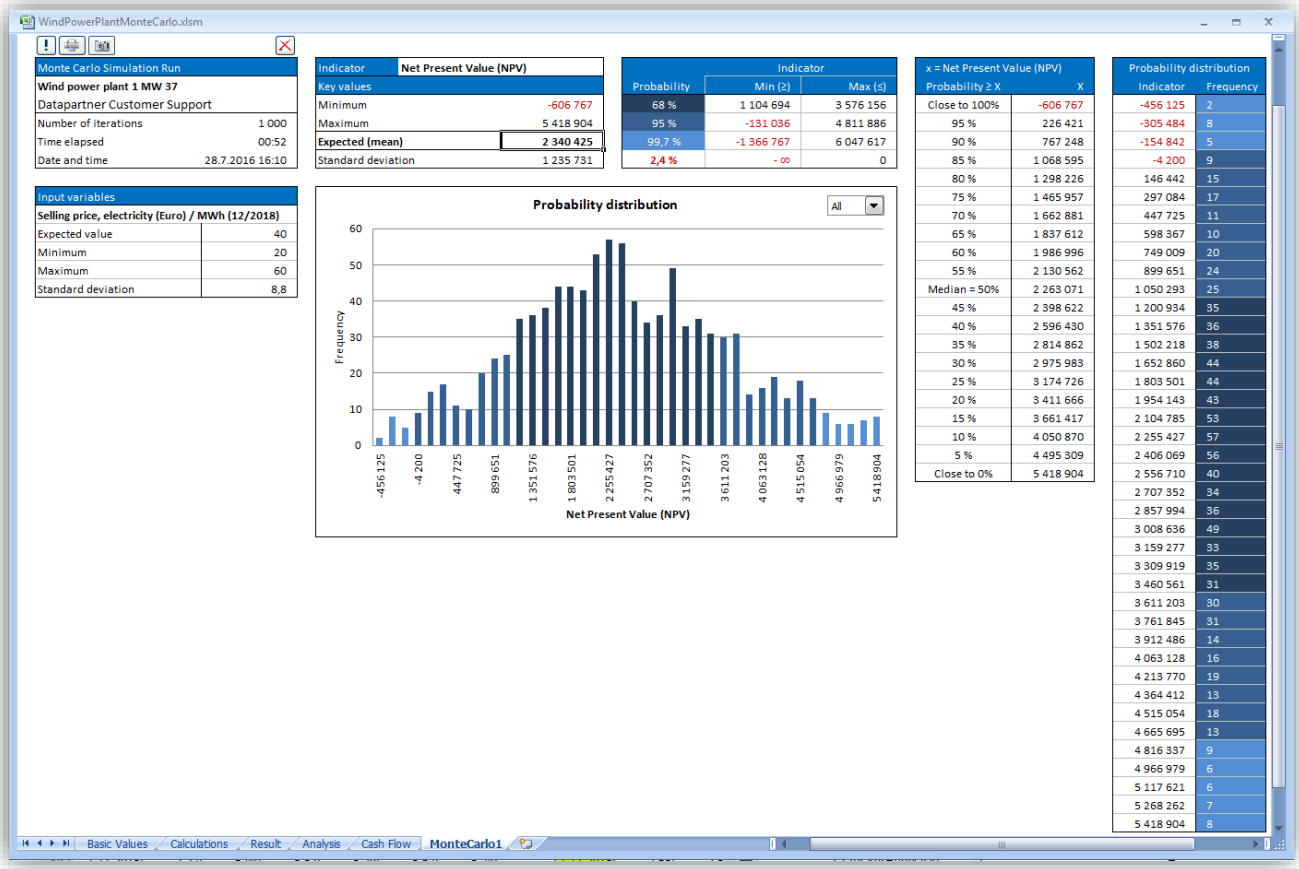


We will keep the default Profitability indicator Net Present Value (NPV) and keep Iteration at 1000. This means that 1000 random numbers between 20 and 60 are entered in variable cell and the resulting NPV is used in the Monte Carlo simulation distribution. Press the "Run" button to run the simulation.

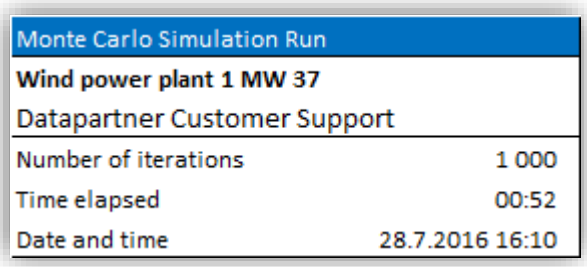
A progress bar is shown while the simulation is running. This could take several minutes.



When the simulation is ready, the result is shown in a new sheet.



At the upper left corner, general information is shown.



Below that, variable information is shown.

Input variables	
Selling price, electricity (Euro) / MWh (12/2018)	
Expected value	40
Minimum	20
Maximum	60
Standard deviation	8,8

The first box above the distribution chart shows the

Indicator	Net Present Value (NPV)
Key values	
Minimum	-606 767
Maximum	5 418 904
Expected (mean)	**2 340 425**
Standard deviation	1 235 731

We can see that the minimum NPV found is -606 767 and the maximum NPV is 5 418 904.

The expected NPV is 2 340 425. When we compare to the Profitability analysis, we can see that this quite close to the calculated NPV.

PROFITABILITY ANALYSIS

Project description	**Wind power plant 1 MW 37**			€
Nominal value of all investments		3 610 000	Discounted investments	3 488 202
Required rate of return		9,00 %		
Calculation term		15,5	years	7/2017 - 12/2032
Calculation point		7/2017	(In the beginning of period)	

	Present value of business cash flows	Nominal	PV	Notes
±	PV of operative cash flow		5 884 314	
+	PV of residual value	...	29 605	
	Present value of business cash flows		**5 913 918**	
-	Present value of reinvestments	0	0	
	Total Present Value (PV)		**5 913 918**	

	Investment proposal	Nominal	PV
-	Proposed investments in assets	-3 610 000	-3 488 202
+	Investment subventions	0	0
	Investment proposal	-3 610 000	-3 488 202

Net Present Value (NPV)	**2 425 716**	>= 0	->	profitable
NPV as a monthly annuity	23 720			
Internal Rate of Return (IRR)	18,35 %	>= 9 %	->	profitable
Modified Internal Rate of Return (MIRR)	12,78 %	>= 9 %	->	profitable

The standard deviation is 1 235 731 and tells about the variation of the NPV values.

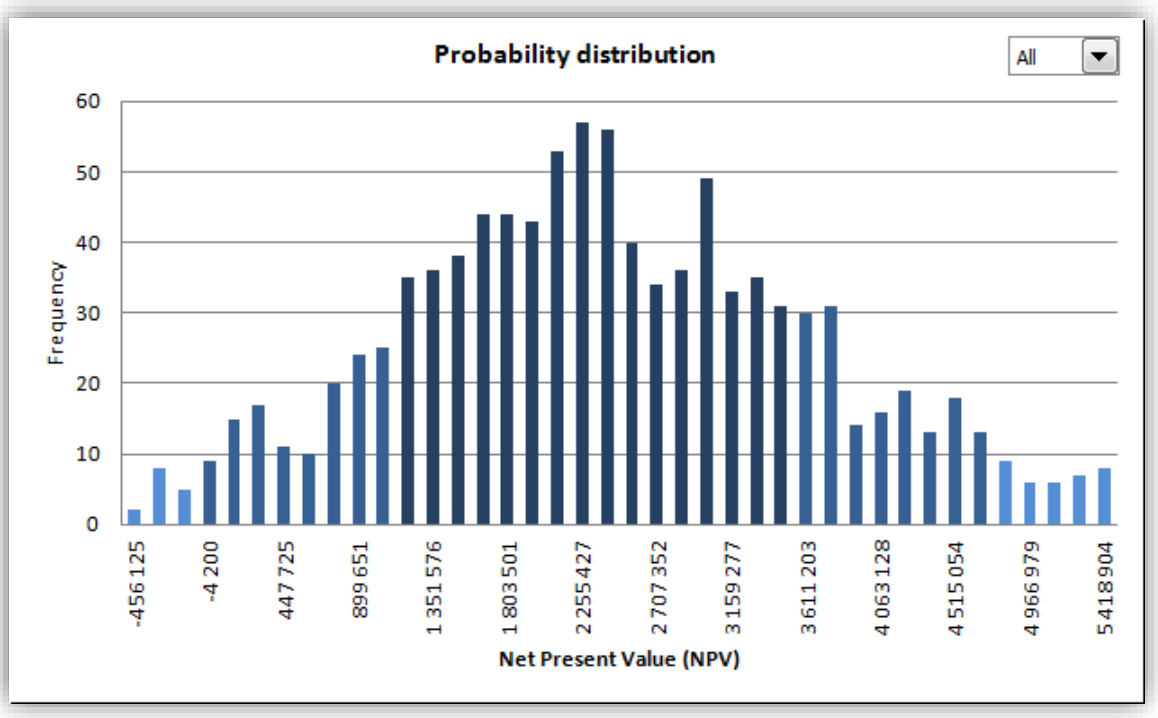
Probability	Indicator	
	Min (≥)	Max (≤)
68 %	1 104 694	3 576 156
95 %	-131 036	4 811 886
99,7 %	-1 366 767	6 047 617
2,4 %	- ∞	0

- There is a 68 % probability that the NPV will be between 1 104 694 and 3 576 156. This is equal to Expected NPV -+ Standard deviation.
- There is a 95 % probability that the NPV will be between -131 036 and 4 811 886. This is equal to Expected NPV -+ 2 * Standard deviation.
- There is a 99,7 % probability that the NPV will be between -1 366 76 and 6 047 617. This is equal to Expected NPV -+ 3 * Standard deviation.
- There is a 2,4 % probability that NPV will be negative.

The following table shows probabilities of NPV values exceeded. For example, there is a 95 % probability that NPV will exceed 226 421.

x = Net Present Value (NPV)	
Probability ≥ X	X
Close to 100%	-606 767
95 %	226 421
90 %	767 248
85 %	1 068 595
80 %	1 298 226
75 %	1 465 957
70 %	1 662 881
65 %	1 837 612
60 %	1 986 996
55 %	2 130 562
Median = 50%	2 263 071
45 %	2 398 622
40 %	2 596 430
35 %	2 814 862
30 %	2 975 983
25 %	3 174 726
20 %	3 411 666
15 %	3 661 417
10 %	4 050 870
5 %	4 495 309
Close to 0%	5 418 904

The chart shows distribution of the 1000 calculated NPV values.



The dropdown menu can be used to show different probabilities separately.

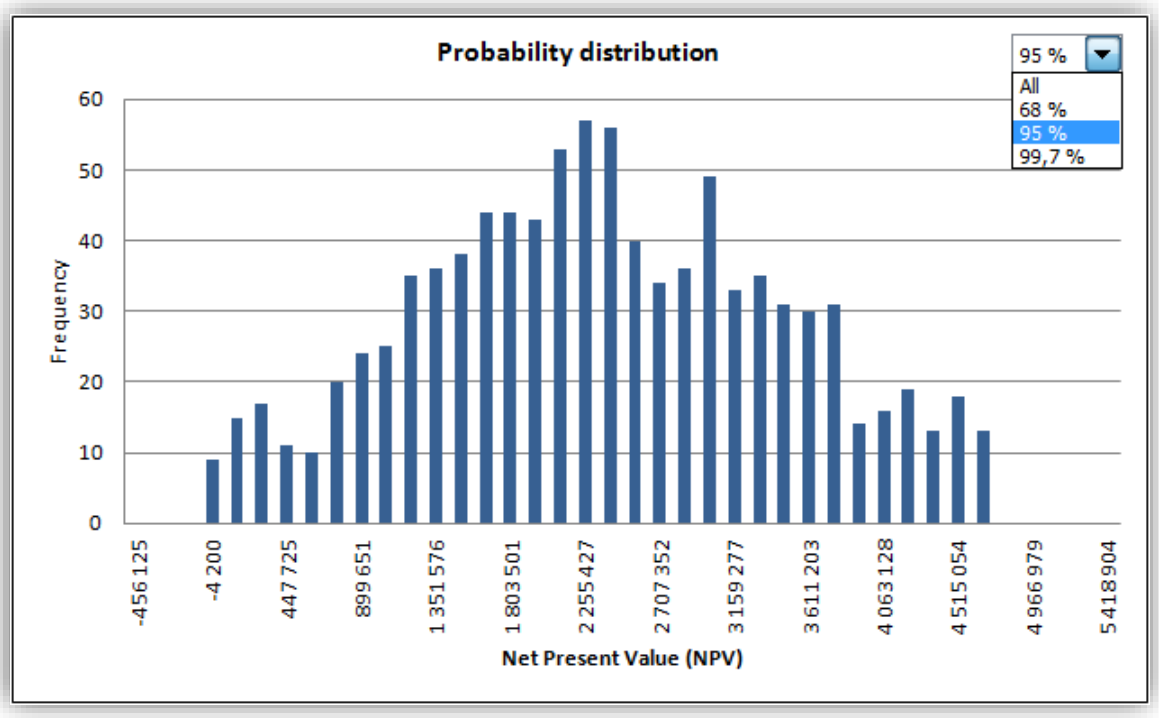
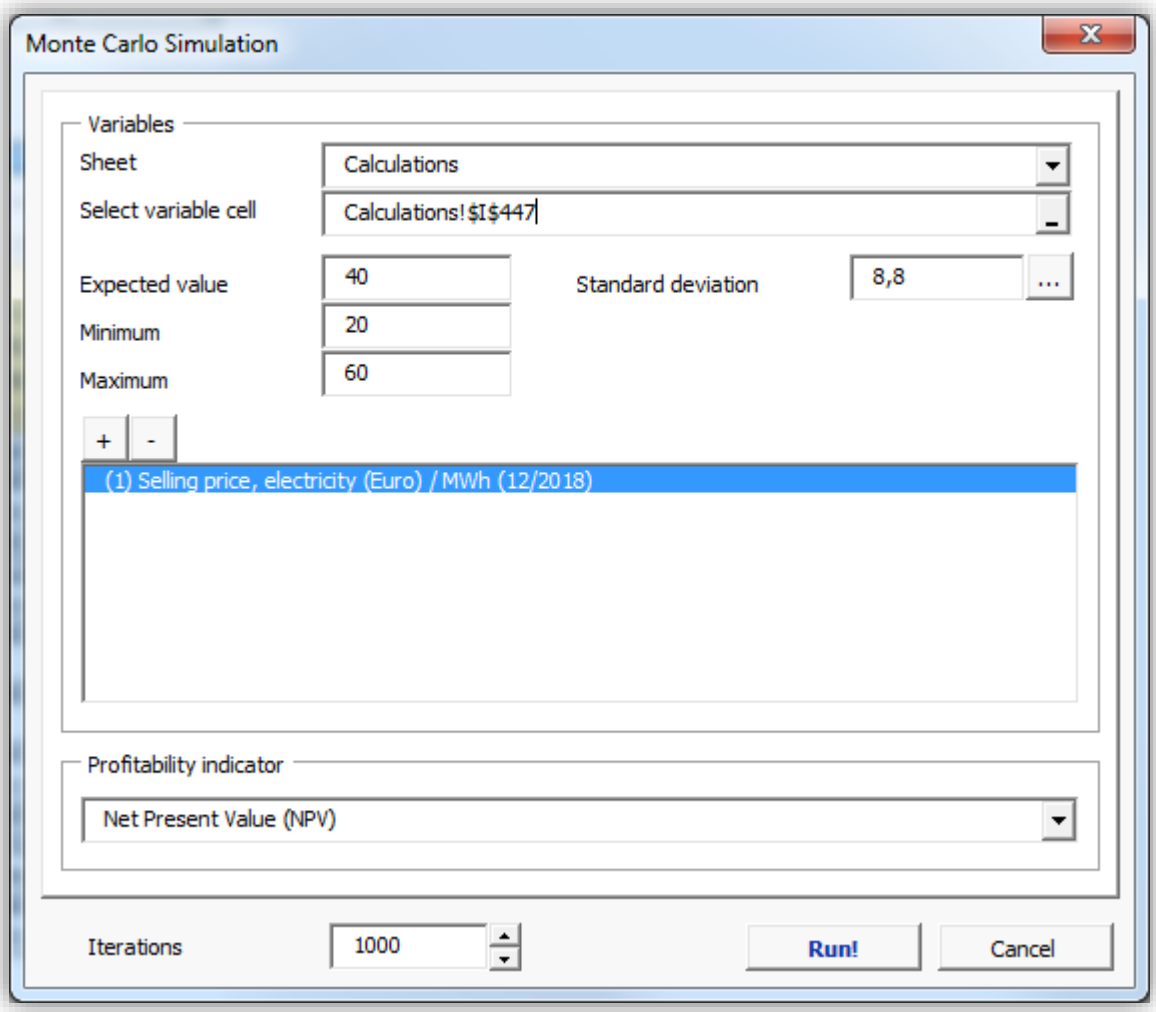


Chart values are also shown in table form.

Probability distribution	
Indicator	Frequency
-456 125	2
-305 484	8
-154 842	5
-4 200	9
146 442	15
297 084	17
447 725	11
598 367	10
749 009	20
899 651	24
1 050 293	25
1 200 934	35
1 351 576	36
1 502 218	38
1 652 860	44
1 803 501	44
1 954 143	43
2 104 785	53
2 255 427	57
2 406 069	56
2 556 710	40
2 707 352	34
2 857 994	36
3 008 636	49
3 159 277	33
3 309 919	35
3 460 561	31
3 611 203	30
3 761 845	31
3 912 486	14
4 063 128	16
4 213 770	19
4 364 412	13
4 515 054	18
4 665 695	13
4 816 337	9
4 966 979	6
5 117 621	6
5 268 262	7
5 418 904	8

The buttons in the upper left corner can be used to change, print , copy and delete the simulation.

Update the simulation. You can change, add and remove variable values if wanted. The Monte Carlo Simulation dialog box is shown.



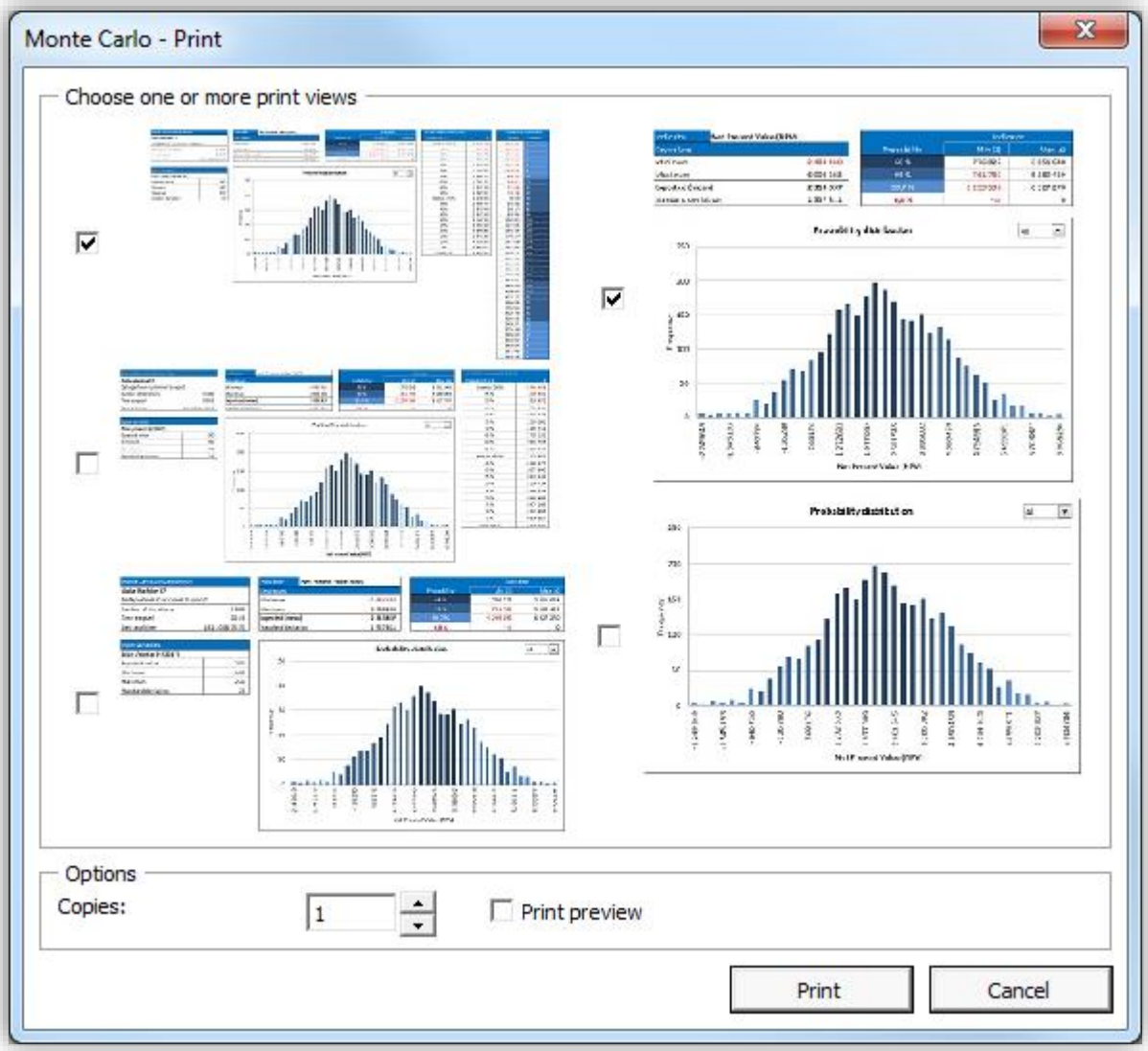
Print the simulation sheet.

Copy a picture of the simulation. When only one cell is selected, the whole sheet is copied. When more than one cell is selected, the selection is copied. This way you can easily select and copy any part of the simulation result.

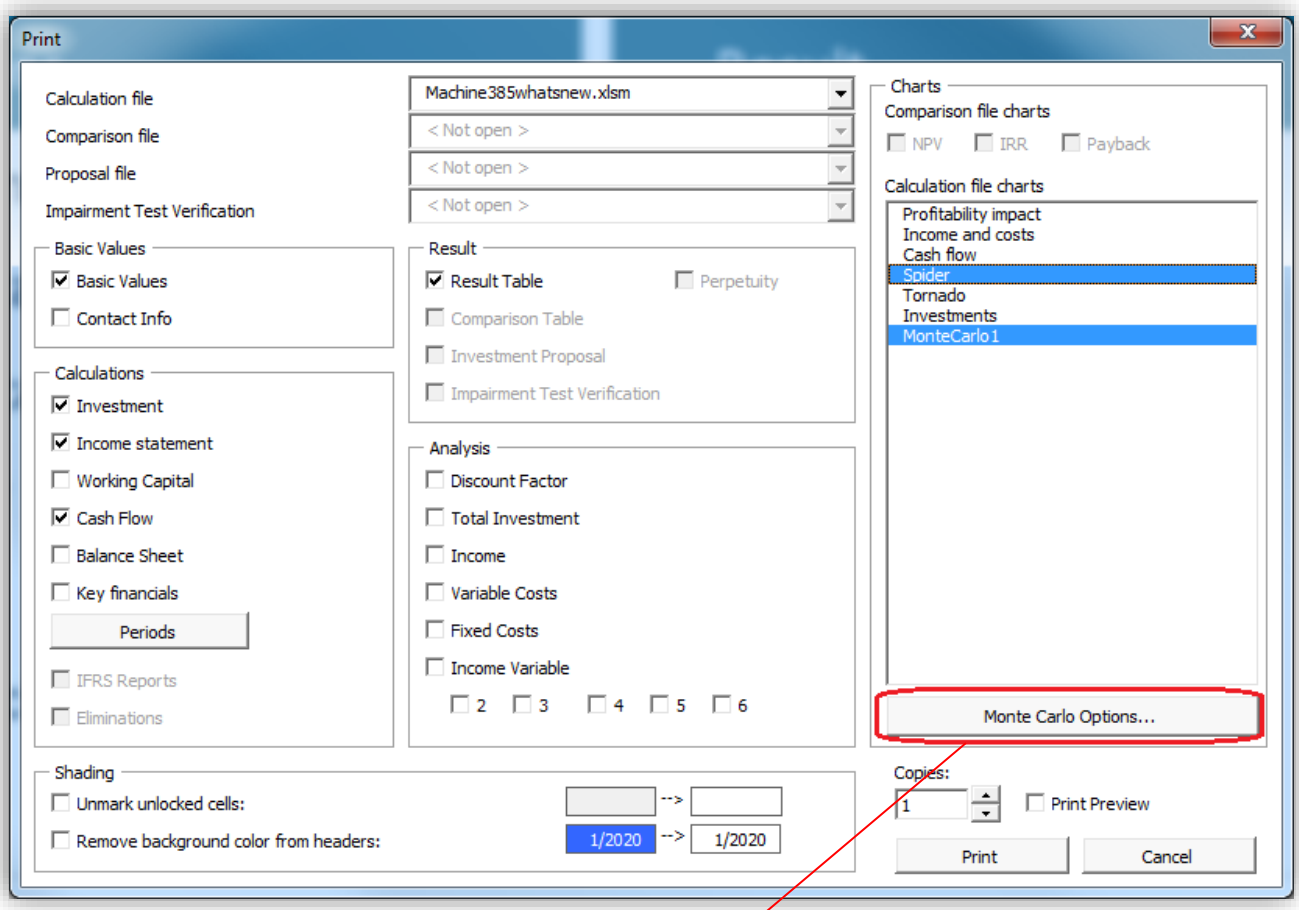
Delete the simulation.

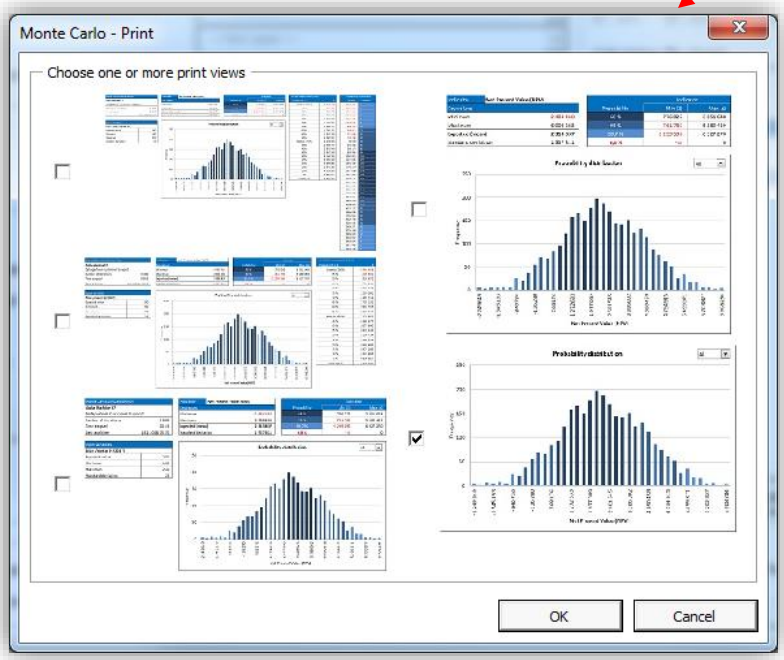
5.9.1 Printing options for Monte Carlo simulation

When printing a Monte Carlo simulation, you can easily choose from five views to print.



The printing options are also available when printing Monte Carlo simulations using mass printing.

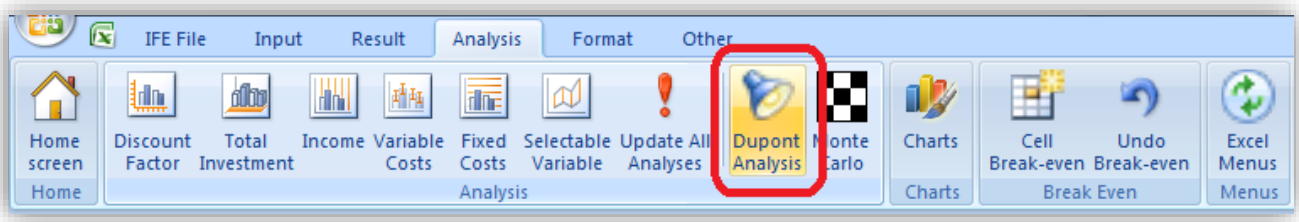




5.10 DuPont analysis

This function requires Invest for Excel Pro or Enterprise Edition.

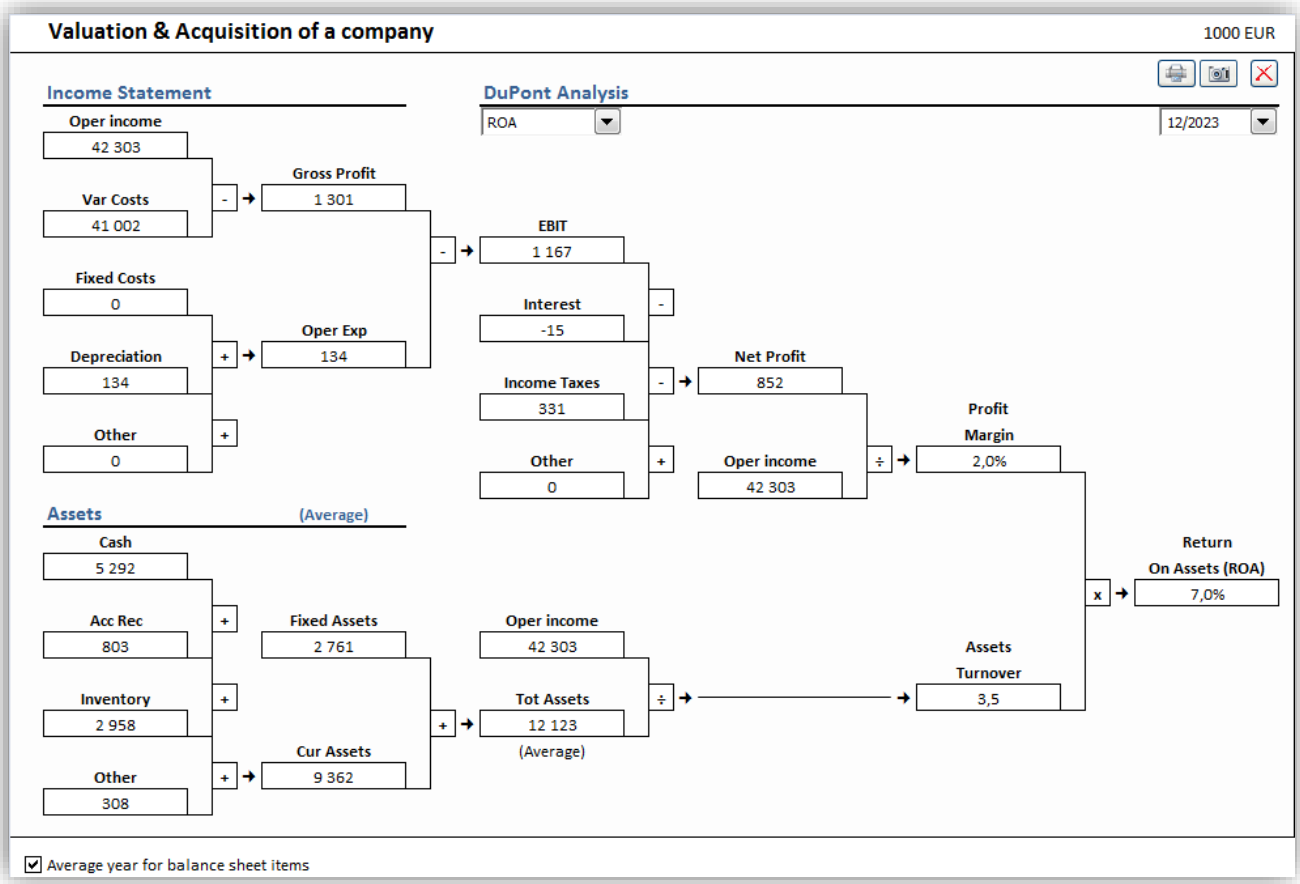
A DuPont analysis can be added to a calculation file by choosing “DuPont Analysis” in then “Analysis” menu. If a DuPont analysis already exists in the file, it will be activated.



The DuPont analysis is added in a new sheet.

5.10.1 Short analysis (ROA)

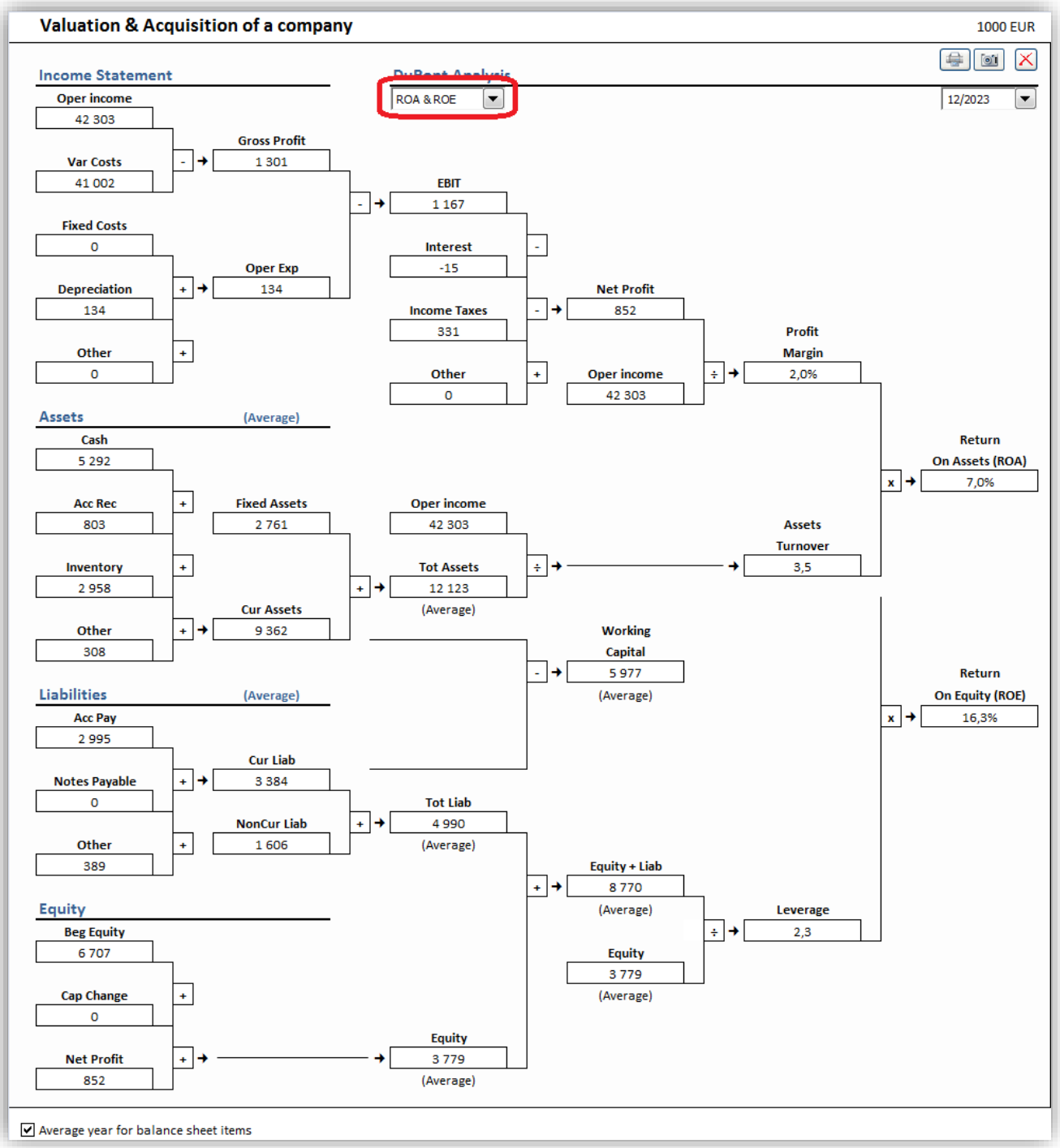
By default a short DuPont Analysis is shown calculating Return On Assets (ROA).



Return On Assets (ROA) is often also called Return On Investment (ROI) in the DuPont analysis.

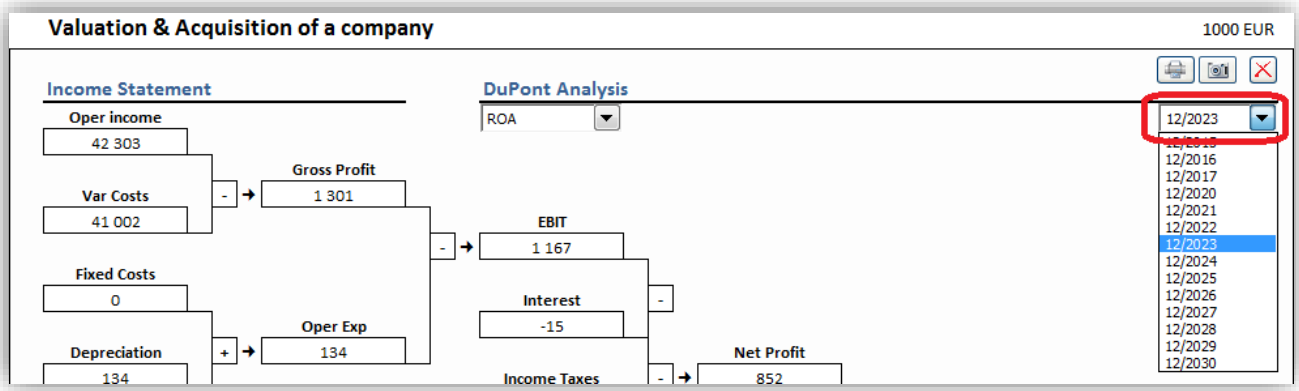
5.10.2 Long analysis (ROA and ROE)

You can change to a longer analysis by choosing ROA and ROE in the dropdown menu in the middle. Financing part of DuPont is included and ROE is calculated.



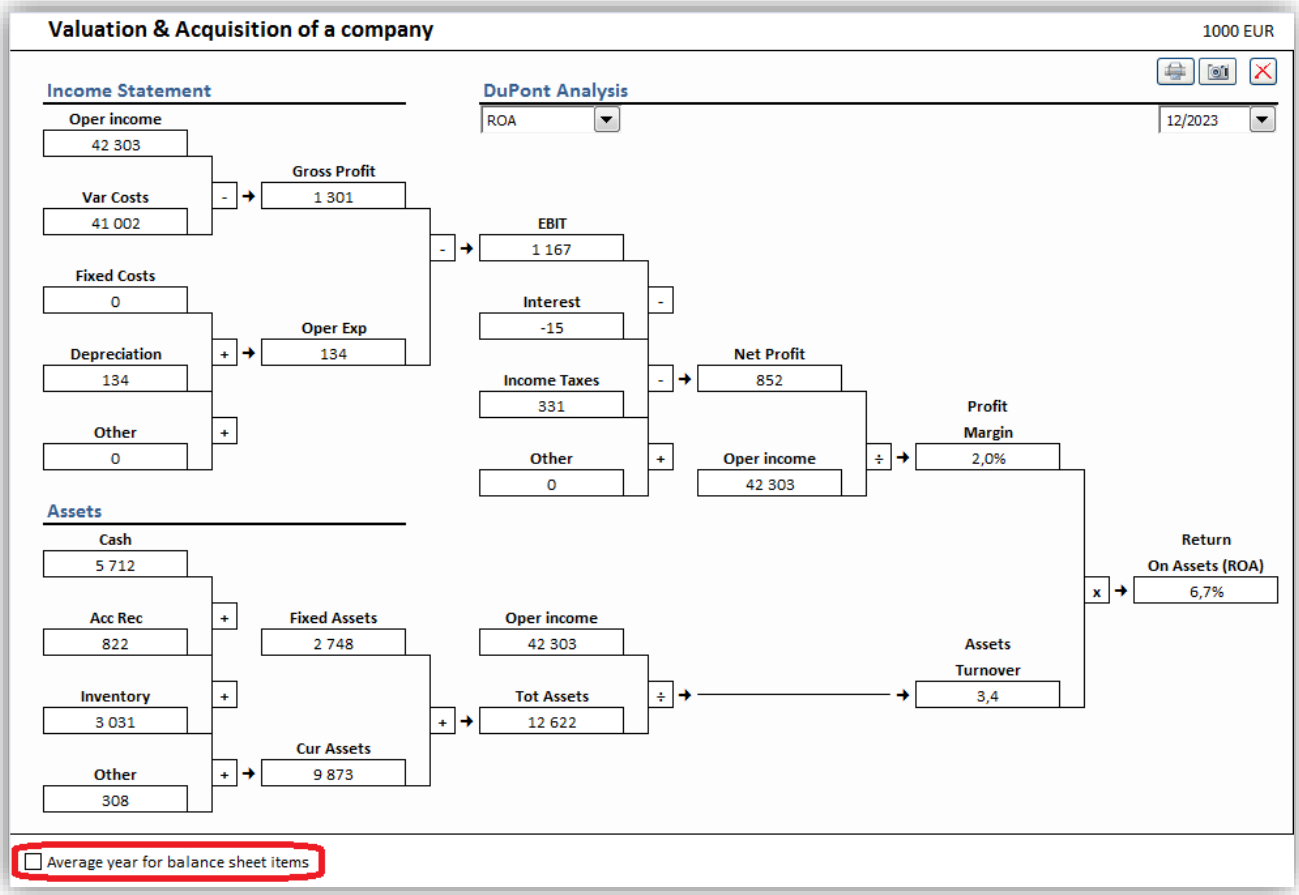
5.10.3 Year

The analysis is shown for one year. You can change year in upper right corner.



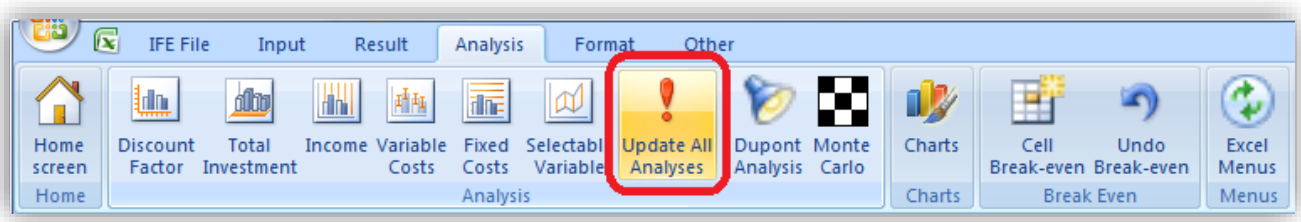
5.10.4 Average / year-end

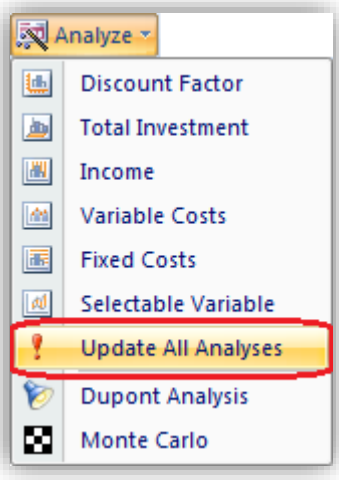
You can change from the default average balance sheet items to year-end numbers in the bottom left corner.



5.11 Update all analyses

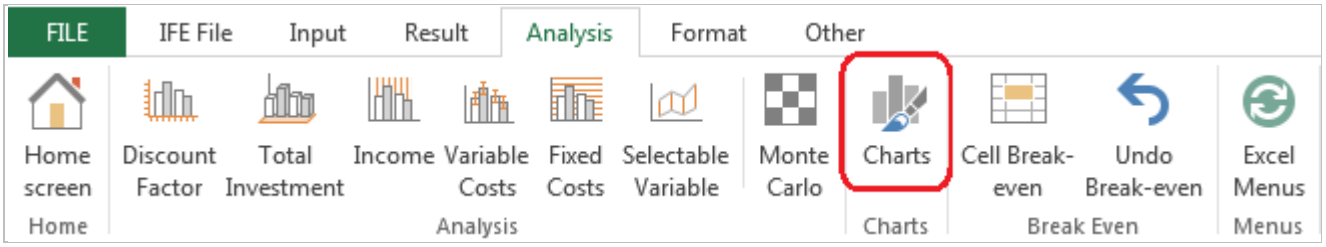
All analyses in a calculation file (with the exception of Monte Carlo analyses) can be updated by choosing ”Update All Analyses” from the “Analysis” menu tab or the “Analyze” menu in the “Invest” menu tab if Excel menus are active.



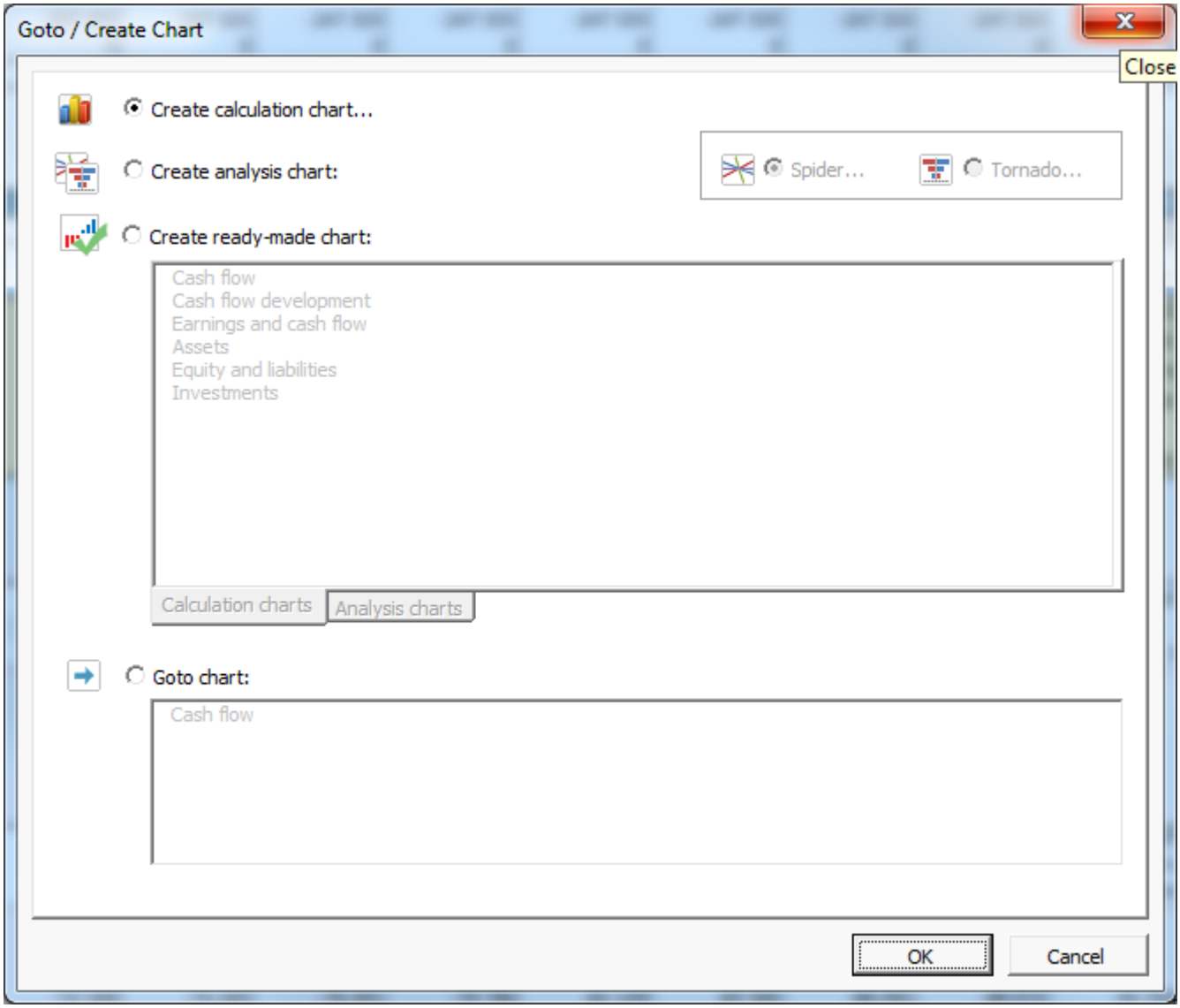


5.12 Charts

It is easy to create diagrams and sensitivity analyses for use in the investment calculation using the **Charts** function. Go to the **Analysis – Charts** menu**,**



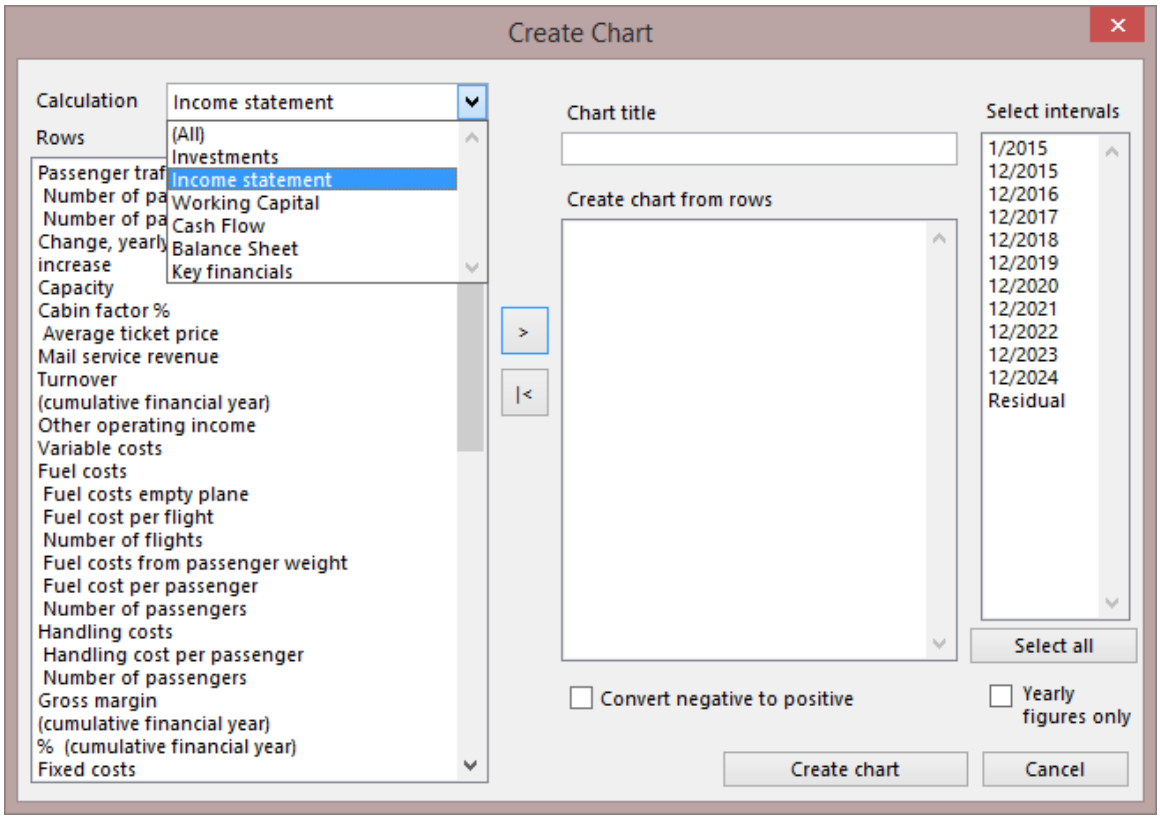
or use the  button. The **Charts** dialog box:



There are four alternatives in the dialog box:

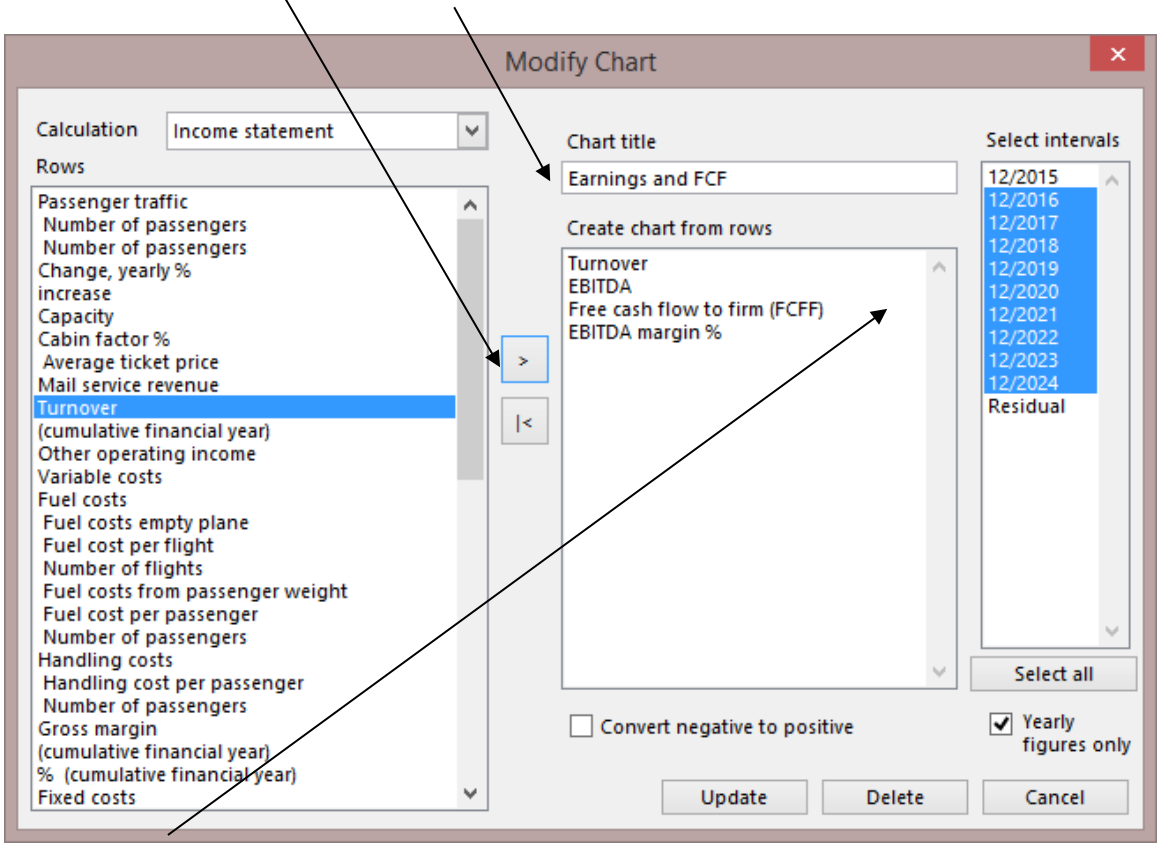
1) *Create new chart*,
2) *Create new analysis chart (Spider or Tornado)*,
3) *Create ready-made chart* and
4) *Goto chart*, if there are any existing charts in the file.

5.12.1 Create calculation chart

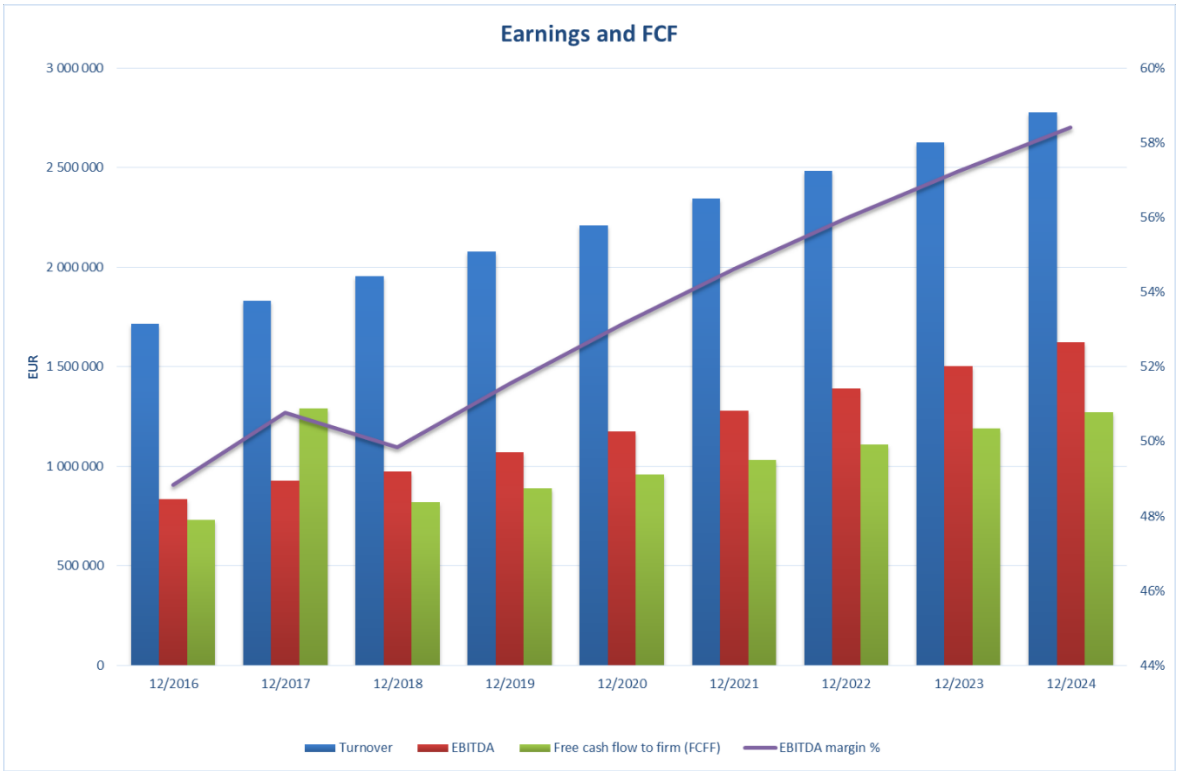


From the drop down menu, choose first the report or Input screen from which to import rows to your chart. Next, mark the row or rows (**Tip**: When selecting several rows at the same time, keep pressing the Ctrl button when selecting rows):

When you click the > button in the centre of the dialog box, the rows selected become sets of bars in your chart. Give your chart a title.

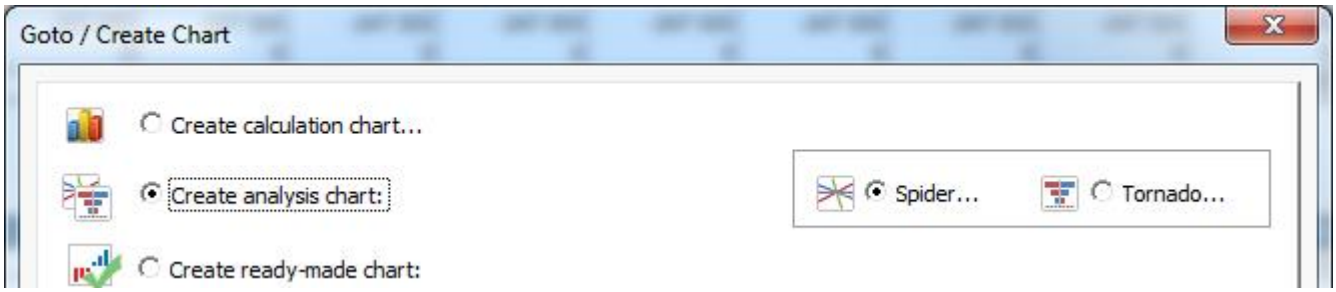


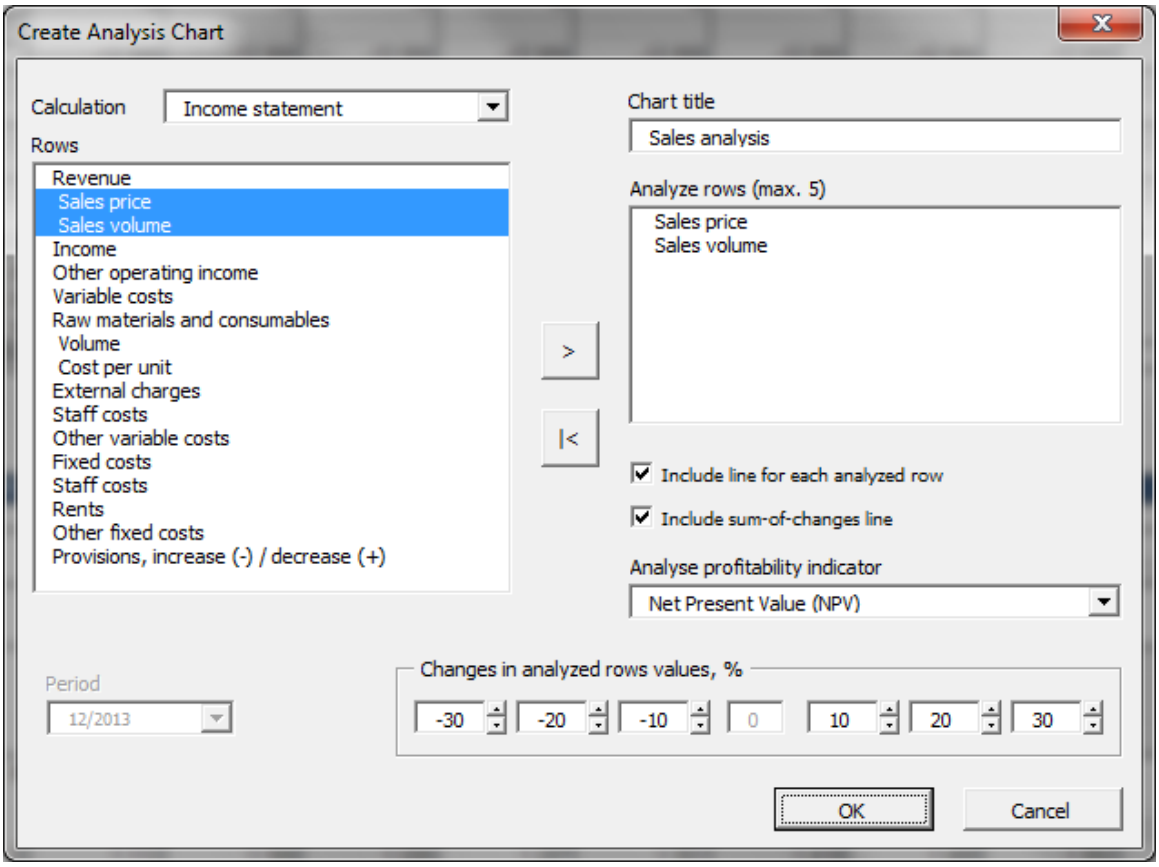
Select the periods that you want to include in your chart from the box to the right. Note! You can change the figures for periods shorter than a year to annual figures with a tick in the box **Yearly figures only**. Check the box **Convert negative to positive** to get the bars or lines of the chart above the X-axis, change the costs and investments to positive figures when appropriate. Click the **Create chart** button. Invest for Excel creates a separate worksheet, containing the chart specified by you, in your investment calculation file.



Now you can continue formatting your chart using Excel's functions.

5.12.2 Create Analysis chart (Spider)





The principle is the same as that applied to creating charts:

1) Select the rows you want to analyse.
2) Click the  button.
3) Give your analysis a title.
4) You can choose if you want to include a line for each analyzed row, a sum-of-changes line or both. To create lines for each analyzed row, each row is separately applied with the change percentages, whereas for the sum-of-changes line, all analyzed rows are changed at once.
5) Choose analysis variable from the following:

   Net Present Value (NPV)
   Internal Rate of Return (IRR)
   Internal Rate of Return before tax
   Modified Internal Rate of Return (MIRR)
   Profitability Index (PI)
   Discounted Value Added (DCVA)
   Payback time, years
   Simple Payback, years
   EBITDA; Operating income before depreciation, USD
   EBITDA, %
   EBIT; Operating income, USD
   EBIT, %
   Return on net assets (RONA), %

Value Added (VA), USD

If Free cash flow to equity (FCFE) based profitability calculation is used, the following variables are furthermore included:

Net Present Value to equity (NPVe)
Internal Rate of Return to equity (IRRe)
Internal Rate of Return to equity before tax
Modified Internal Rate of Return to equity (MIRRe)
Payback time to equity, years
Simple Payback to equity, years

Any Key financial ratio defined in the Key Financials table si also included.

Note that all variables may not be included if the calculation file is created with an older version of Invest for Excel

6) Select the **change in value** percentages (sensitization), and
7) Click **OK.**

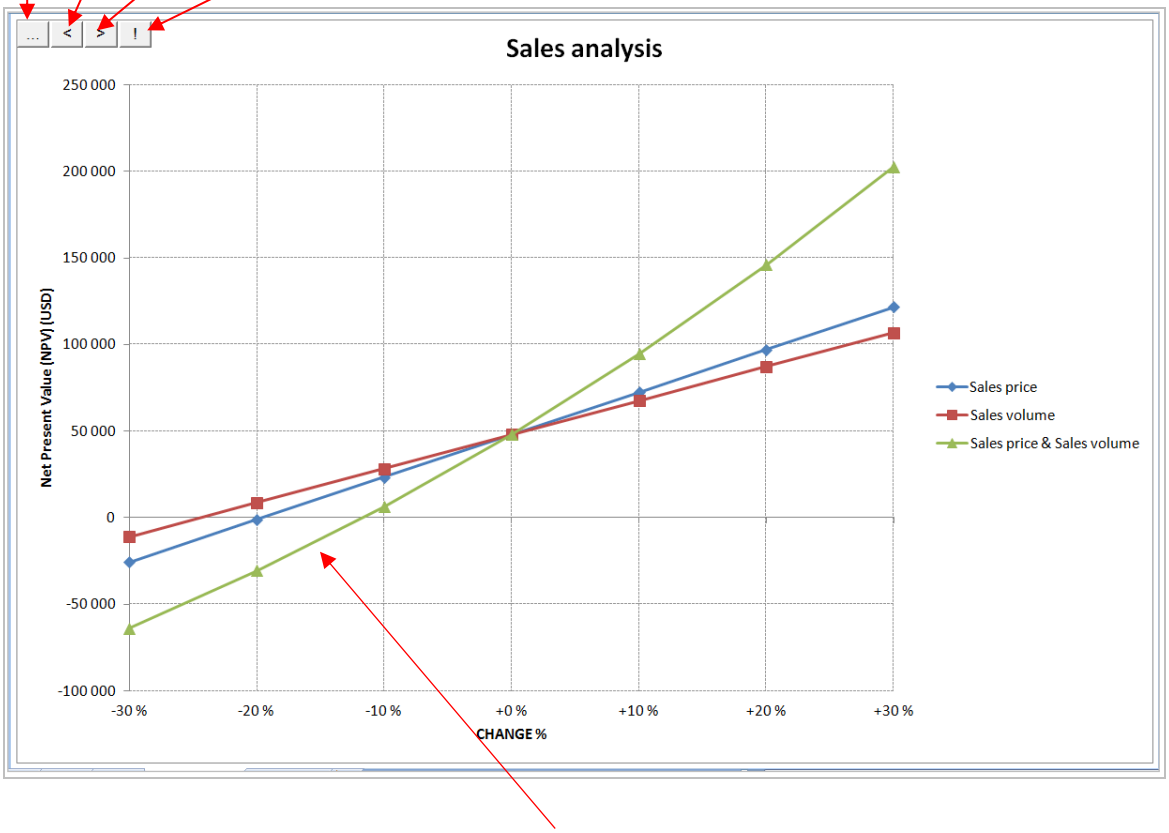
The buttons at the top from left to right:

The first button returns to the **Create Analysis Chart** screen.

The second button returns to the previous table or chart.

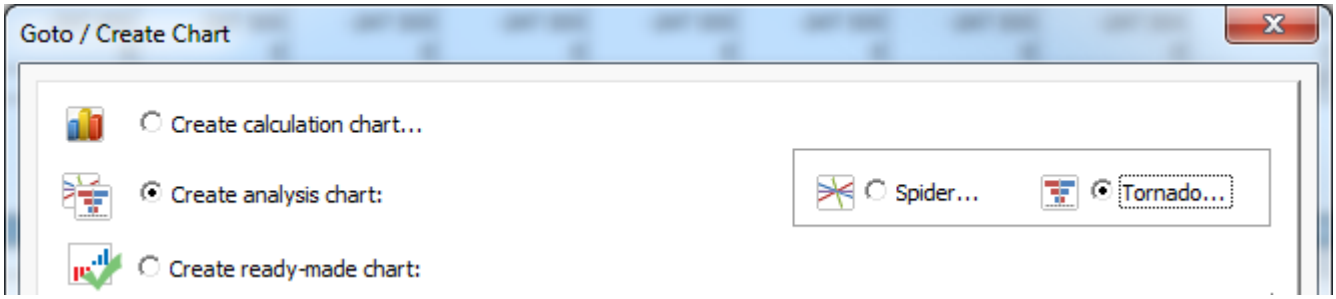
The third button goes to the next table or chart.

The Exclamation mark button updates the chart (if the figures in the calculation have changed).

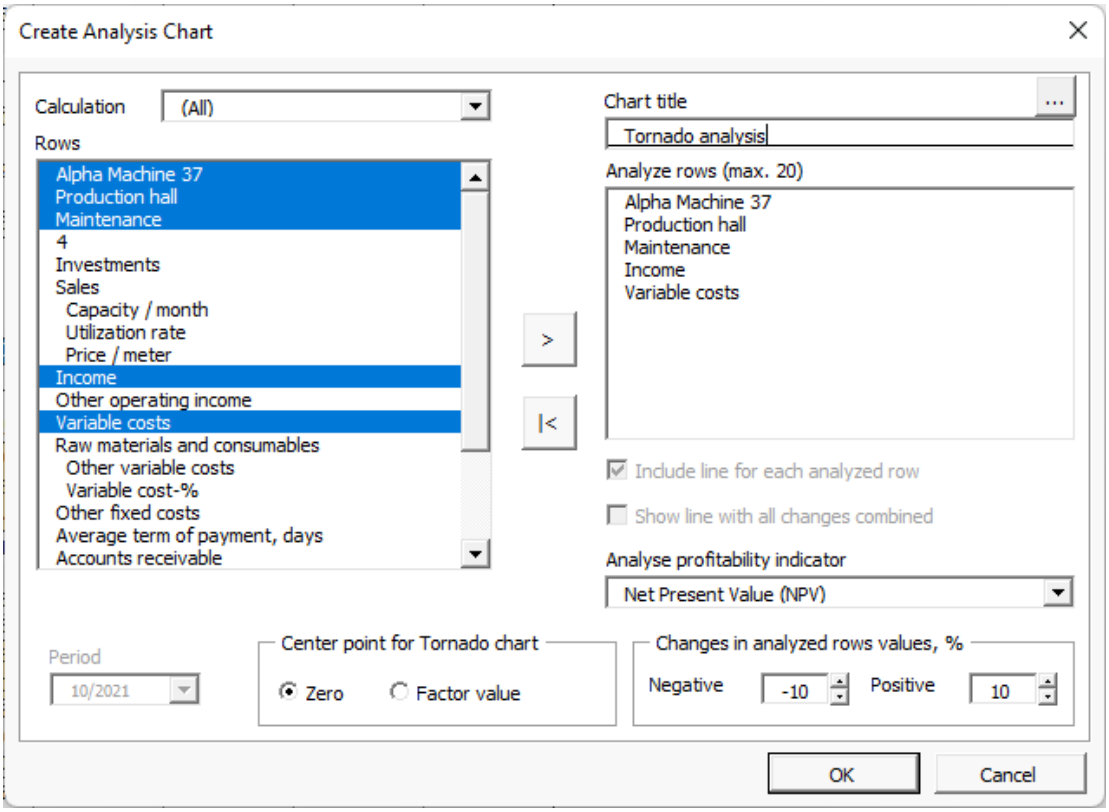


The chart above shows that a 15% drop in turnover (price*volume) output leads to negative NPV.

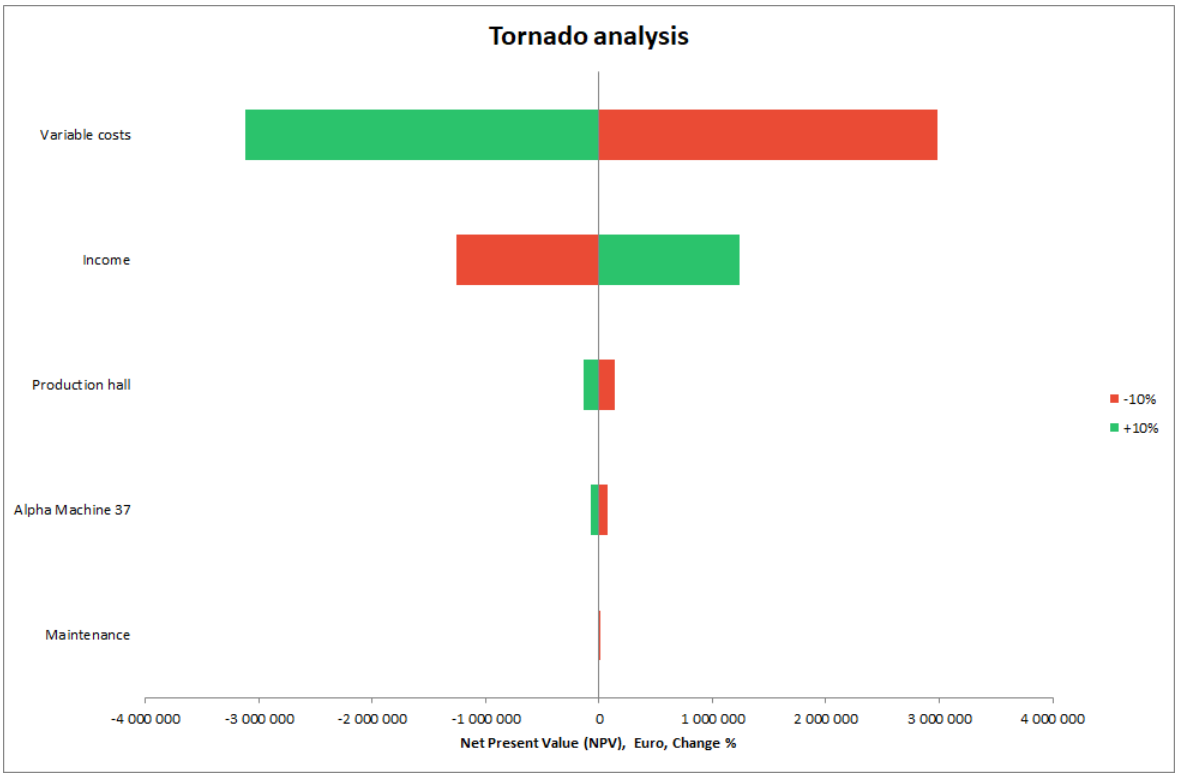
5.12.3 Create Analysis chart (Tornado)



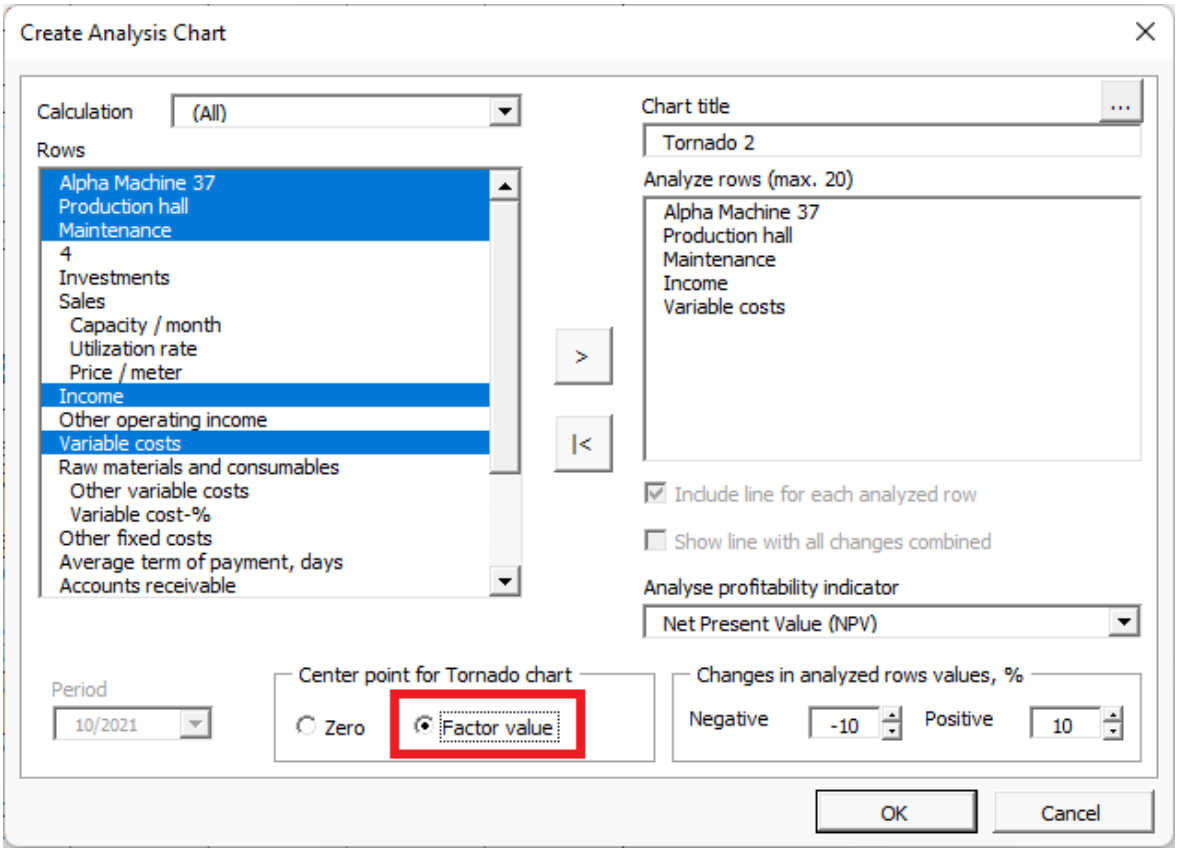
A Tornado analysis chart type is available as an option to the traditional Spider analysis chart. The Tornado chart shows how a selected result factor is affected when selected calculation rows are changed by selected minus and plus percentages.

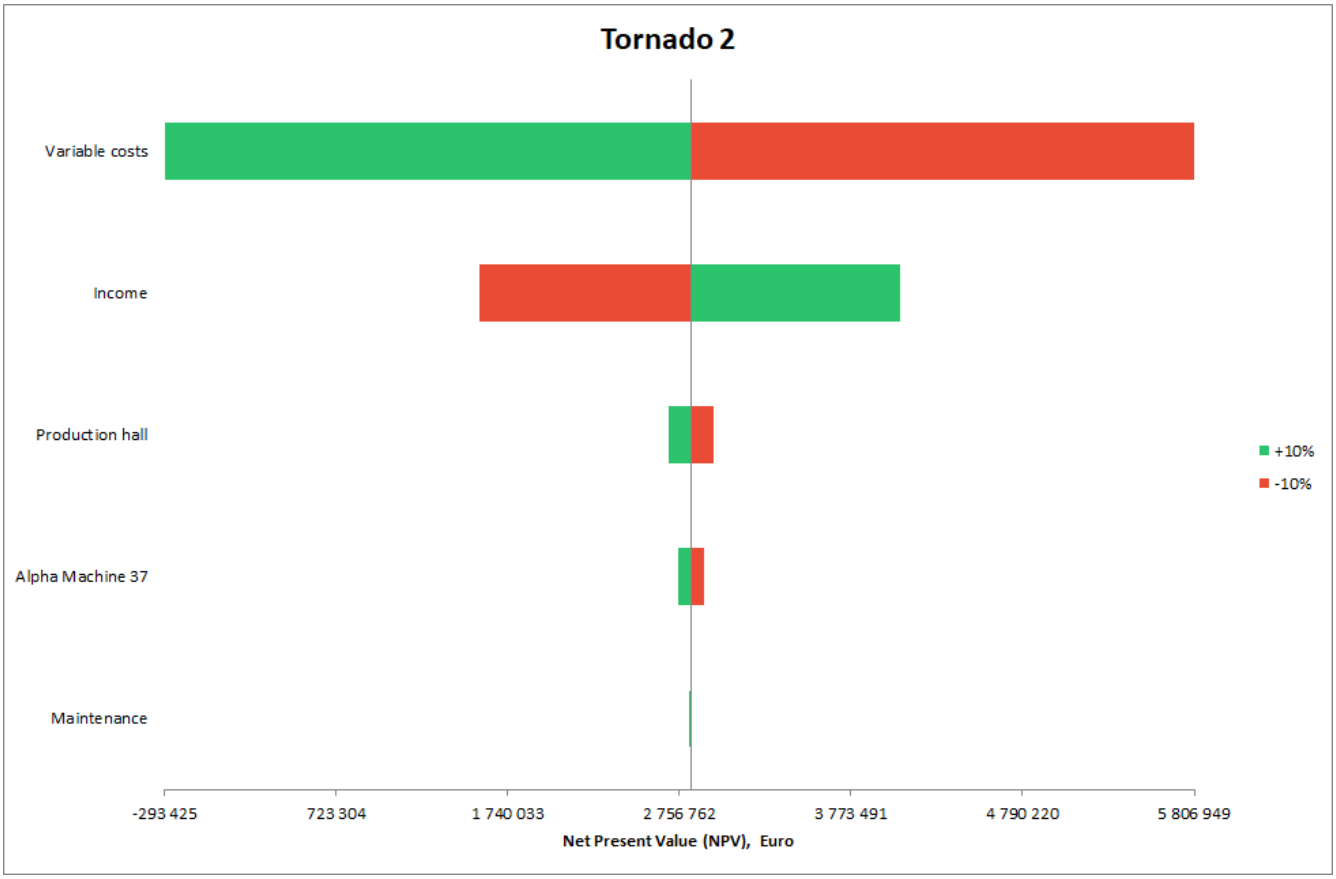


When tornado charts negative and positive impacts differ, green colour means better, red colour means worse.



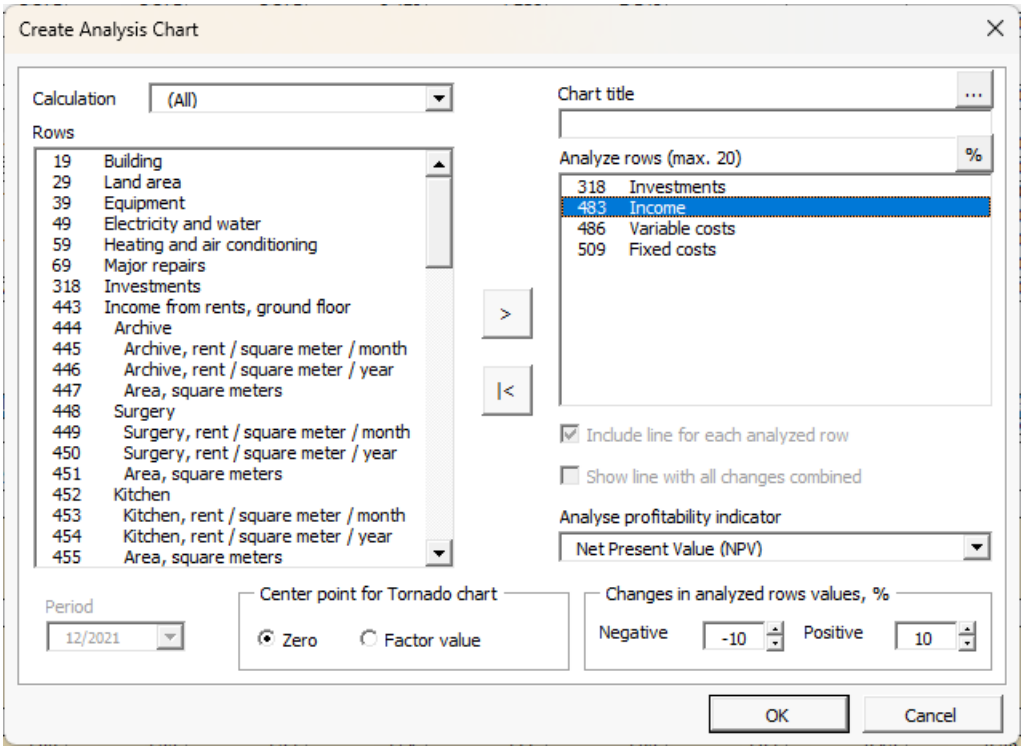
If the factor value is selected as Center value, the chart will show the actual value of the changed result factor.



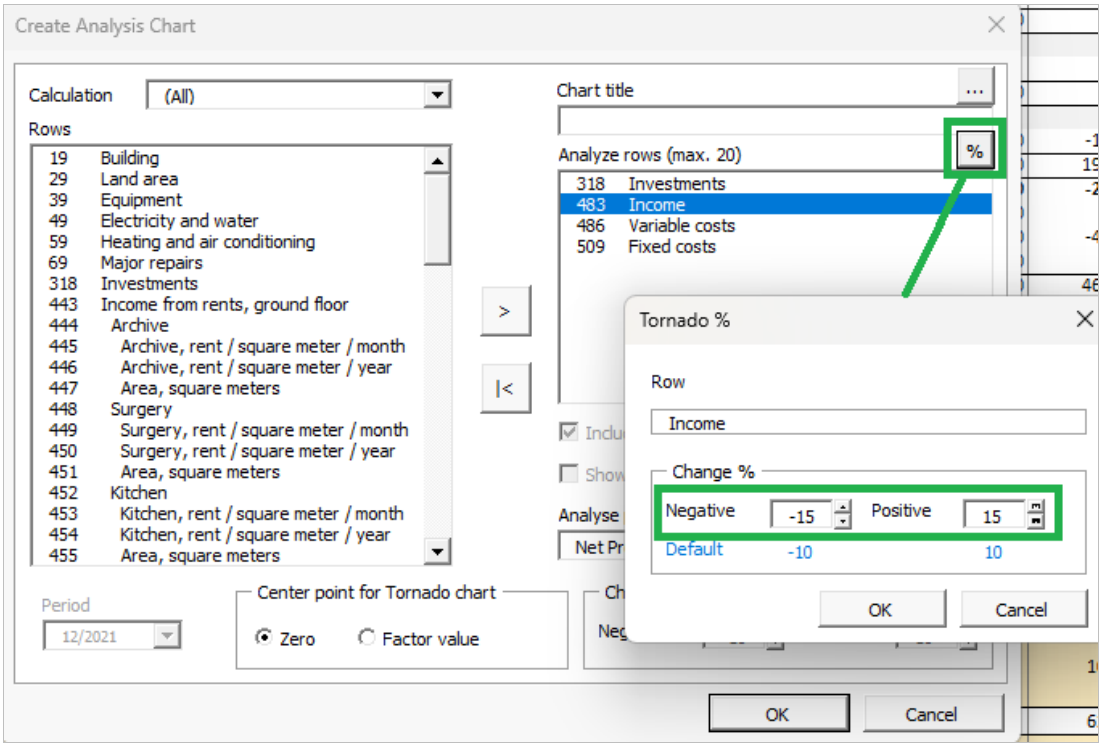


5.12.3.1 Individual change percentages in Tornado

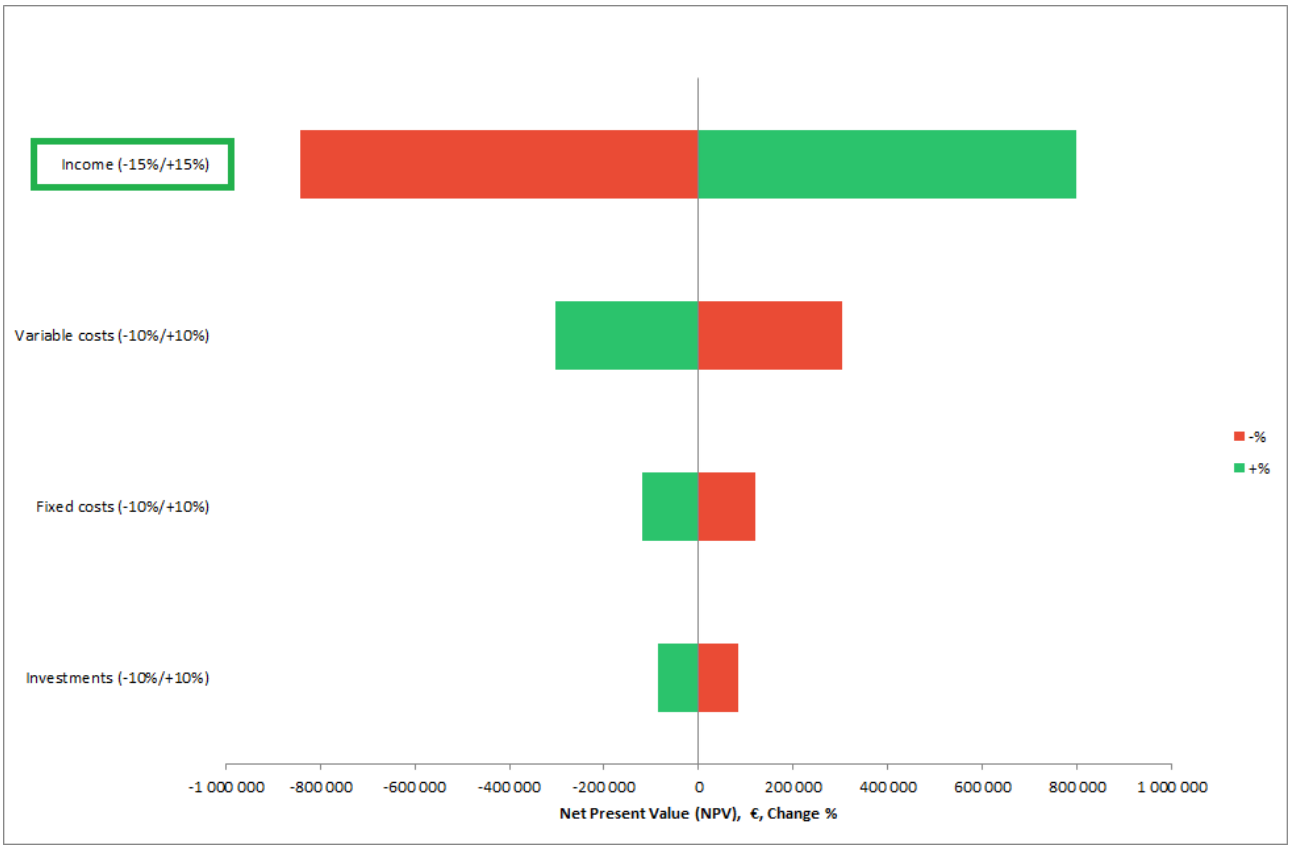
You can use individual change percentages in a Tornado analysis chart. Choose the row for which you want to enter individual change percentages.



Click the %-button above the list and enter change percentages in the form that opens.

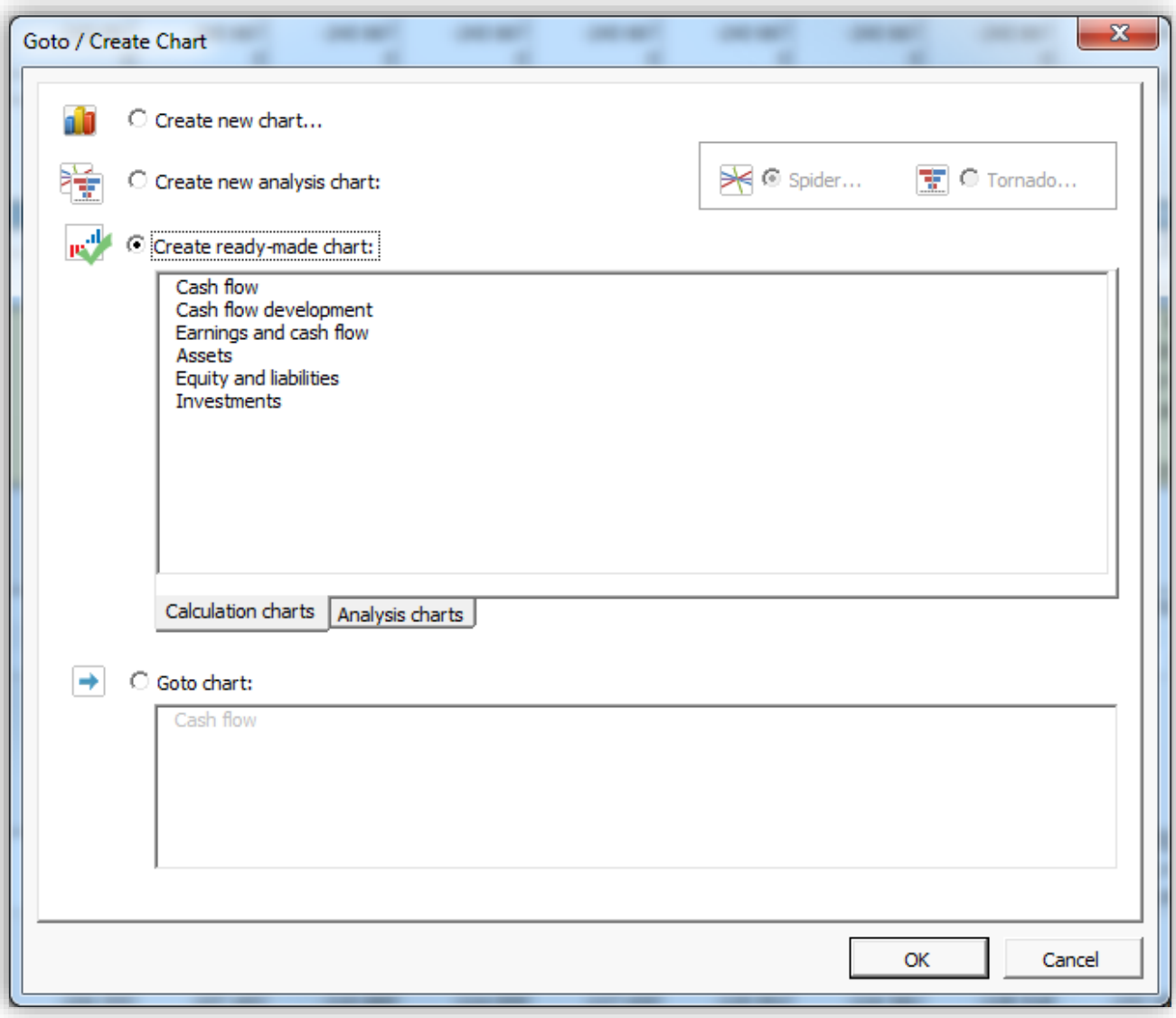


The individual differences are shown in the Tornado chart.



5.12.4 Ready-made charts

As an alternative to creating new charts from scratch, you can quickly choose from a number of ready-made calculation and analysis charts.

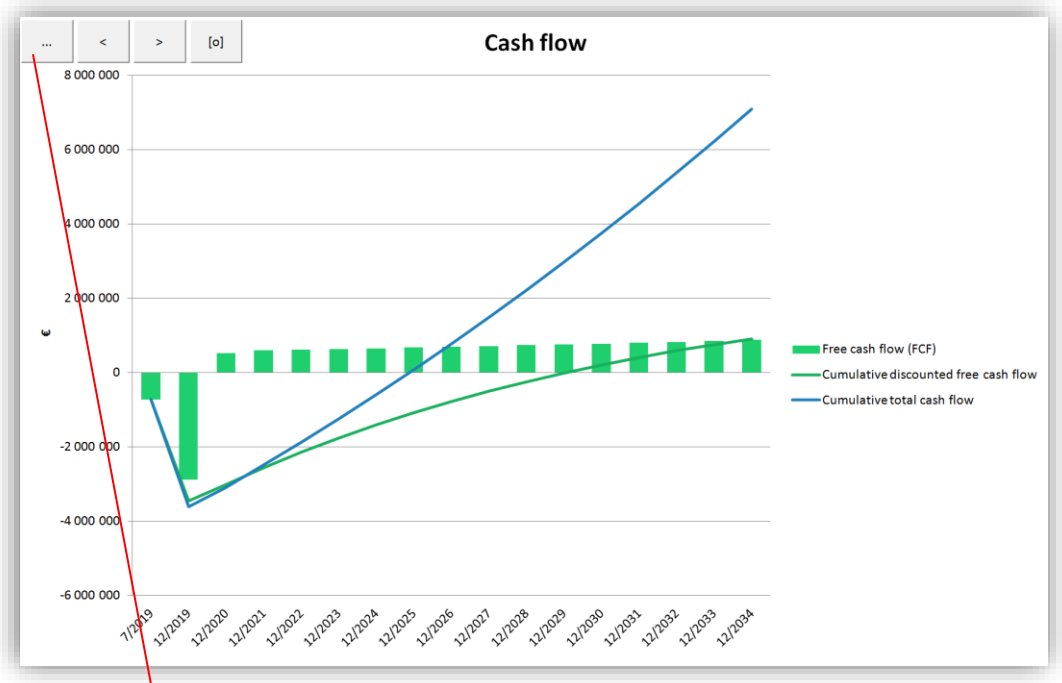


Ready-made charts are separated in Calculation charts and Analysis charts.

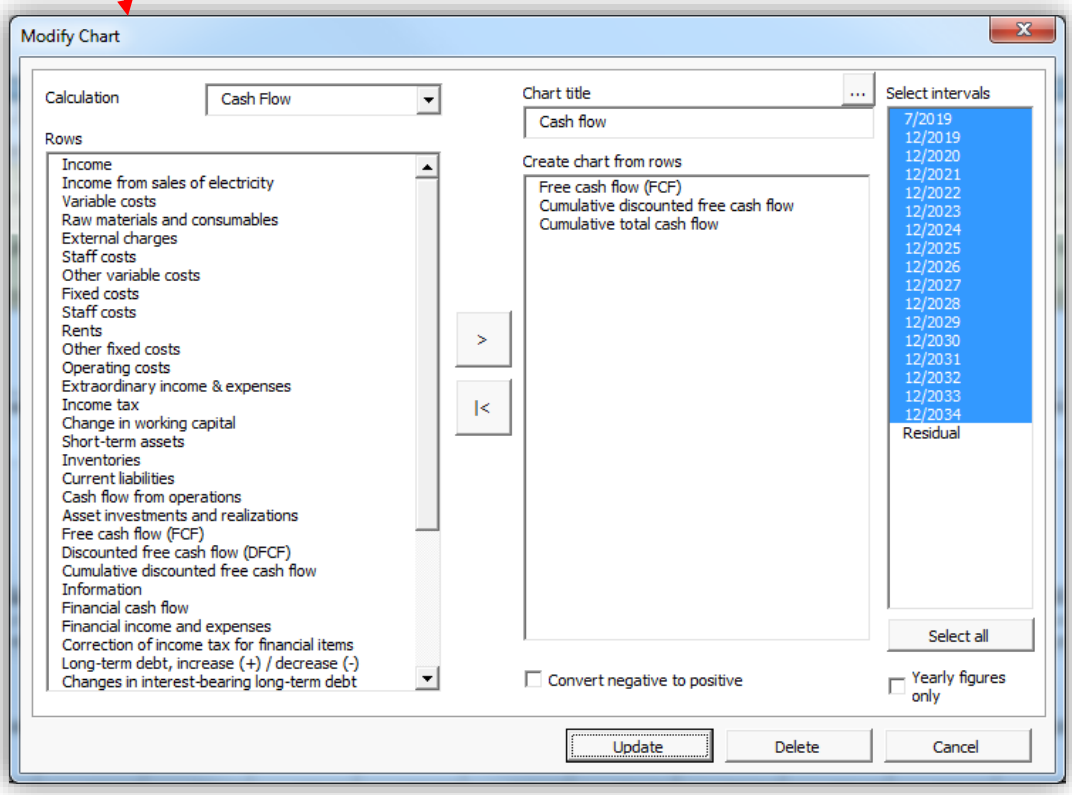
5.12.4.1 Calculation charts

Calculation charts are reporting charts that don't require updating.

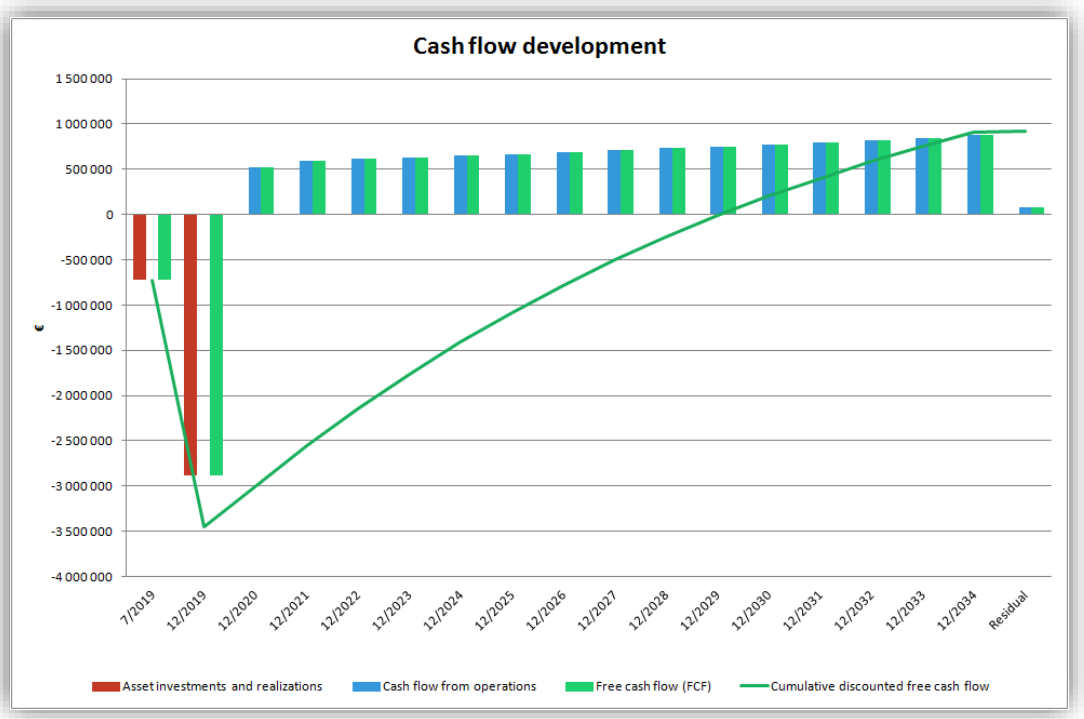
5.12.4.1.1 Cash flow



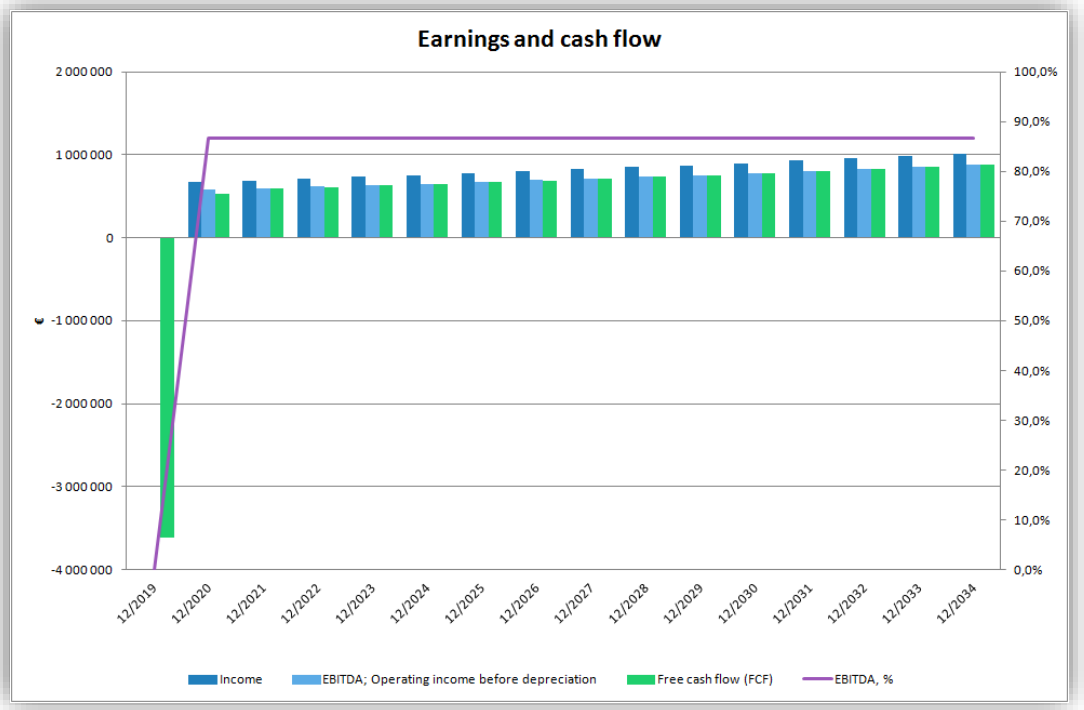
Ready-made charts can be modified like charts created from scratch.



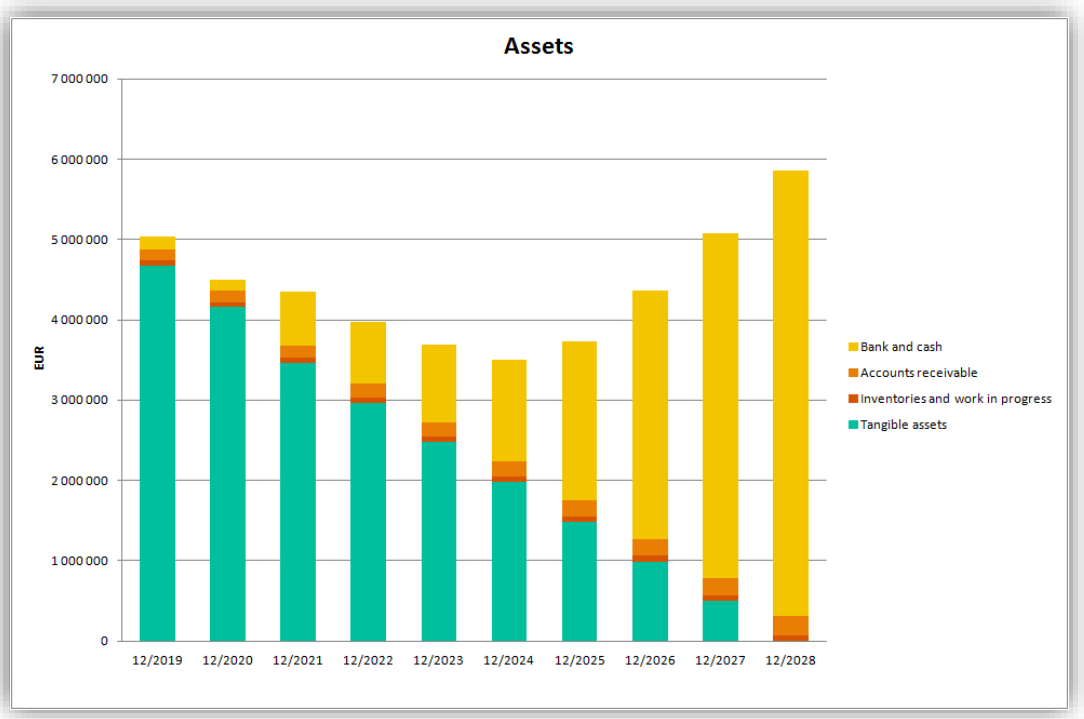
5.12.4.1.2 Cash flow development



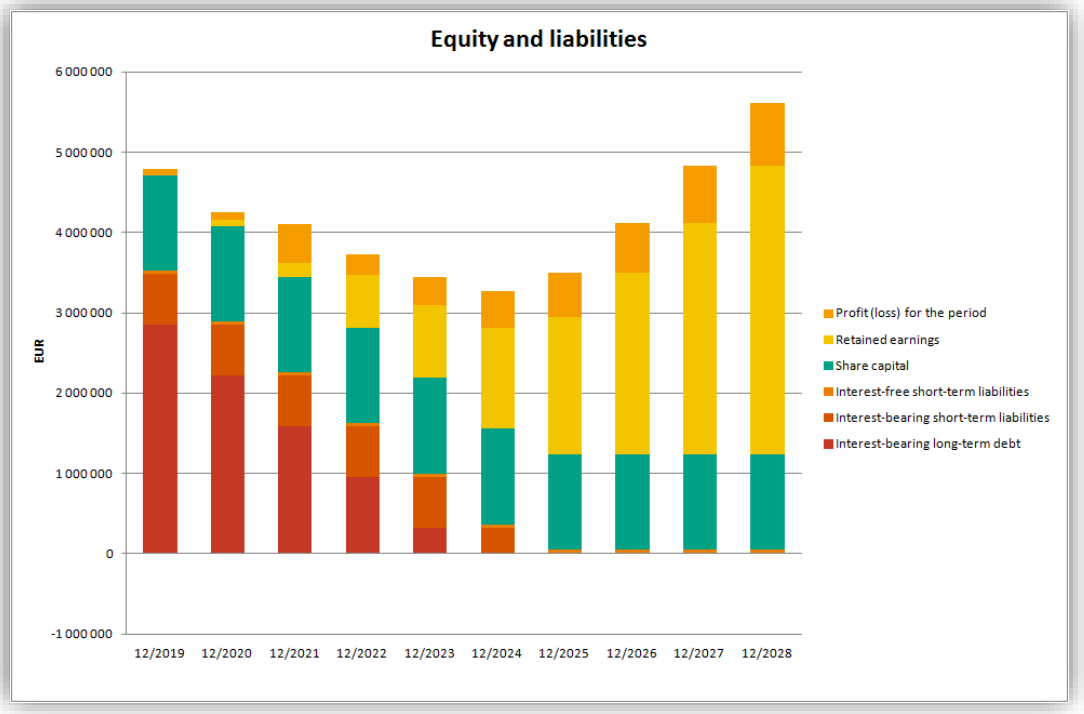
5.12.4.1.3 Earnings and cash flow



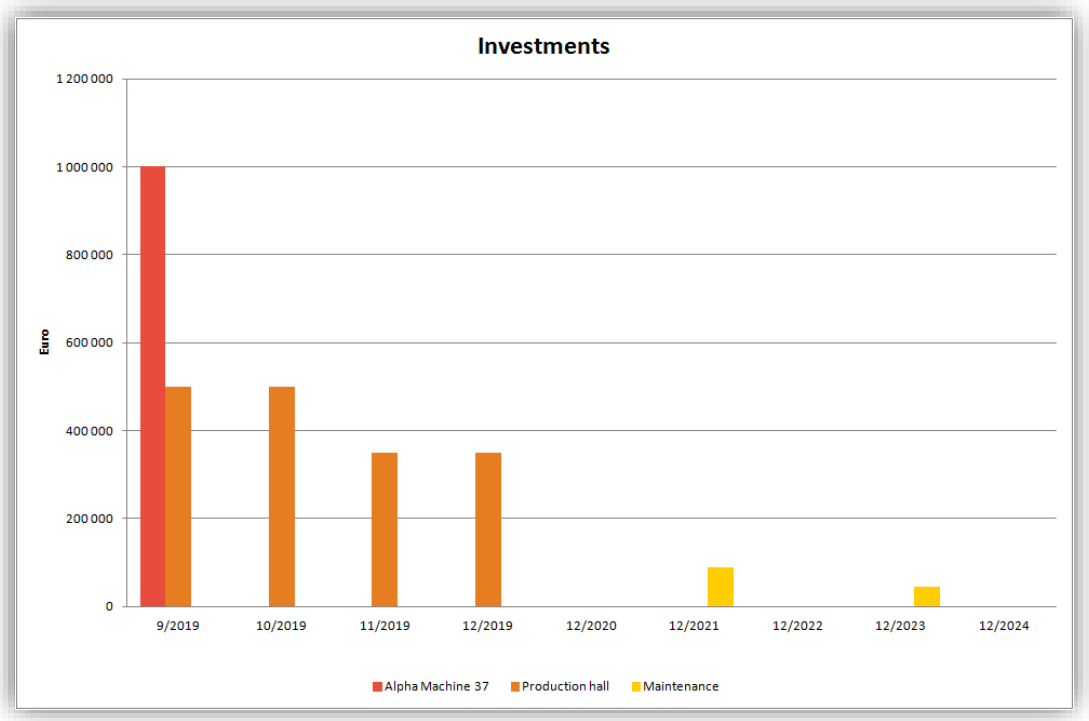
5.12.4.1.4 Assets



5.12.4.1.5 Equity and liabilities

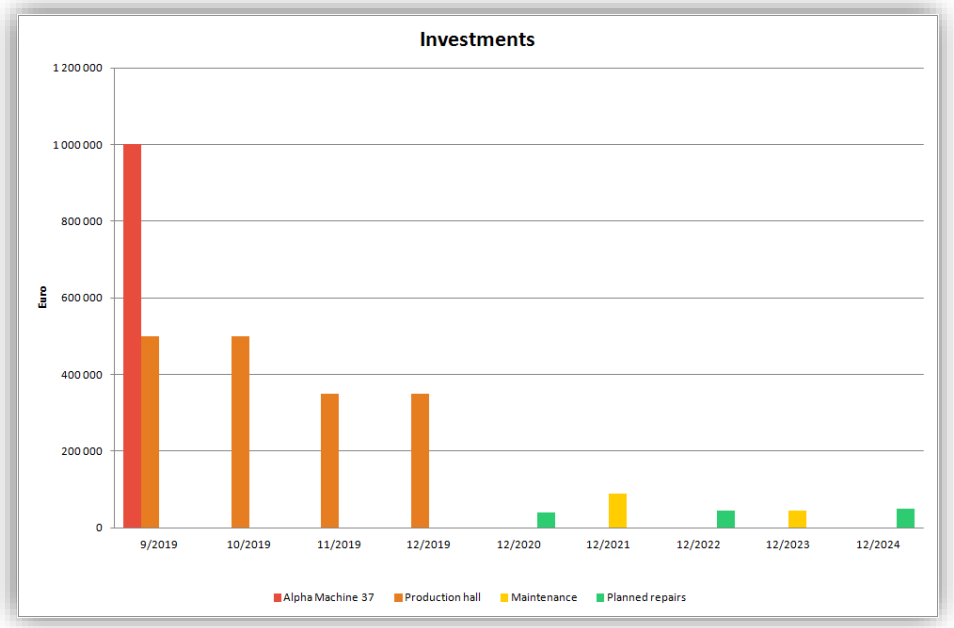


5.12.4.1.6 Investments

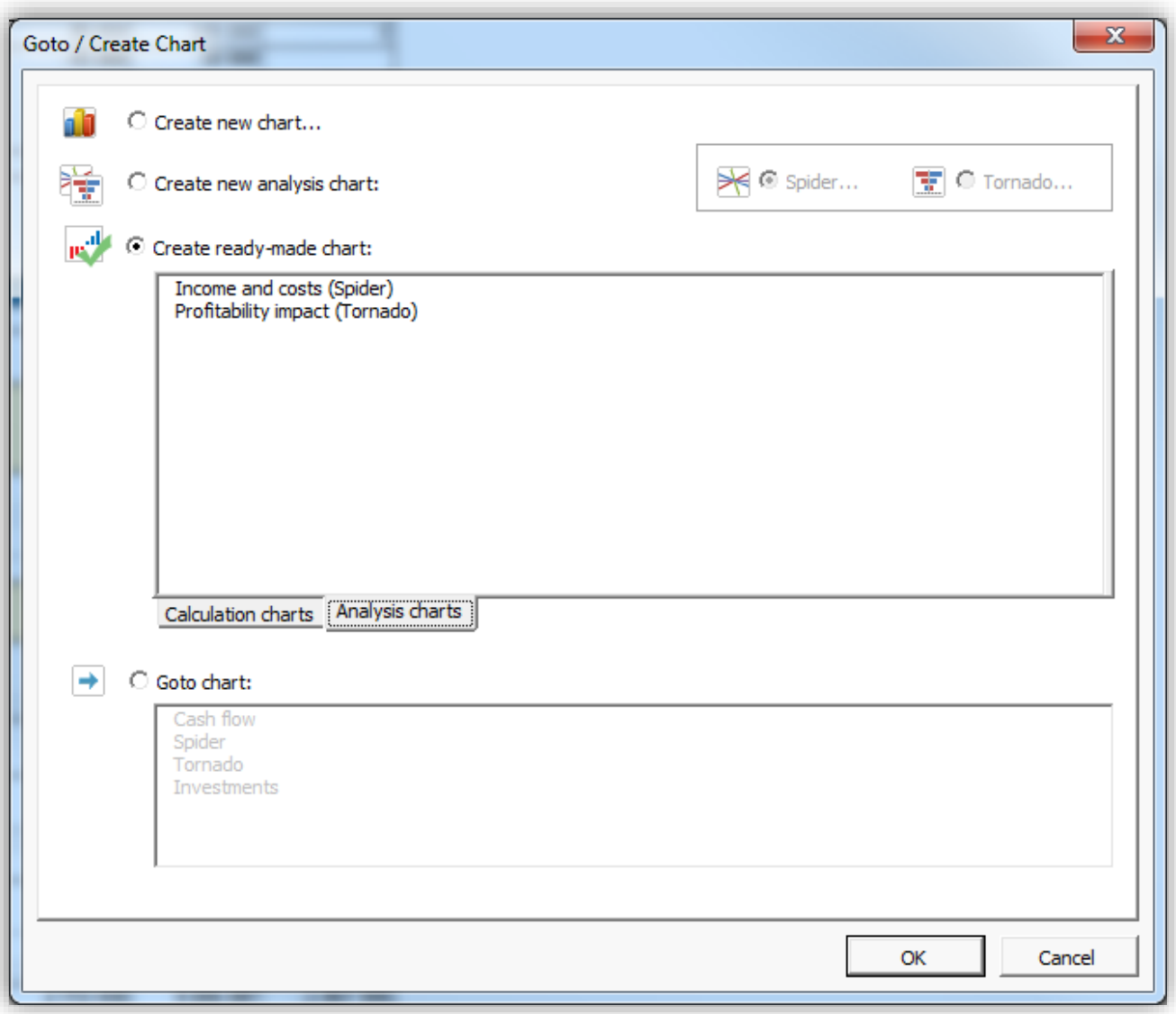


5.12.4.1.7 Automatically expanding ready-made calculation charts

The charts ***Assets***, ***Equity and liabilities*** and ***Investments*** are automatically expanding with new data. As new data appears in Calculations sheet, it is automatically included in the chart.

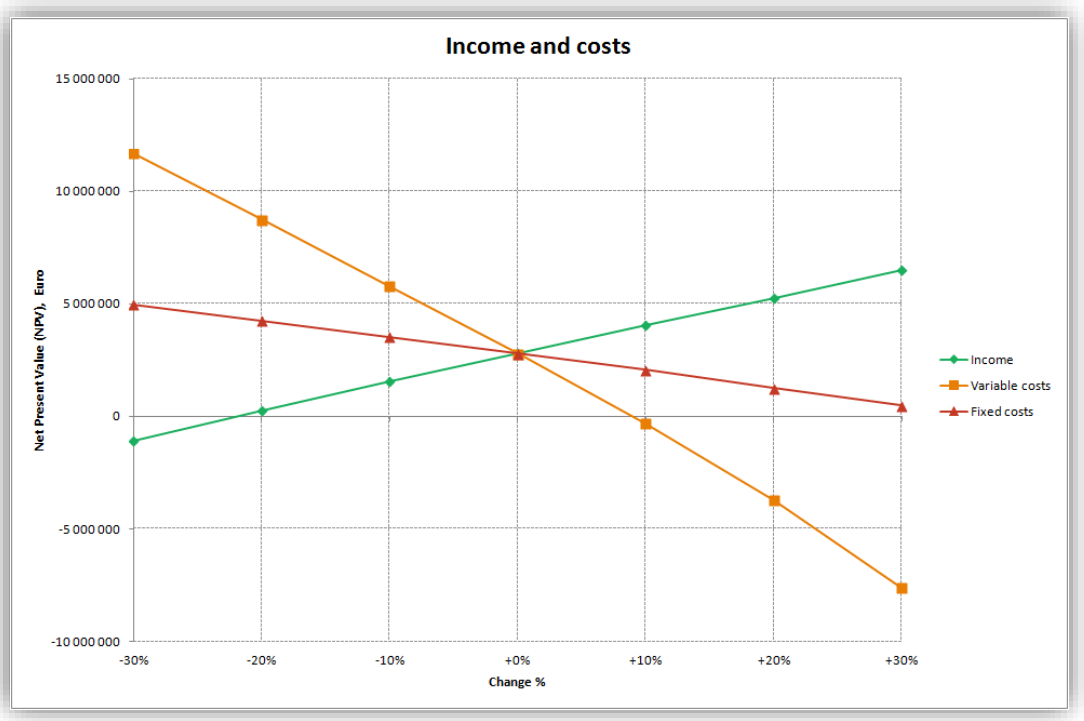


5.12.4.2 Analysis charts



Analysis charts are used to examine sensitivity of different items in Spider and Tornado charts.

5.12.4.2.1 Income and costs



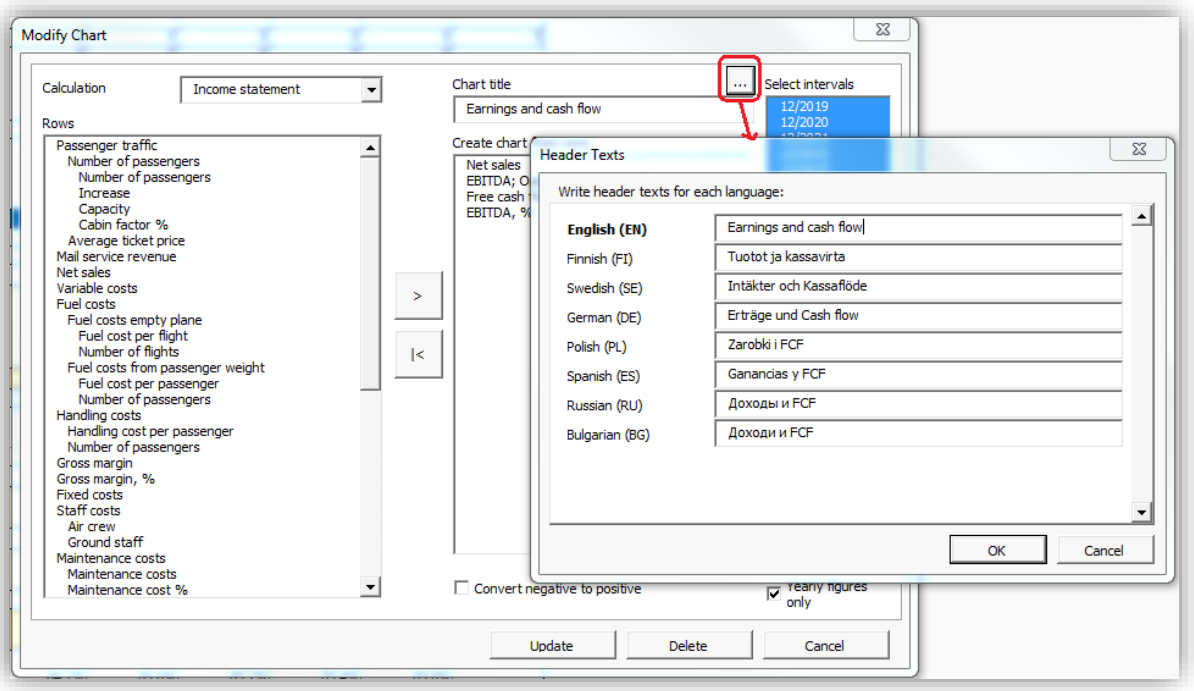
5.12.4.2.2 Profitability impact

5.12.4.2.3 Refreshing ready-made analysis charts

Ready-made analysis charts are refreshed the same way as analysis charts made from scratch.

5.12.5 Chart titles in multiple languages

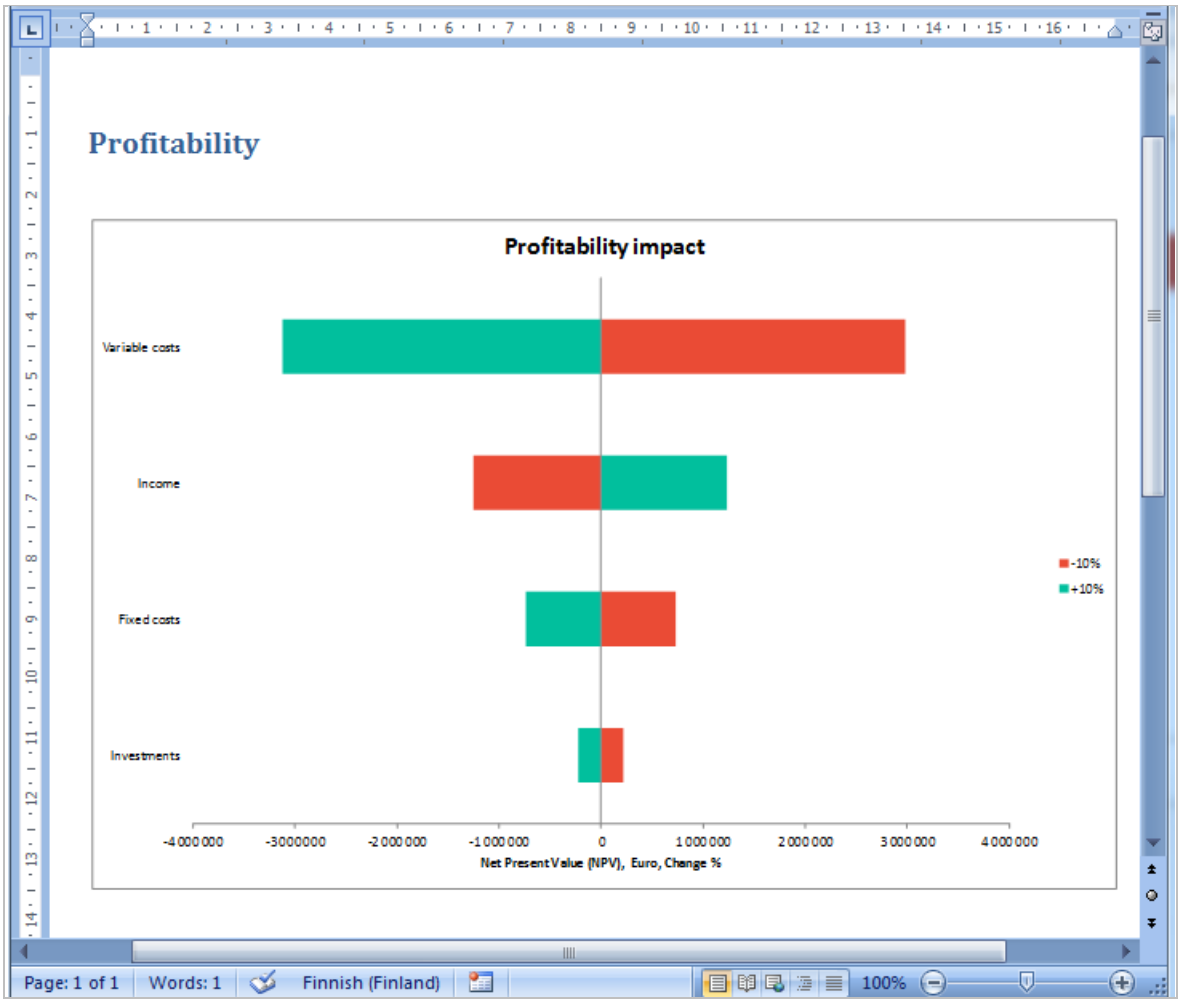
Chart titles can be entered in multiple languages. Also, if the chart title and the chart sheet name is the same, chart sheet name is automatically changed when file language is changed.



5.12.6 Camera button is added to newly created chart

Camera button is added to newly created chart for easy copying a picture of a chart to clipboard.

Easily paste any chart into a PowerPoint presentation, a Word document or any other file.



5.13 Cell Break-Even

By running the Cell Break-Even function, you can quickly calculate the break-even point of the investment, for example how much certain incomes can drop, or costs rise, while the NPV falls to zero level, meaning that if implemented with the given target interest rate, the investment would, theoretically, only just be feasible.

Note! The Cell Break-Even command changes the calculation file, and therefore it is good practice to save the file before running the Cell Break-Even function.

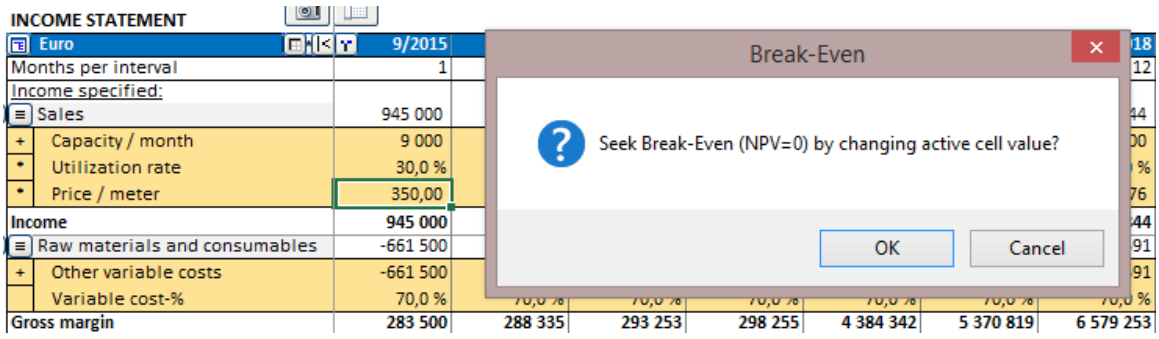
To start the Cell Break-Even:

1. First select the cell containing a value you want to analyse.
2. Then select from Invest for Excel's menu **Analysis - Cell Break-Even,** or click the  -button.
3. To restore the status afterwards, select from the same menu **Cancel Break-Even.**

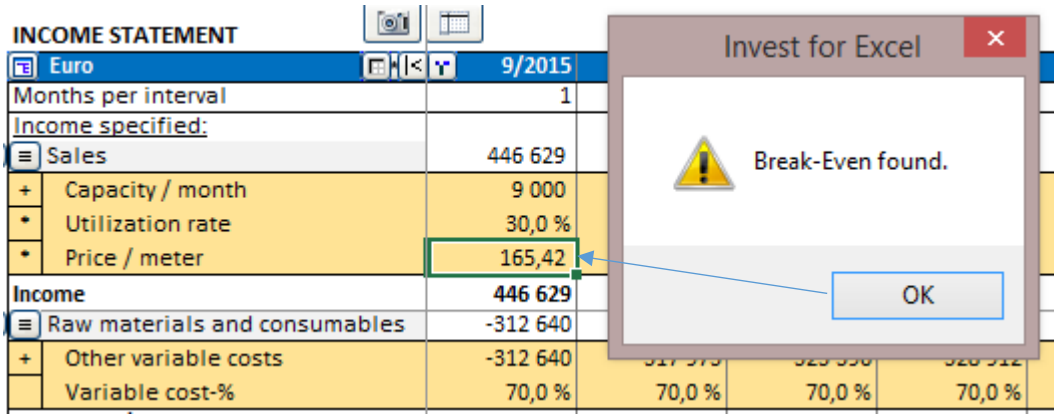
Let us assume that you have defined the following income items (NPV is positive):

Months per interval	1	1	1	1	12
Income specified:					
≡ Sales	945 000	961 117	977 510	994 182	14 614 473
+ Capacity / month	9 000	9 000	9 000	9 000	108 000
• Utilization rate	30,0 %	30,6 %	31,1 %	31,7 %	39,7 %
• Price / meter	350,00	349,41	348,82	348,24	341,27
Income	**945 000**	**961 117**	**977 510**	**994 182**	**14 614 473**

You now want to analyse how low the selling price could be before the NPV of the investment becomes negative. Choose the first cell containing the selling price and run Cell Break-Even. You will be asked the question:



Choose **OK**. When the Break-Even point has been found, Invest for Excel informs you as follows:



The Break-Even function now told us that the Break-Even of the Sales price / ton is 165.42 €, which is much lower than the planned price (350 €).

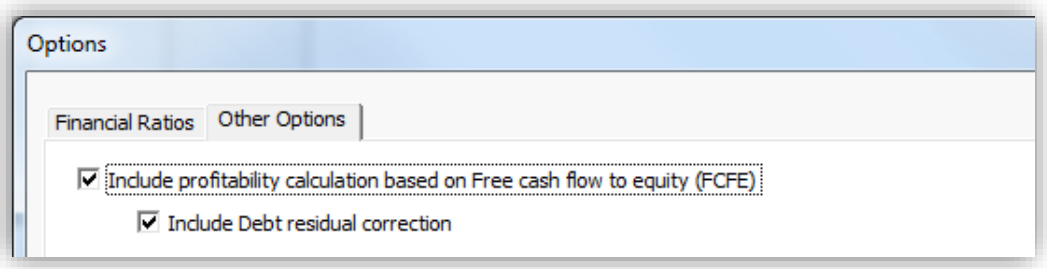
The **Profitability analysis** screen shows that net present value is zero (NPV=0) in the table:

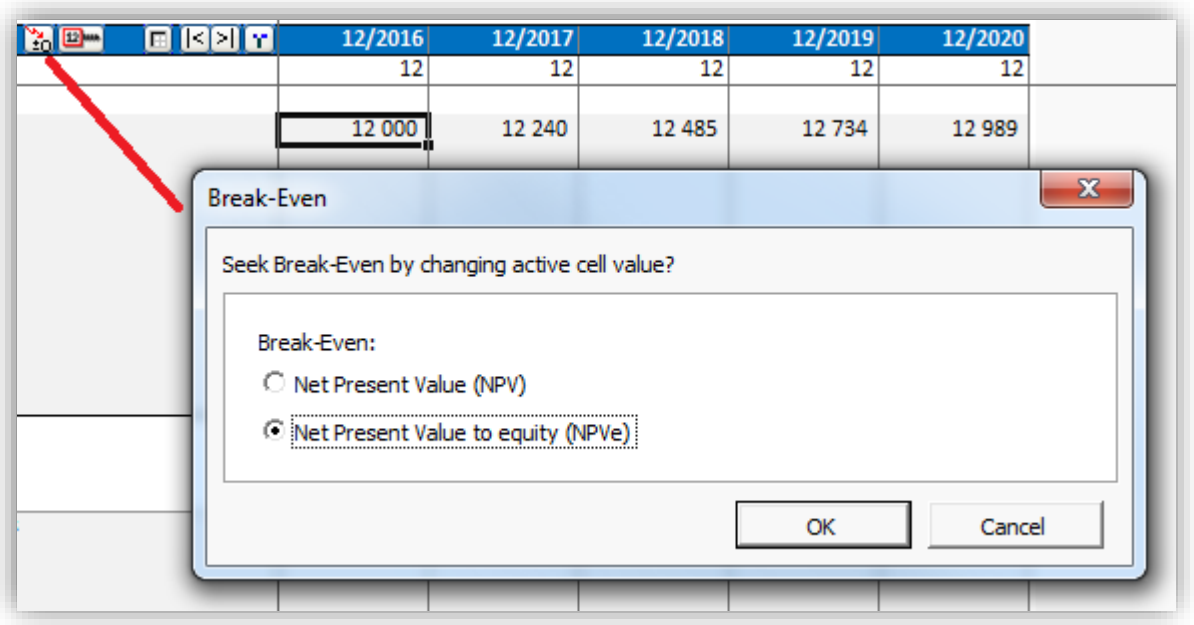
Total investment capital	**2 400 000**
Required rate of return	**17,30 %**
Calculation term	**10,0**
Calculation point	**1/2005**
Present value of net cash flow	-56 094
Present value of residual value	56 094
Net Present Value (NPV)	**0**
↳ NPV as a monthly annuity	0
Discounted Value Added (DCVA)	-26 048
Internal Rate of Return (IRR)	17,30 %
Profitability Index (PI)	1,00
Payback time	-

Hint! Use Copy/ Distribute function to create dependence between columns, otherwise only the value in one cell is changed!

5.13.1 Break even to NPV/NPVe

When profitability calculation based on Free cash flow to Equity is included in the calculation file in Invest for Excel program options you can choose to seek Break even for Net Present Value (NPV) or Net Present Value to equity (NPVe).





5.13.2 Undo Cell Break-Even

In *Invest for Excel*'s main menu, under the **Analysis** column, the 2nd to last item is **Undo Break-Even**. True to its name, this function enables you to restore the situation prior to looking for the break-even point.

You can also Undo Cell Break-Even by pressing the Cell Breal-Even button again.

6 Format

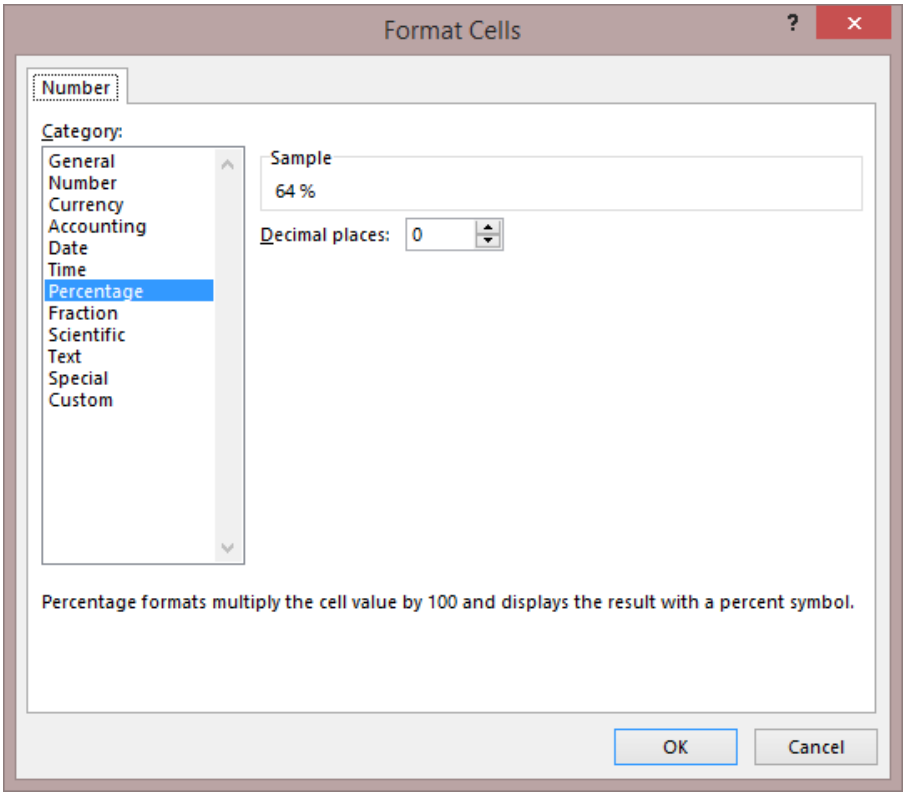
6.1 Formatting cells

Formatting calculation file cells is allowed using Microsoft Excel's menus and shortcuts.

Some of Excel's formatting functions are accessible only from the Invest for Excel menu. The interface language of the dialogue box has been defined already when installing the Microsoft Office package or Excel. The **Change Language** function will not work here.

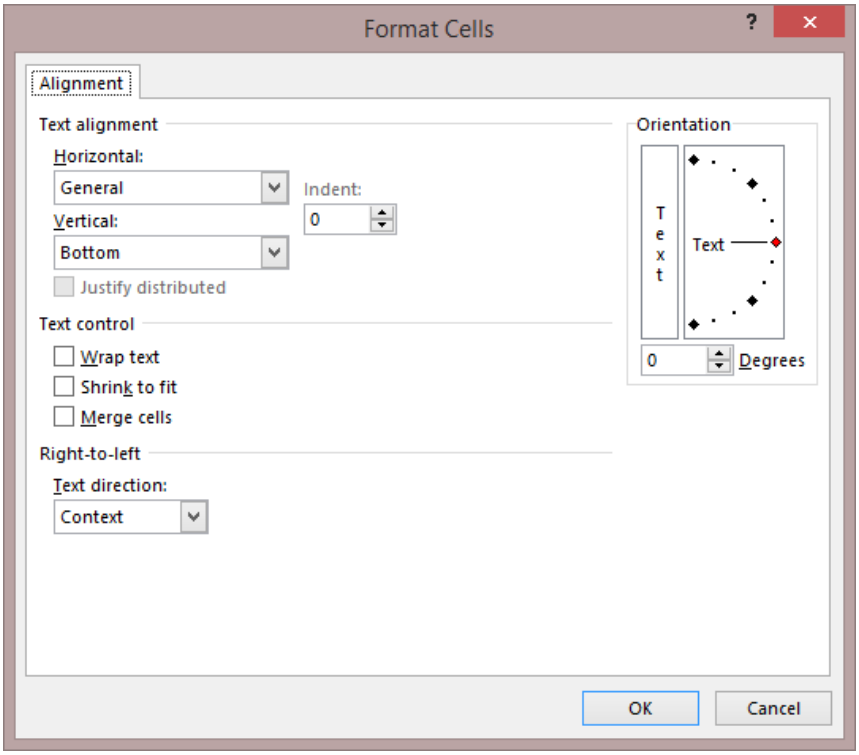
6.2 Number

This is Excel's *Format - Cell* function. Here you define the format in which figures are presented.

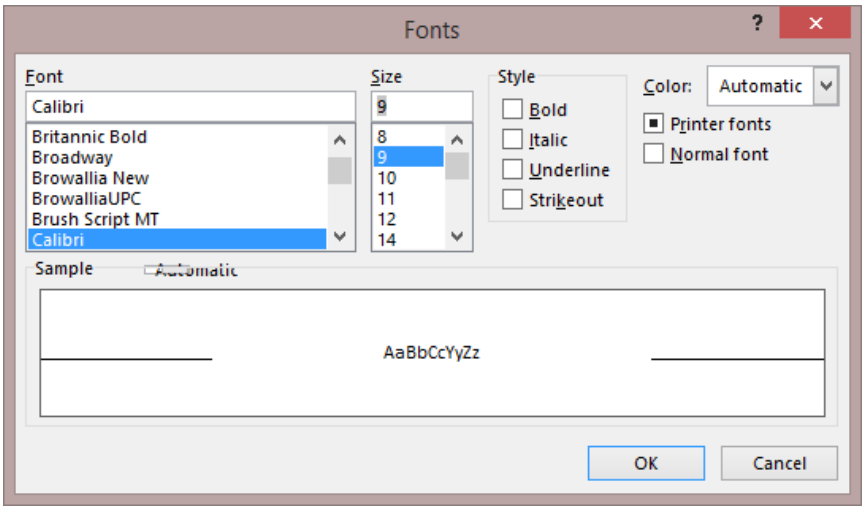


6.3 Text Alignment

Use Excel's *Alignment* function to align text in active cells.

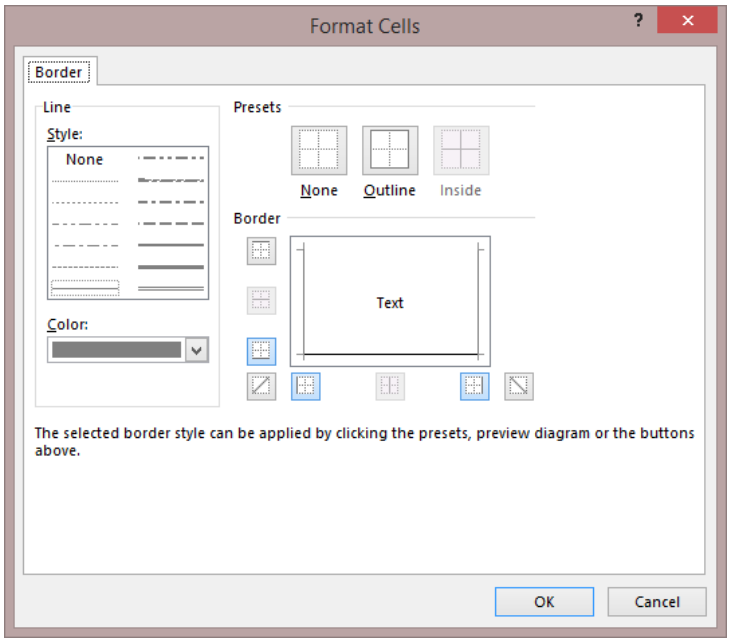


6.4 Font



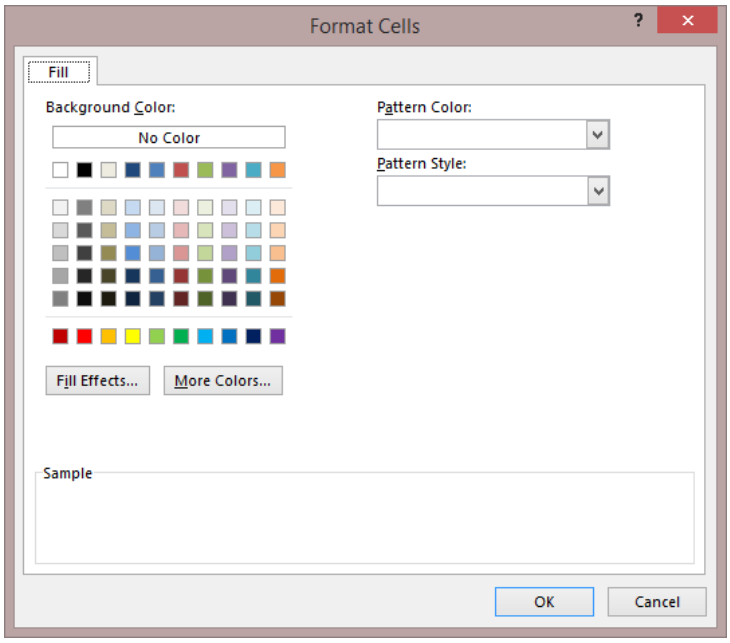
This is Excel's *Format - Fonts…* function. Here you define the font in which text and numbers are displayed.

6.5 Borders



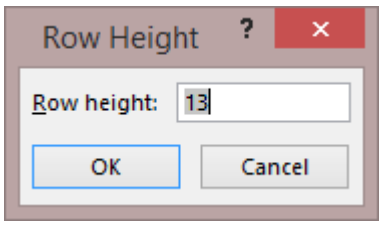
Use Excel's *Format-Cell* function to change the borders style and color of the column where the cursor is.

6.6 Format pattern



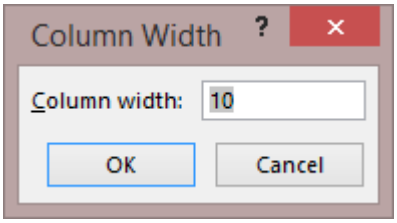
Format pattern command. This Microsoft Excel-command allows you to change the cell pattern of selected cells:

6.7 Row Height



Use Excel's *Row Height* function to set the height of the row where the cursor is.

6.8 Column Width



Use Excel's *Column Width* function to set the width of the column where the cursor is.

6.9 Mark/Unmark unlocked cells

In Invest for Excel the unlocked cells are marked with grey or yellow background colour:

Income specified:			
Sales		500 000	500 000
New sales		250 000	300 000
Old sales		250 000	200 000

With this function you can remove and return the background colours:

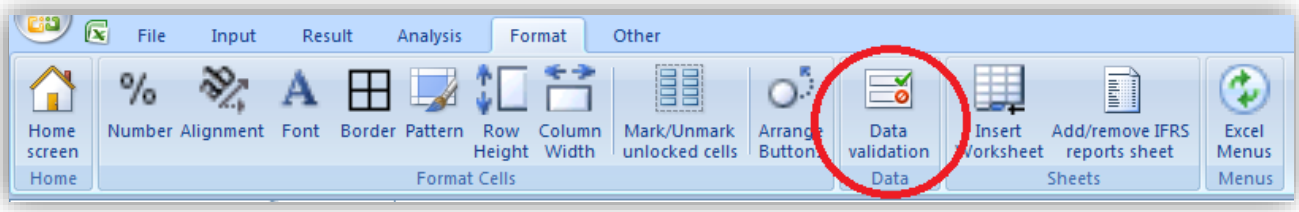
Income specified:			
Sales		500 000	500 000
New sales		250 000	300 000
Old sales		250 000	200 000

6.10 Arrange Buttons

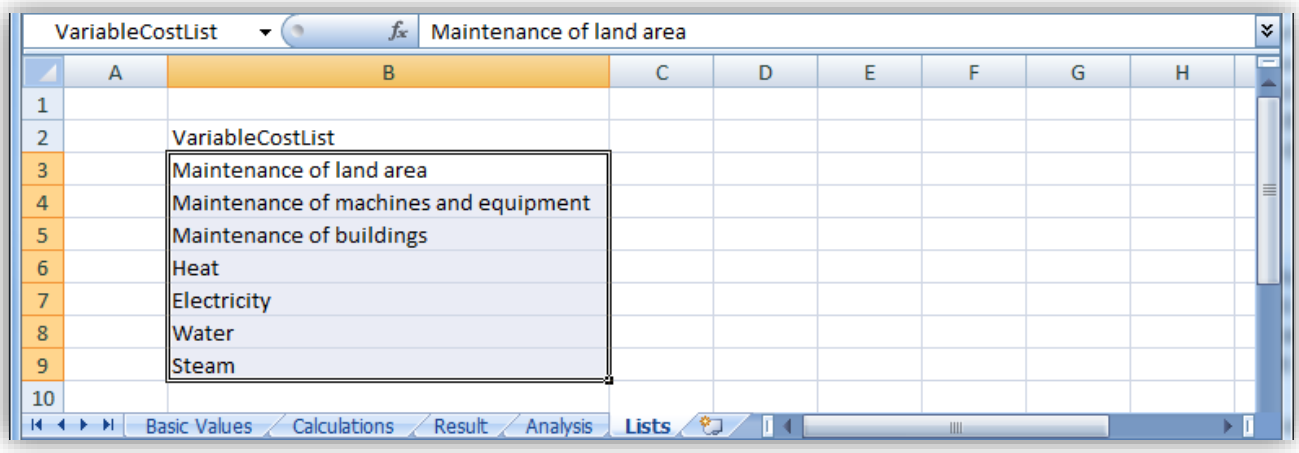
In case Excel misplaces some of the buttons in Invest for Excel calculation file, you can use this function to put them back in the right places.

6.11 Data validation

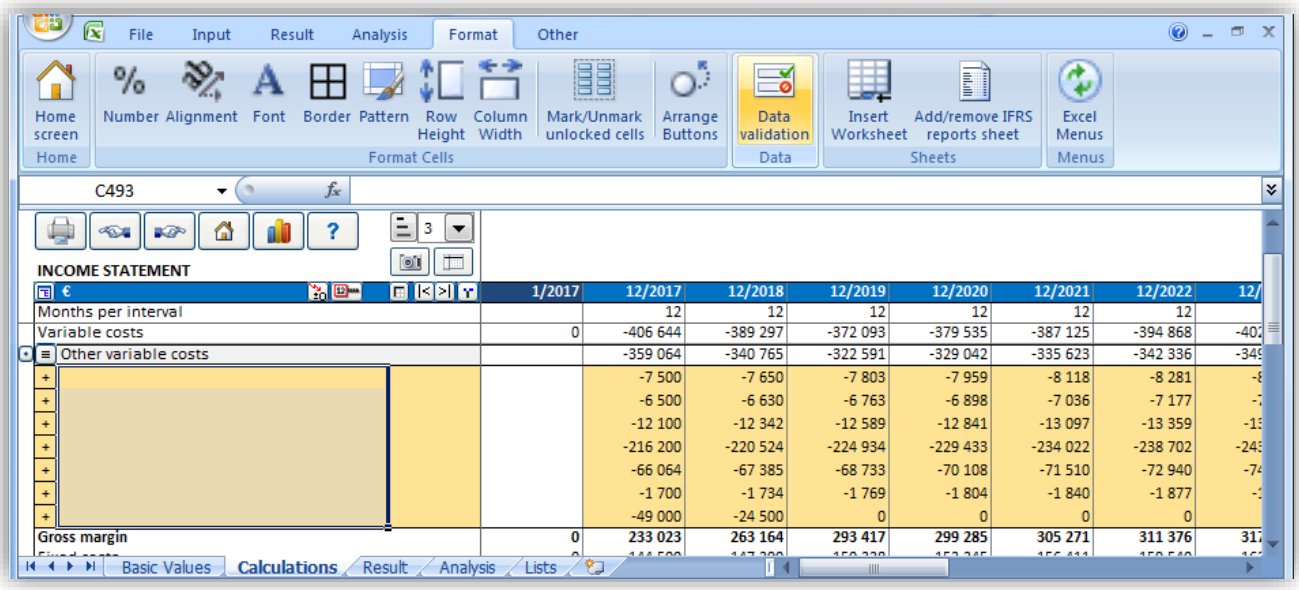
Data validation can be accessed from the Invest for Excel Format menu.



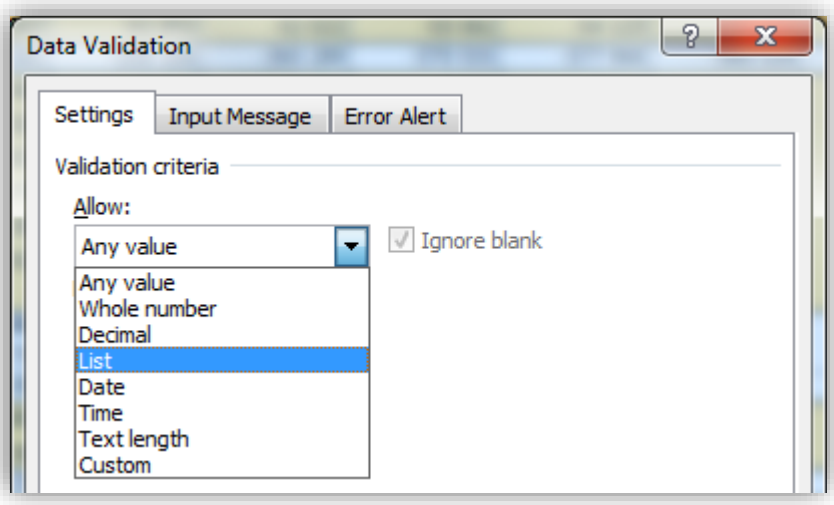
If you want to use Data validation to choose from lists, create the list on a new worksheet and name the list range. Example:



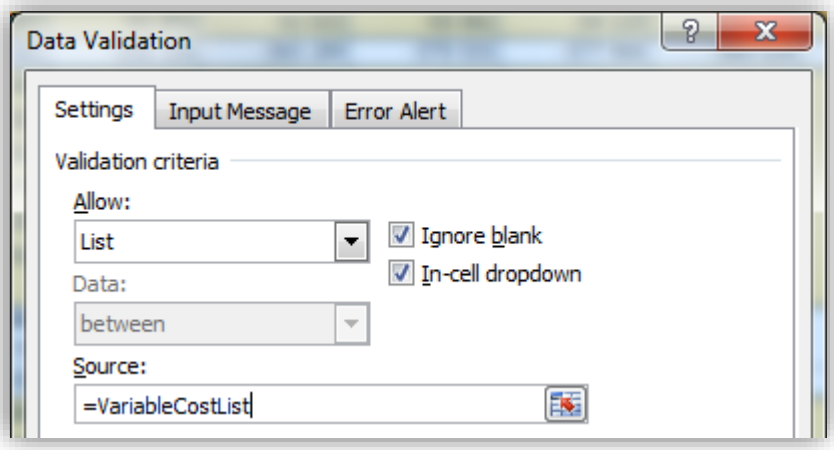
Select the cell or range where you want to use the list and press “Data validation” in the Invest for Excel Format menu.



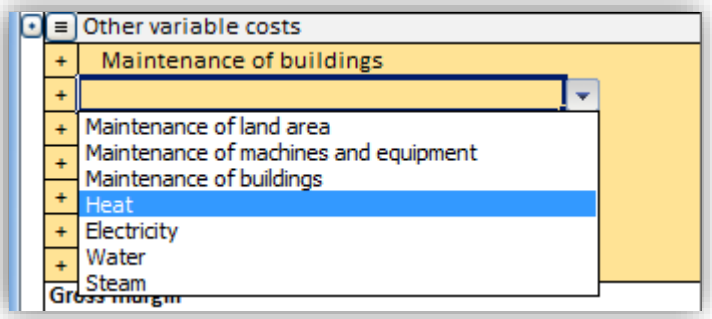
Choose list in the Data validation dialog box.



Enter created range.



Your Data validation list is ready to be used.



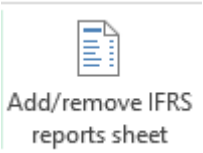
NOTE! Be careful when if use Data validation to restrict input cell entries, so that software functionality is not impaired.

6.12 Insert worksheet

Here is one way of including a table to the workbook you are using. The table or tables are appended to your investment calculation and any changes in them are relayed to the actual Invest for Excel tables through links.

For example, you can separate and calculate the total of fixed costs in a table like this. When you have established a link e.g. between the Income statement and the separate table of fixed costs, all changes in the fixed costs are also relayed to the Invest for Excel calculations.

Note that you can rename, move and delete an inserted sheet like any Excel sheet.



An optional IFRS reports sheet can be added to a calculation file in the Enterprise edition of Invest for Excel. See chapter 11.2 below for details.

7 Other

7.1 Home Screen

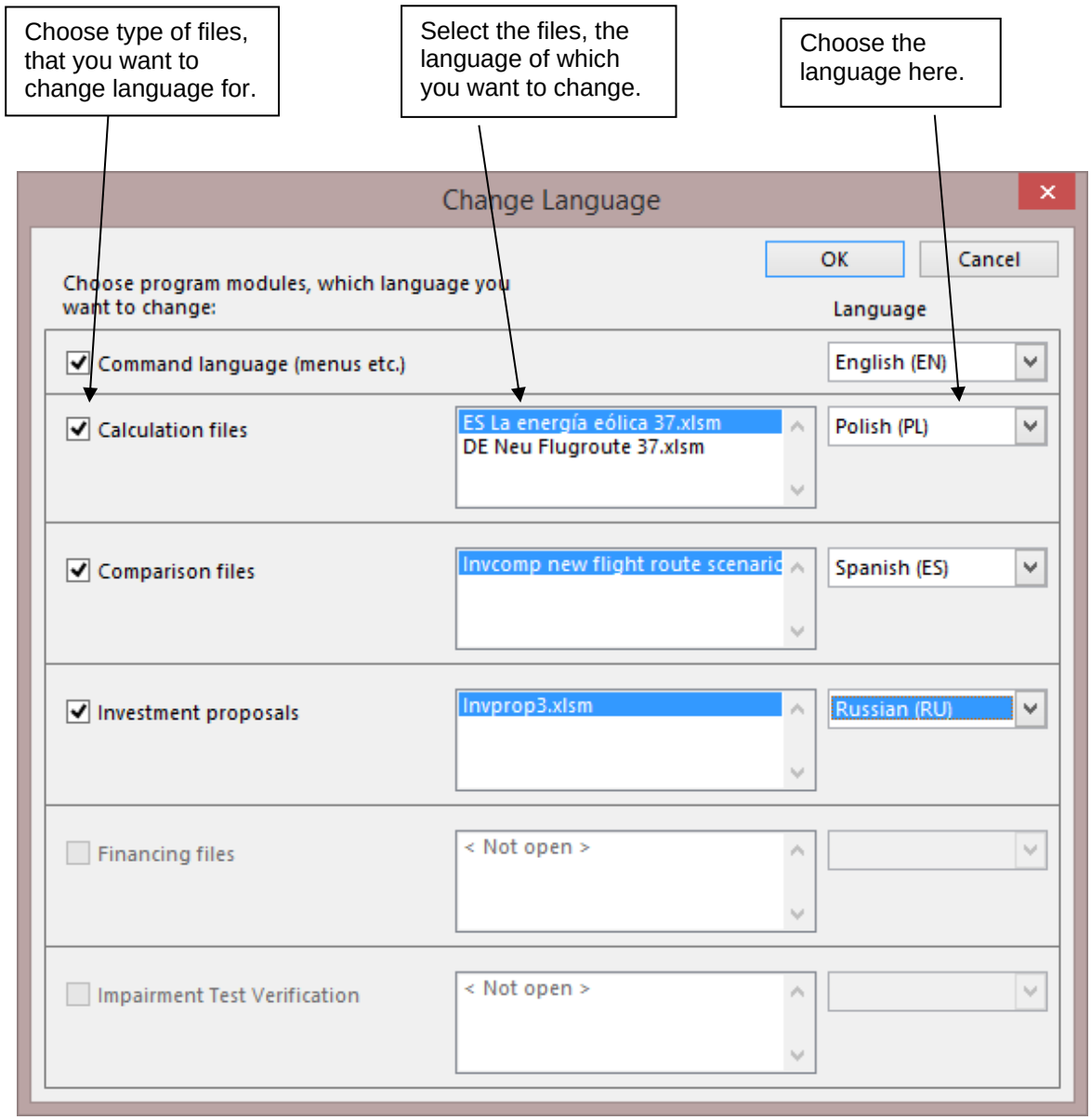
We call the start-up window of the Invest for Excel program the **Home Screen**. The Home Screen functions also as a menu, from which you can go to almost every part of the Invest for Excel program by clicking the Home Screen buttons.

7.2 Change Language

The **Change Language** function is quite useful. It changes the language of parts of the program as selected. In addition to the text in tables, the language of printouts and the Manual texts will change. You can make use of all the languages (**English, Finnish, Swedish, German, Polish, Spanish, Russian, Bulgarian, Serbian** and **Czech**).

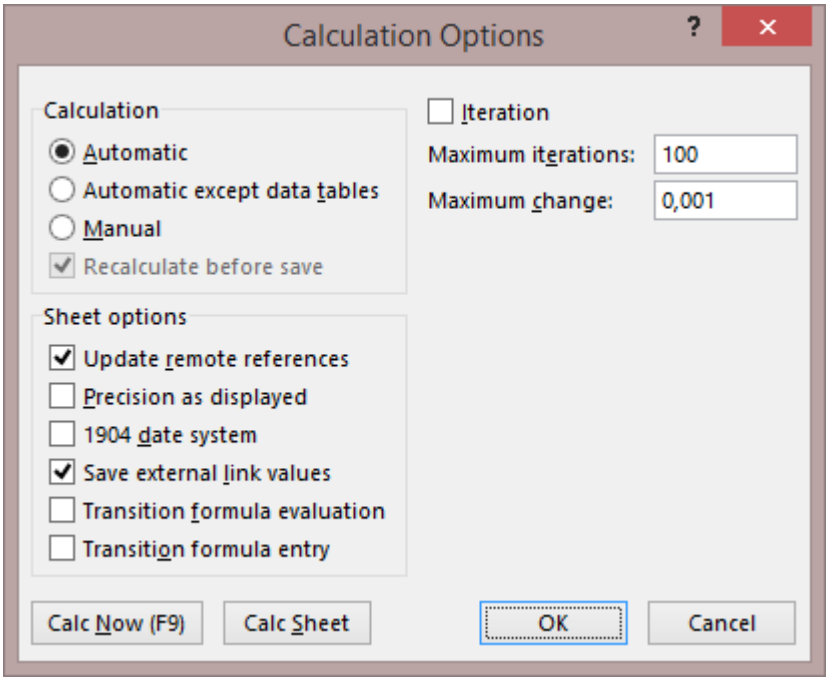

You can change language by clicking the globe icon in the Home Screen or from the Invest for Excel menu "**Other – Change Language…**".

It is possible to change the language separately for:
The commands of the Invest for Excel program,
Any calculation file,
Any comparison file, and
Any investment proposal file.
Any financing file
Any impairment test verification file.



If several files are open at the same time, the program lists them all. Select the file(s), of which you want to change the language. The file must be open for this function to work. Changing the language will not affect Excel's own dialog boxes.

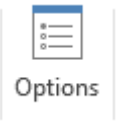
7.3 Calculation



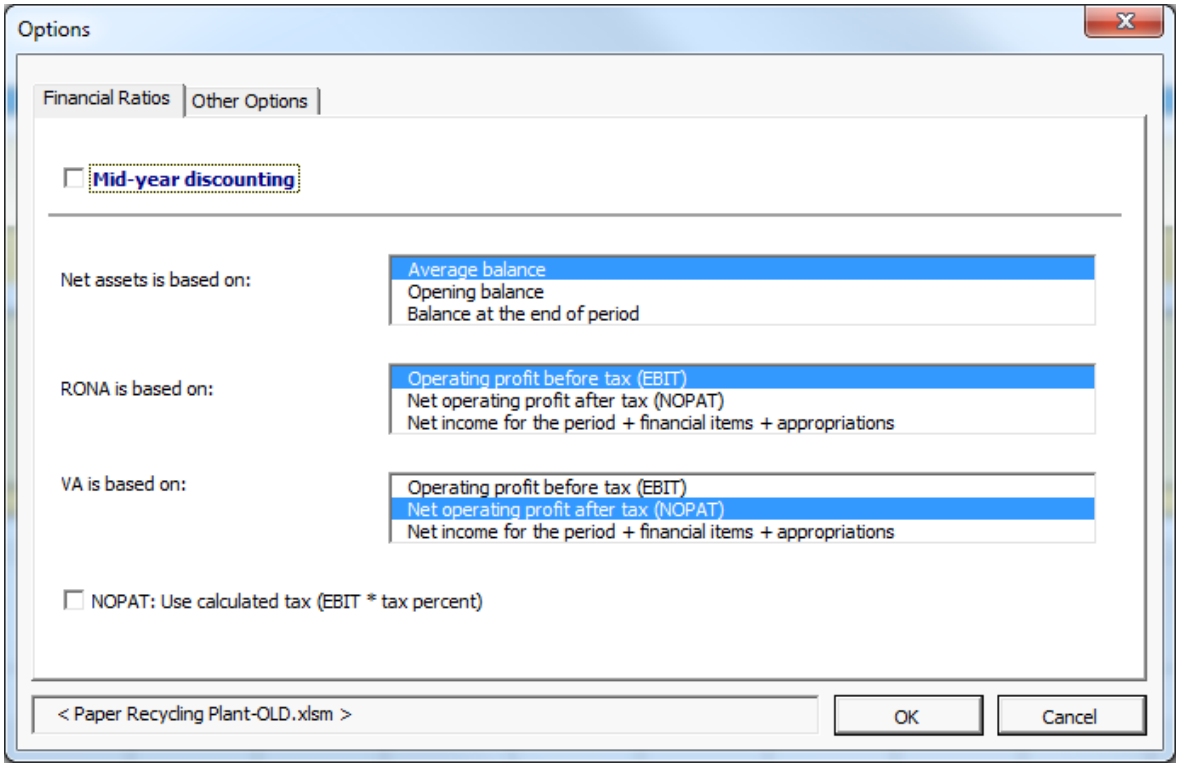
In the **Calculation Options** dialog box you can adjust *Invest for Excel*'s manner of calculating. In practice, you are unlikely to need to change the default settings. One reason might be that you have devised formulas for calculations requiring iteration. Being an Excel function, it will work in the same language as your Excel. For more information, refer to Excel's **Help** function.

Open the Calculation dialog box from Invest menu Other – Calculation – Calculation (Excel).

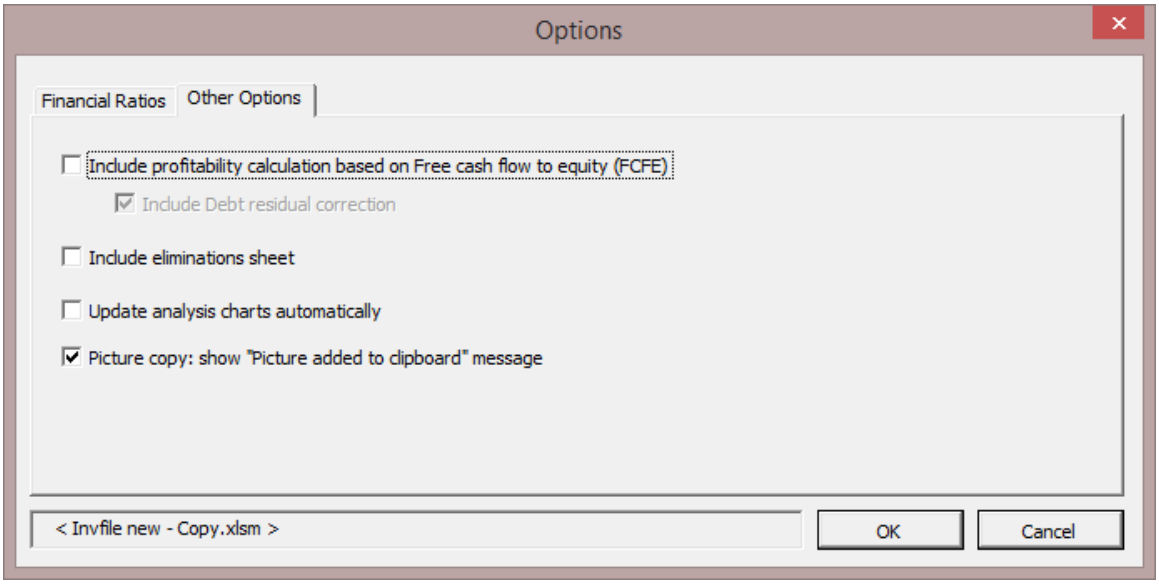
7.4 Options



Define how financial ratios Net assets, RONA and VA are calculated in a new calculation file or, if an calculation file is active, in the active calculation file. Financial ratios are described further in chapter 3.259 Financial ratios



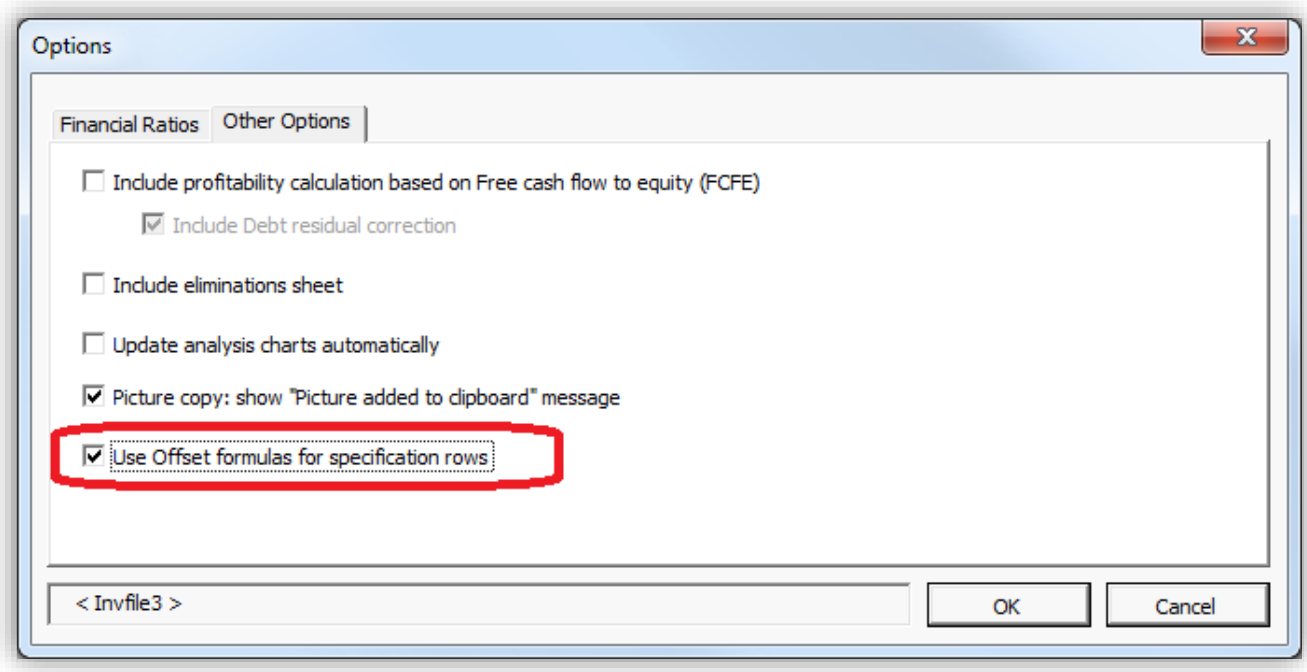
7.4.1 Other Options



1st option, see chapter 4.1.3 Profitability calculation based on Free cash flow to equity (FCFE).
2nd option, see chapter 4.6.4.2 Elimination of internal transactions.
3rd option, you can choose to have sensitivity analyses updated automatically every time you activate a sheet including a sensitivity analysis.

7.4.2 Use Offset formulas for specification rows

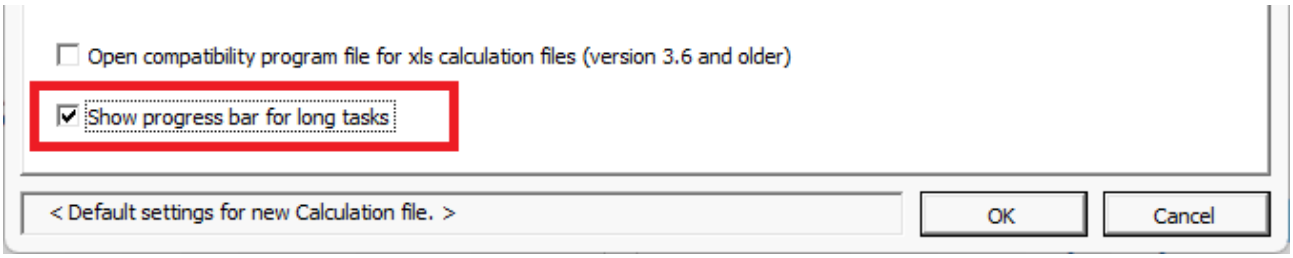
As an option you can use Offset formulas for specification rows.



Offset formulas are safer and can handle cut and paste but are also much slower to calculate. Normal direct-reference formulas will break when cut and paste is used, but are much faster to calculate.

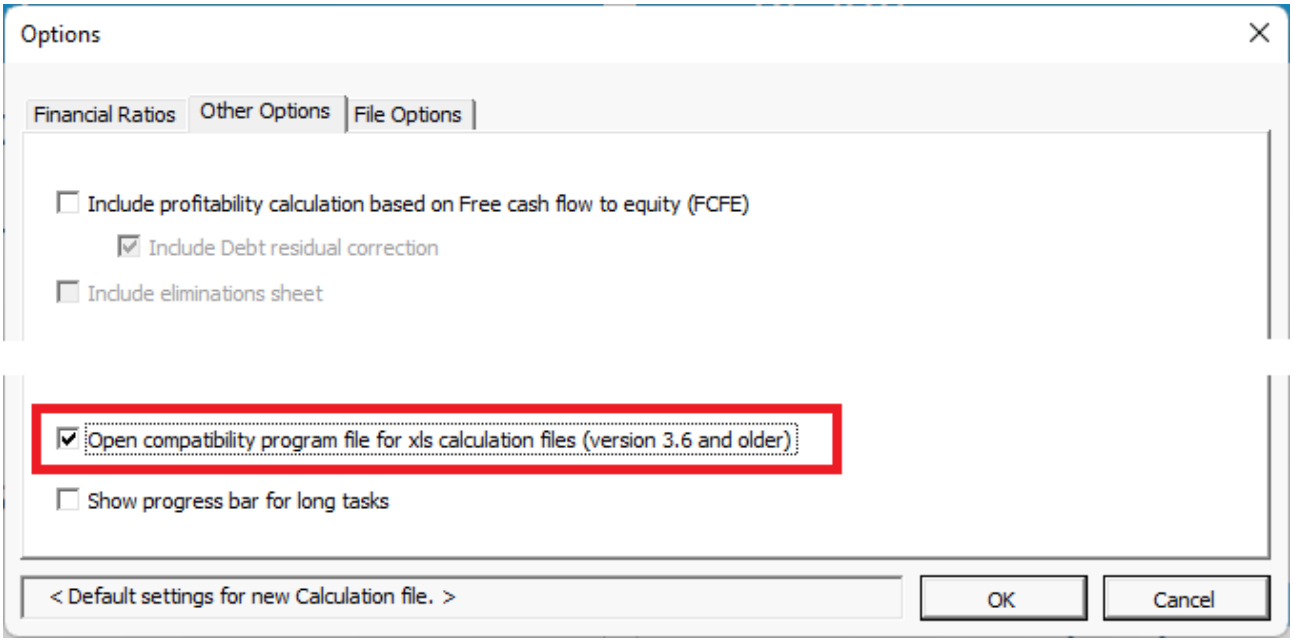
7.4.3 Show progress bar for long tasks

Progress bar is by default turned off to minimize resources. It can be turned on in Options.



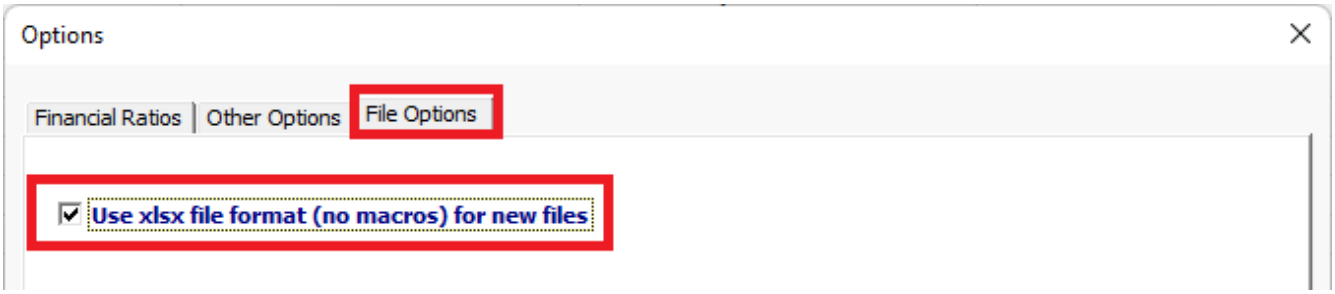
7.4.4 Open compatibility program file for xls calculation files (version 3.6 and older)

The program file with macros for xls calculation files is by default not opened at startup. Opening the file can be activated in program options.



Use this option if you have an old calculation file where buttons aren't working.

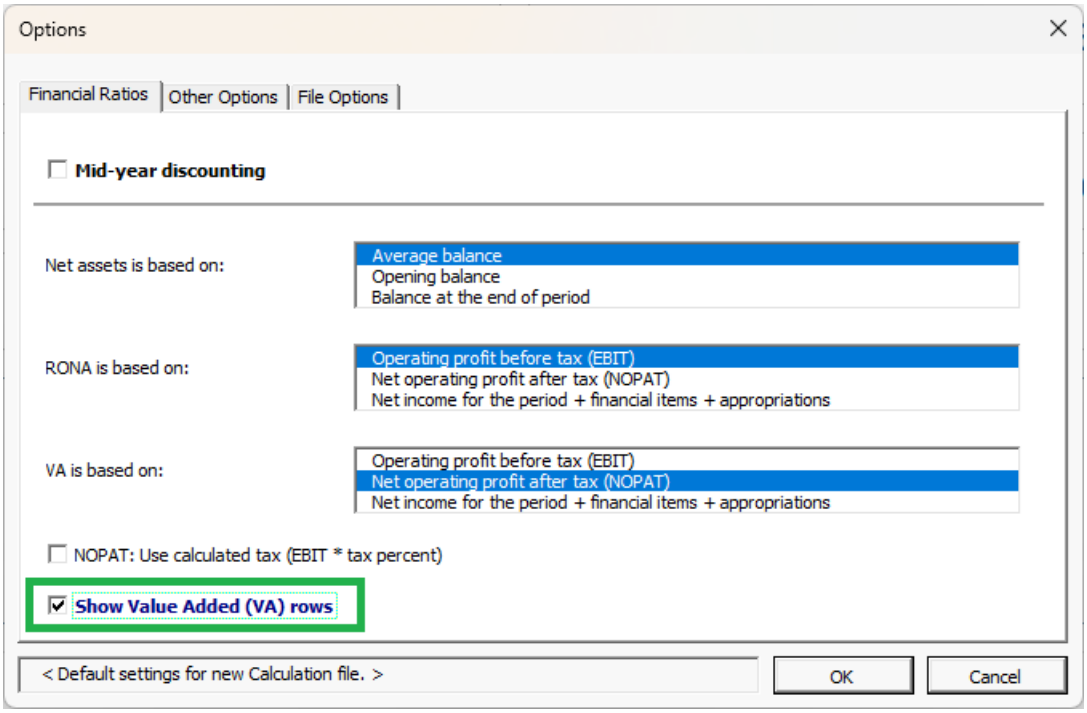
7.4.5 Use xlsx file format (no macros) for new files



See chapter 2.7.

7.4.6 Show Value Added (VA) rows

By default, Value Added-related rows are not shown in new calculation files. If you want to show Value Added rows in new calculation files, check the **Show Value Added (VA) rows** in the Invest for Excel **Options**.



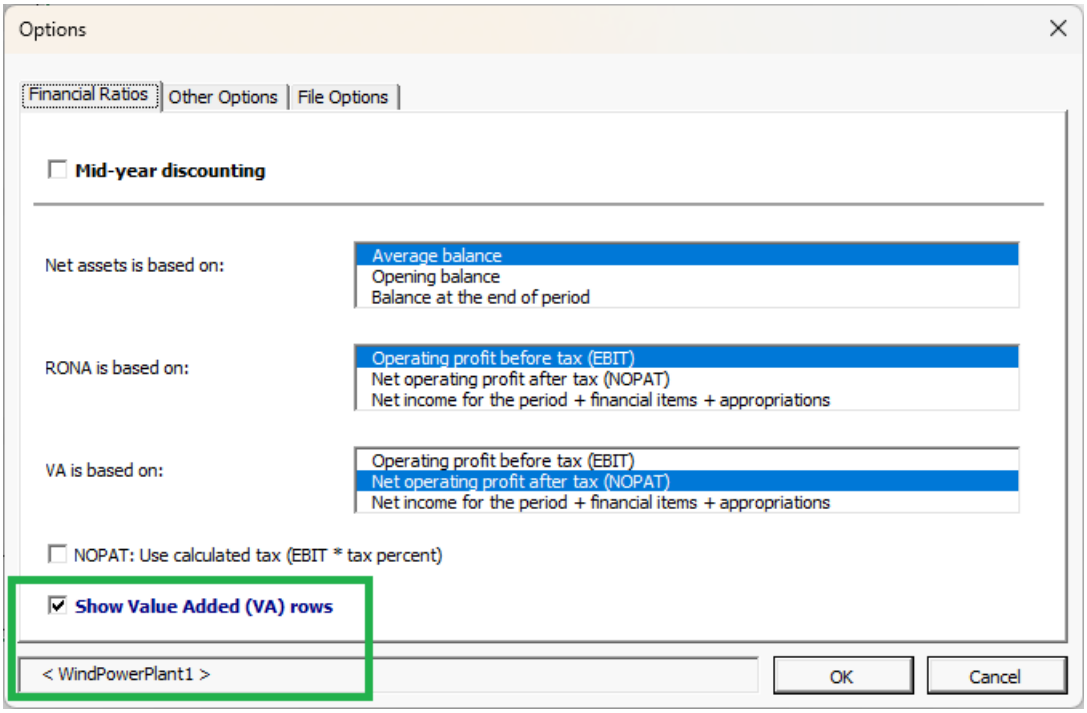
The function will unhide/hide Value Added-related rows in **Calculations** sheet and **Result** sheet.

When you have a calculation file active you can easily unhide/hide Value Added rows.

PROFITABILITY ANALYSIS

Project description		**Wind power plant 1 MW**			€
Nominal value of all investments			3 610 000	Discounted investments	3 453 954
Required rate of return			11,75 %		
Calculation term			15,5	years	7/2021 - 12/2036
Calculation point			7/2021	(In the beginning of period)	
	Present value of business cash flows	Nominal	PV	Notes	
±	PV of operative cash flow		4 365 523		
+	PV of residual value	84 437	15 090		
	Present value of business cash flows		**4 380 613**		
-	Present value of reinvestments	0	0		
	Total Present Value (PV)		**4 380 613**		
	Investment proposal	Nominal	PV		
-	Proposed investments in assets	-3 610 000	-3 453 954		
+	Investment subventions	0	0		
	Investment proposal	-3 610 000	-3 453 954		
	Net Present Value (NPV)		**926 659**	>= 0 ->	profitable
	NPV as a monthly annuity		10 494		
	Internal Rate of Return (IRR)		15,98 %	>= 11,75 % ->	profitable
	Modified Internal Rate of Return (MIRR)		13,48 %	>= 11,75 % ->	profitable
	Profitability Index (PI)		1,27	>= 1 ->	profitable
	Payback time, years		10,6	Based on discounted FCF	
	Calculation is made by	Datapartner Customer Support			
	Calculation file				

Check the **Show Value Added (VA) rows** in the Invest for Excel **Options**.



Value Added rows are shown in **Result** sheet and **Calculations** sheet.

PROFITABILITY ANALYSIS

Project description	**Wind power plant 1 MW**				€
Nominal value of all investments		3 610 000	Discounted investments		3 453 954
Required rate of return		11,75 %			
Calculation term		15,5	years		7/2021 - 12/2036
Calculation point		7/2021	(In the beginning of period)		

Present value of business cash flows	Nominal	PV	Notes
± PV of operative cash flow		4 365 523	
+ PV of residual value	84 437	15 090	
Present value of business cash flows		**4 380 613**	
- Present value of reinvestments	0	0	
Total Present Value (PV)		**4 380 613**	

Investment proposal	Nominal	PV
- Proposed investments in assets	-3 610 000	-3 453 954
+ Investment subventions	0	0
Investment proposal	-3 610 000	-3 453 954

Net Present Value (NPV)	**926 659**	>= 0	->	profitable
NPV as a monthly annuity	10 494			
Internal Rate of Return (IRR)	15,98 %	>= 11,75 %	->	profitable
Modified Internal Rate of Return (MIRR)	13,48 %	>= 11,75 %	->	profitable
Profitability Index (PI)	1,27	>= 1	->	profitable
Payback time, years	10,6	Based on discounted FCF		
Return on net assets (RONA), %	52,5 %	Average 16 years		
Value Added (VA)	229 032	Average 16 years		
Discounted Value Added (DCVA)	853 945			
Internal Rate of Return based on DCVA (IRRd)	15,37 %	>= 11,75 %	->	profitable
Modified Internal Rate of Return based on DCVA (MIRRd)	14,07 %	>= 11,75 %	->	profitable
Payback time, years, based on DCVA	7,7			

Calculation is made by	Datapartner Customer Support						
Calculation file							

Net income for the period	**0**	**0**	**339 203**	**356 599**	**374 517**	**392 973**	**411 982**
Net income for the period, %			50,6%	51,7%	52,7%	53,7%	54,6%
Return on net assets (RONA), %		**0,0%**	**9,6%**	**10,8%**	**12,2%**	**13,9%**	**15,9%**
Value Added (VA)		**-212 088**	**-74 112**	**-31 816**	**14 181**	**60 709**	**107 785**
Discounted Value Added (DCVA)		**-200 628**	**-62 736**	**-24 100**	**9 613**	**36 825**	**58 505**
Cumulative Discounted Value Added		-200 628	-263 364	-287 464	-277 852	-241 027	-182 521
Operating profit		0	339 203	356 599	374 517	392 973	411 982

7.5 Insert comment

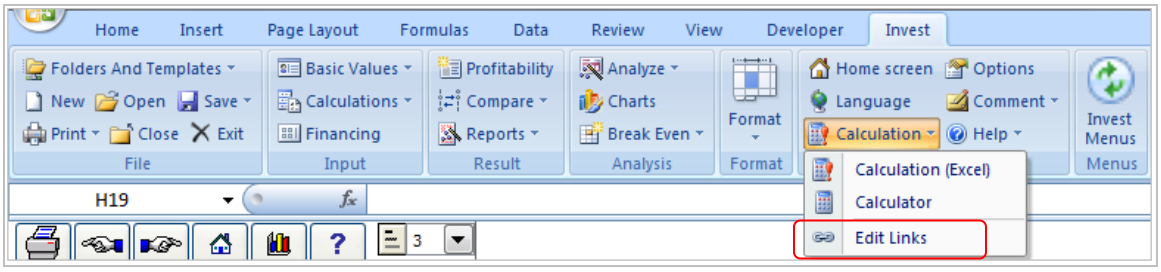
You can insert a comment to any input cell. It makes sense to use this function often to jog your memory, or to assist other users of the program. The text of the comment is usually hidden. Cells with a comment inserted have a small red dot in the top right corner. To display a comment, move the cursor to the cell.

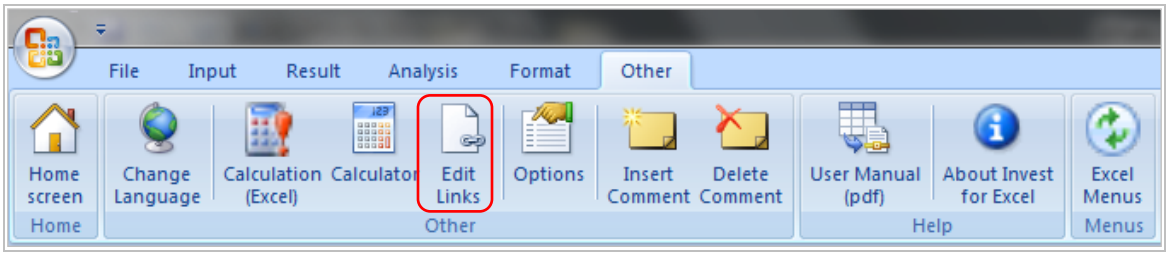
7.6 Delete comment

Deletes comment in active cell. Select cell and choose "Delete comment" from the "Other" menu.

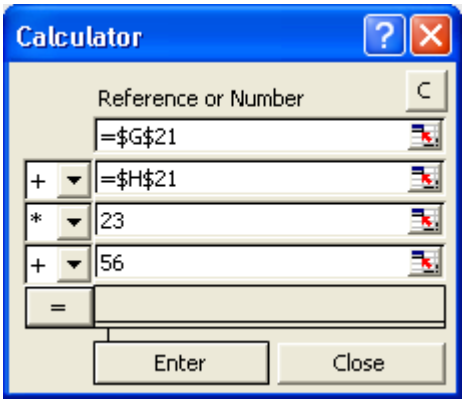
7.7 Edit links

Links to external documents can be edited from Invest for Excel's menus.





7.8 Calculator



How to use the calculator: Click an input field of the calculator and enter a number (see the example above). You can also add references to the calculator. To do this, click one of the fields in the calculator with the mouse. Then click the cell in the calculation table that contains the reference value (see the example above).

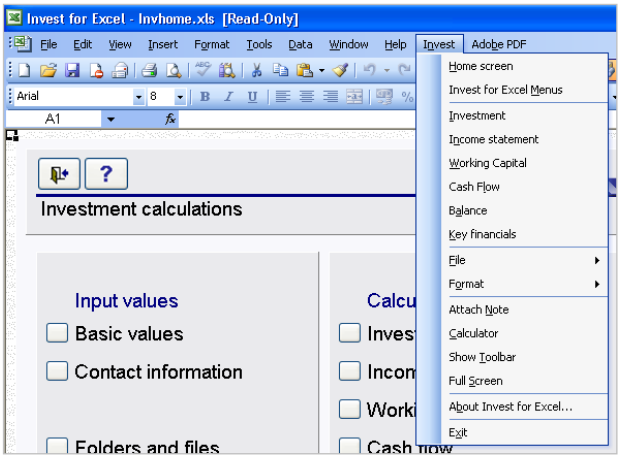
Use the left mouse button to choose a calculation operator (+ - * /), from the pull down menus. Click the **Enter** button to copy the result to the active cell in the calculation table.

7.9 Excel menus

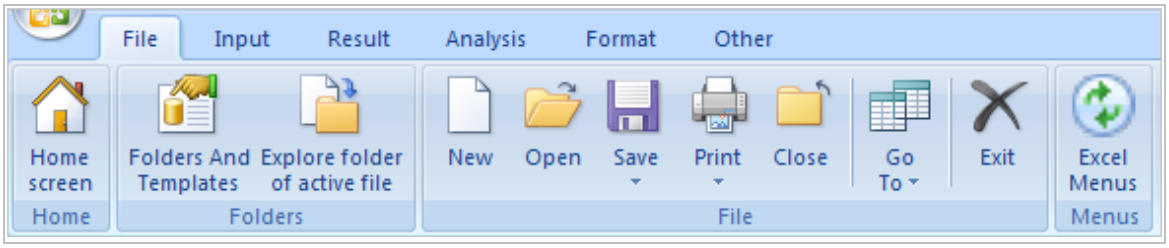
This function changes the Invest for Excel menus to Excel menus. Excel menus enable you to make better use of Excel's functions. Please note, though, that an additional menu has appeared under the Excel menu: Invest. It contains some of Invest for Excels functions.

7.9.1 Invest for Excel Menus

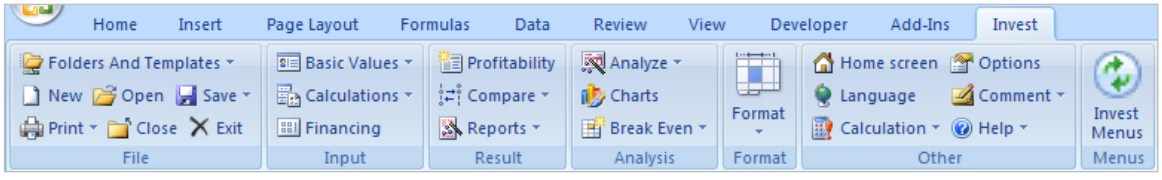
This function enables you to restore the Invest for Excel menu structure.



Full Invest for Excel-menus:



Short Invest menu as part of Excel menus:



7.9.2 Menu setting at startup

Invest for Excel remembers menu setting so that, if Excel menus were active the last time the program was closed, Excel menus will be active at the next startup.

8 Help

8.1 Learning portal

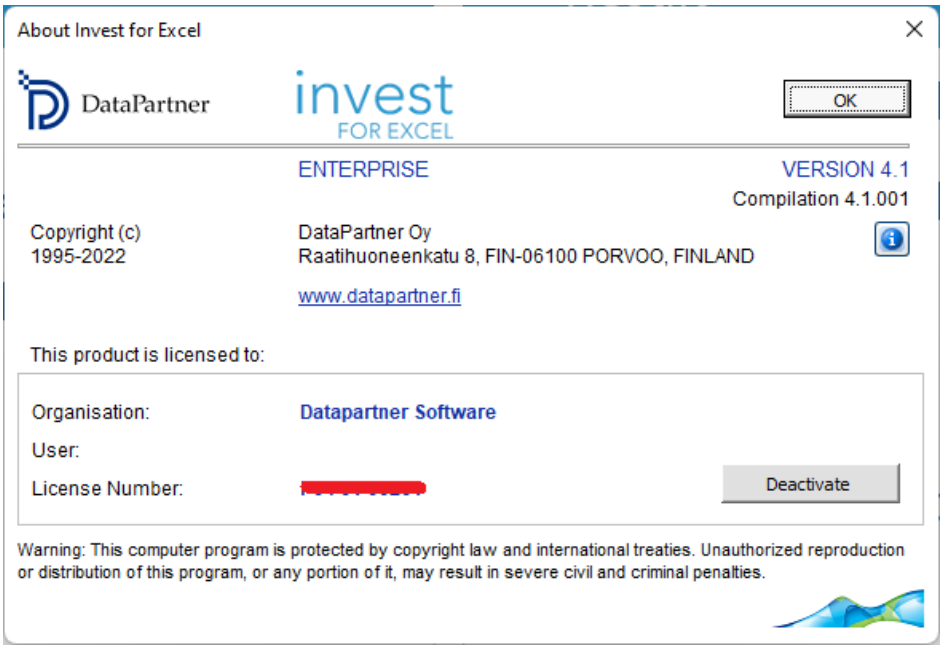
See chapter Learning portal or go directly to learn.investforexcel.com.

8.2 User Manual

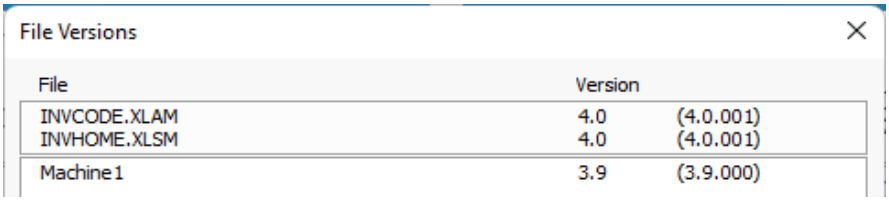
Opens User manual (pdf format).

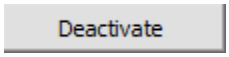
8.3 About Invest for Excel

This dialog box shows the version of the program and to whom it is licensed:



Click on the  -button to see in which Invest for Excel edition the open files are created:



The  -button can be used to deactivate Invest for Excel for the workstation.

Note that this should be done when you are no longer using Invest for Excel on the workstation and before you uninstall the software for example when you get a new computer. When you deactivate the license on your old computer, you can activate it on your new computer.

For more information on license activation, see chapter 1.3 Online activation.

9 Balance sheet (Pro- and Enterprise edition)

As a feature, Balance Sheet gives the person doing investment calculations new scope. This feature complements Invest for Excel calculations, but its use is by no means obligatory.

Like other tables, the Balance Sheet table has been divided into intervals. It contains links to figures and sums from other tables as default. To unhide the **Balance Sheet** categories (and hide again), click these buttons: 

9.1 Fixed assets and other long-term investments

INTANGIBLE ASSETS, TANGIBLE ASSETS, INVESTMENTS

If you have checked the ”Include Historical Data” option in the Calculation term dialog box, you can enter historical balances in the left hand columns. The last history period balance acts as the opening balance for the investment calculation. The figures belonging to this group, which have been entered in the Investments table, will be shown by default.

9.1.1 Intangible assets

There are four asset types under this heading: **Immaterial rights, Capitalized development costs, Goodwill** and **Other intangible assets.**

For each fixed asset type there are three rows. The first row, ending in "(specified)", shows asset investments specified in the investment table.

The second row shows the book value entered in historical period after depreciation.

The third row shows the depreciation of the historical book value. You can choose between three depreciation methods: straight-line, declining balance or enter manually. Choose from the drop down menu. Enter the depreciation percentage in the grey cell to the right of the drop down menu, if straight-line or declining balance deprecation.

9.1.2 Tangible assets

There are four asset types under this heading: **Machinery and equipment, Buildings and structures, Land and water** and **Other tangible assets.**

For each fixed asset type there are three rows. The first row, ending in "(specified)", shows asset investments specified in the investment table.

The second row shows the book value entered in historical period after depreciation.

The third row shows the depreciation of the historical book value. You can choose between three depreciation methods: straight-line, declining balance or enter manually. Choose from the drop down menu. Enter the depreciation percentage in the grey cell to the right of the drop down menu, if straight-line or declining balance deprecation.

9.1.3 Investments

There are four asset types under this heading: Investments in associated companies, Deferred tax assets, Long-term loans receivable and Other investments.

For each fixed asset type there are three rows. The first row, ending in "(specified)", shows asset investments specified in the investment table.

The second row shows the book value entered in historical period after depreciation.

The third row shows the depreciation of the historical book value. You can choose between three depreciation methods: straight-line, declining balance or enter manually. Choose from the drop down menu. Enter the depreciation percentage in the grey cell to the right of the drop down menu, if straight-line or declining balance deprecation.

9.2 Inventories and current assets

INVENTORIES, RECEIVABLES, BANK AND CASH

Enter the balances for history periods only. The figures entered the working capital calculation, or taken from the Income statement based on rotation days, are shown by default.

9.2.1 Inventories and work in progress

This row shows the sum total of all inventories in the Working capital table. Note that, if you enter an opening balance, it can affect the change in working capital and that way, the result of the investment calculation.

9.2.2 Receivables

The balance of accounts receivable and other receivables entered in the Working Capital table are shown here. Note that, if you enter an opening balance, it can affect the change in working capital and that way, the result of the investment calculation.

9.2.3 Bank and Cash

This row shows the cash situation at any time. It should be equal to total cumulative cash flow in the cash flow table + minimum cash reserve (if entered) in the working capital table.

An example balance sheet:

BALANCE SHEET

			12/2005	1/2006	12/2006	12/2007	12/2008	12/2009
Months per interval			12		12	12	12	12
ASSETS								
Fixed assets and other non-current assets								
Intangible assets			1 250	1 250	1 000	750	500	250
Immaterial rights			0	0	0	0	0	0
Capitalized development costs			0	0	0	0	0	0
Goodwill			0	0	0	0	0	0
Other intangible assets			1 250	1 250	1 000	750	500	250
Other intangible assets (specified)			0	0	0	0	0	0
Other intangible assets		1 250	1 250	1 250	1 000	750	500	250
- Depreciation	Straight line	20,0 %		0	-250	-250	-250	-250
Tangible assets			348 000	363 000	355 740	313 480	271 220	228 960
Machinery and equipment			26 000	41 000	31 500	22 000	12 500	3 000
Machinery and equipment (specified)			0	15 000	12 000	9 000	6 000	3 000
Machinery and equipment		26 000	26 000	26 000	19 500	13 000	6 500	0
- Depreciation	Straight line	25,0 %		0	-6 500	-6 500	-6 500	-6 500
Buildings and structures			322 000	322 000	324 240	291 480	258 720	225 960
Buildings and structures (specified)			0	0	28 000	21 000	14 000	7 000
Buildings and structures		322 000	322 000	322 000	296 240	270 480	244 720	218 960
- Depreciation	Straight line	8,0 %		0	-25 760	-25 760	-25 760	-25 760
Land and water			0	0	0	0	0	0
Other tangible assets			0	0	0	0	0	0
Investments			0	0	0	0	0	0
Total fixed assets and other non-current assets			349 250	364 250	356 740	314 230	271 720	229 210
Current Assets								
Inventories and work in progress			12 500	12 500	20 000	19 440	18 852	18 235
Accounts receivable				0	1 944	1 983	2 023	2 063
Other receivables				0	0	0	0	0
Bank and cash			53 950	38 950	27 706	42 727	58 489	76 208
Total Current Assets			66 450	51 450	49 650	64 150	79 364	96 506
ASSETS			**415 700**	**415 700**	**406 390**	**378 380**	**351 084**	**325 716**
SHAREHOLDERS' EQUITY AND LIABILITIES								
Shareholders' equity								
Share capital			45 000	45 000	45 000	45 000	45 000	45 000
Share issue premium				0	0	0	0	0
Other restricted equity				0	0	0	0	0
Retained earnings			124 500	124 500	124 500	116 990	110 180	104 084
Profit (loss) for the period			0	0	-7 510	-6 810	-6 096	-5 368
Total shareholders' equity			169 500	169 500	161 990	155 180	149 084	143 716
Accumulated appropriations				0	0	0	0	0
Minority interest				0	0	0	0	0
Liabilities								
Long-term liabilities			234 000	229 000	209 000	189 000	169 000	149 000
Interest-bearing long-term debt			202 000	197 000	177 000	157 000	137 000	117 000
Interest-free long-term debt			32 000	32 000	32 000	32 000	32 000	32 000
Short-term liabilities			12 200	17 200	35 400	34 200	33 000	33 000
Total liabilities			246 200	246 200	244 400	223 200	202 000	182 000
SHAREHOLDERS' EQUITY AND LIABILITIES			**415 700**	**415 700**	**406 390**	**378 380**	**351 084**	**325 716**

9.3 Shareholder's equity and liabilities

9.3.1 Shareholder's Equity

Share capital, share issue premium and other restricted equity:

In addition to the opening balance item, increase/decrease in equity given in the cash flow table has an effect on this row.

Retained earnings: The profit/loss of the financial period accumulated. Dividends entered in the cash flow table, are subtracted from this row.

Profit (loss) for the period: Profit (loss) for the period (cumulative financial year) from the Income statement.

9.3.2 Accumulated appropriations and minority interests

The changes of accumulated appropriations and minority interests come from the Income statement, the balance is shown here.

9.3.3 Liabilities

Long-term Liabilities:
Long-term liabilities are divided in interest-bearing and interest-free long-term debt.

In addition to the opening balance, increases and decreases entered in the cash flow table will change these items. The current portion of long-term debt is shown separately under short-term liabilities.

Short-term Liabilities:
Short-term liabilities are divided in interest-bearing and interest-free short-term debt.

Interest-bearing short-term debt include short-term borrowings, which can be altered in the cash flow table, and current portion of long-term debt, which is calculated from changes to long-term debt, entered in the cash flow table. Example:

CASH FLOW STATEMENT	12/2005	12/2006	12/2007	12/2008	12/2009	12/2010	12/2011
Long-term debt, increase (+) / decrease (-)	1,600,000	0	-200,000	-190,000	-180,500	-171,475	-162,901
Changes in interest bearing long-term debt	1,600,000	0	-200,000	-190,000	-180,500	-171,475	-162,901
Long-term debt, increase (+) / decrease (-)	1,600,000		-200,000	-190,000	-180,500	-171,475	-162,901

BALANCE SHEET	12/2005	12/2006	12/2007	12/2008	12/2009	12/2010	12/2011
Long-term liabilities	1,600,000	1,400,000	1,210,000	1,029,500	858,025	695,124	540,368
Interest bearing long-term debt	1,600,000	1,400,000	1,210,000	1,029,500	858,025	695,124	540,368
Interest-free long-term debt	0	0	0	0	0	0	0
Short-term liabilities	0	200,000	190,000	180,500	171,475	162,901	154,756
Interest-bearing short-term liabilities	0	200,000	190,000	180,500	171,475	162,901	154,756
Short-term borrowings	0	0	0	0	0	0	0
Current portion of long-term loans	0	200,000	190,000	180,500	171,475	162,901	154,756

Accounts payable and Other interest-free short-term debt can be changed in *short-term liabilities* in the *Working Capital* table.

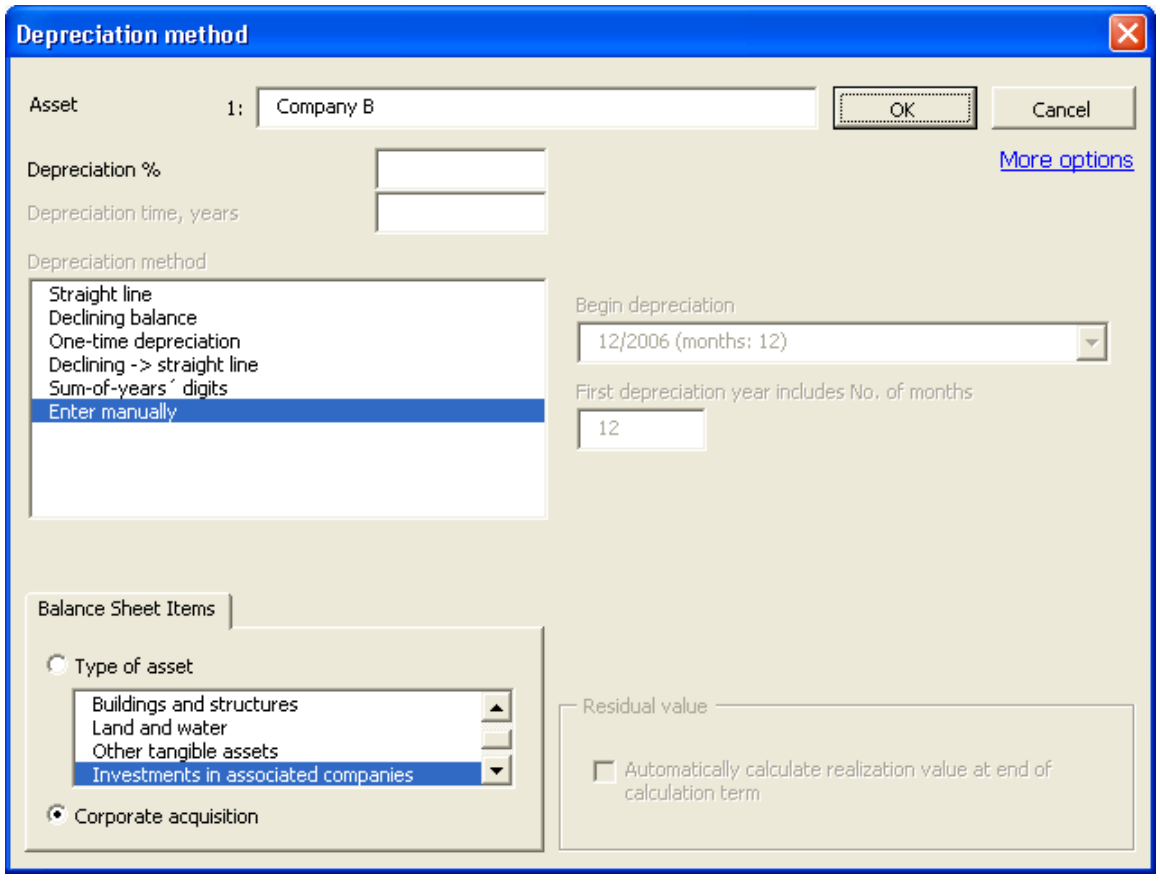
10 Corporate acquisition (Enterprise edition)

Investment as a concept and the Invest for Excel tool are much more than the investments made in tangible assets, such as machinery, equipment and buildings in order to increase productivity, or the related profitability calculations. The program can also help you in the profitability evaluation of an acquisition of a business or a business function. The profitability can be calculated by feeding in the data on the income and costs related to the acquisition of a business or a business function and the future cash flow. The calculation will also return the recommended maximum purchase sum based on this information.

10.1 Investment

When starting an acquisition calculation, select New - Calculation file in the Invest for Excel menu and corporate acquisition as the calculation type.

The Corporate acquisition calculation type is selected only when Company A (buyer) evaluates the profitability of acquiring Company B (the business or function to be acquired). The Invest for Excel calculation is made of Company B and it shows the effects of the acquisition on Company A (goodwill). In the Depreciation screen, select the ”Corporate Acquisition” option when entering the purchase price of the corporate acquisition.



As a default, the first investment in the investment table is defined as corporate acquisition in a new investment calculation.

The basic data of the investment is entered regardless of balance item type. Depreciation percent is however not needed for corporate acquisition. The number of columns for entering historical data has been defined under basic values.

Enter the expected purchase price Company A is prepared to pay for Company B on the first row. The other rows of investment table are by default reserved for future capital expenditures of Company B. There are a total of 30 rows available and any of the rows can be hidden if not needed.

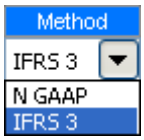
INVESTMENTS (-) / REALIZATIONS (+)

Imputed depreciation		1/2006	12/2006	12/2007	12/2008	12/2009	12/2010
Months per interval	Depr.-%		12	12	12	12	12
1 **Company B**		-4 000 000					
Depreciation							
2							
Depreciation (straight line)							
3							
Depreciation (straight line)							
Investments		0	0	0	0	0	0
Realizations		0	0	0	0	0	0
Depreciation		0	0	0	0	0	0
Realization profit (+) / loss (-)		0	0	0	0	0	0
Book value		0	0	0	0	0	0
Group investments		-4 000 000	0	0	0	0	0
Group realizations		0	0	0	0	0	0
Group depreciation		0	0	0	0	0	0
Group realization profits (+) / losses (-)		0	0	0	0	0	0
Group book value		4 000 000	4 000 000	4 000 000	4 000 000	4 000 000	4 000 000
Goodwill calculation	Method	1/2006	12/2006	12/2007	12/2008	12/2009	12/2010
Price	N GAAP	4 000 000	0	0	0	0	0
Share, %		100,00					
Share capital		800 000	0	0	0	0	0
Share issue premium		350 000	0	0	0	0	0
Other restricted equity		0	0	0	0	0	0
Retained earnings		1 230 000	0	0	0	0	0
Profit (loss) for the period		450 000	0	0	0	0	0
Depreciation difference		0	0	0	0	0	0
Goodwill		1 170 000	0	0	0	0	0
Depreciation			-234 000	-234 000	-234 000	-234 000	-234 000
Goodwill		1 170 000	936 000	702 000	468 000	234 000	0
Equity		1 250 000	1 250 000	1 250 000	1 250 000	1 250 000	1 250 000
Interest bearing long-term debt		2 750 000	2 475 000	2 200 000	1 925 000	1 650 000	1 375 000
Amortizations		0	-275 000	-275 000	-275 000	-275 000	-275 000
Financial expenses		0	-176 344	-157 781	-139 219	-120 656	-102 094

The texts of mother company/group-related figures are shown in blue.

10.1.1 Allocation of overvalue according to IFRS 3

Overvalue in acquisitions can be allocated on existing assets and depreciated with added deferred tax liability according to the depreciation of the asset. Make sure IFRS 3 is selected as the method for calculating goodwill:



(IFRS 3 is the default method of handling goodwill. "N GAAP" = "National GAAP" refers to an alternative method with straightforward depreciation of goodwill without allocation.)

A deferred tax liability is added to overvalue:

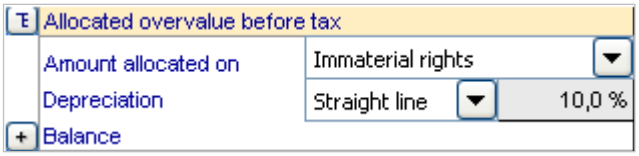
Overvalue before tax liability			16 578
Deferred tax liability			6 447
Overvalue			23 025

The deferred tax liability is by default calculated as:

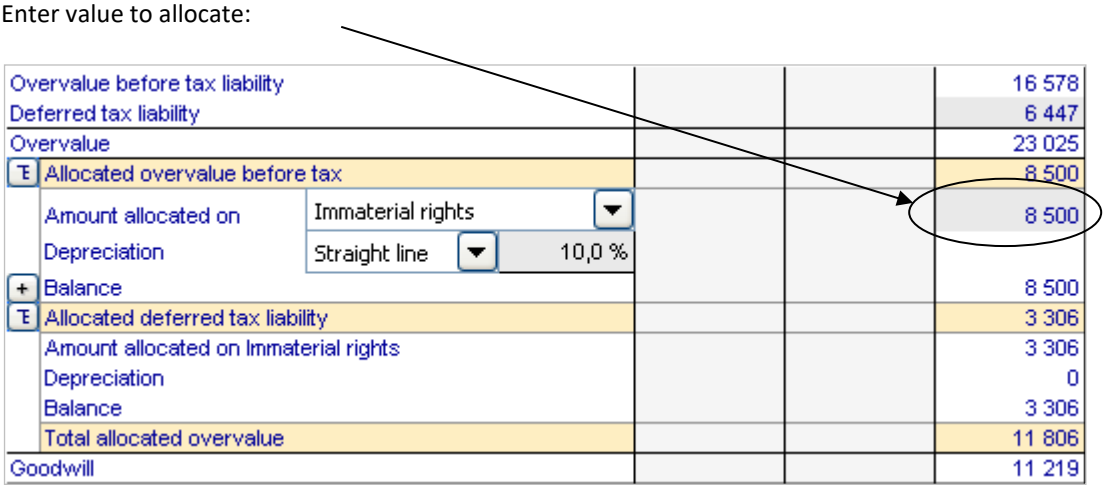
(Overvalue before tax liability / (1 – Tax-%)) * Tax-%

In other words, the tax liability equals Tax-% * Overvalue. Adjust deferred tax liability if necessary. Overvalue can be allocated on the Balance sheet fixed assets of the purchased company:

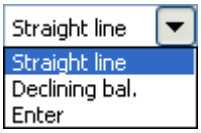
If a depreciation method is defined for the asset in the Balance sheet, Invest for Excel will use the same depreciation method as default:



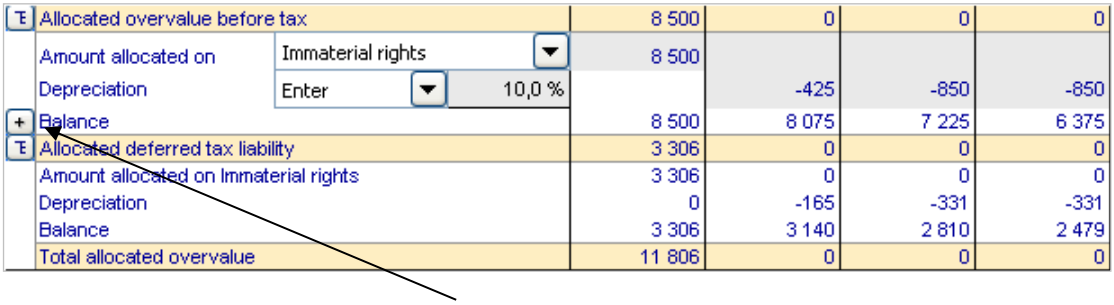
Enter value to allocate:



Note that the entered value should be part of (or all of) Overvalue before tax liability. An equal share of the deferred tax liability is automatically allocated. Any remaining overvalue is shown as goodwill. Allocated overvalue is depreciated according to selected depreciation method. The available methods are:

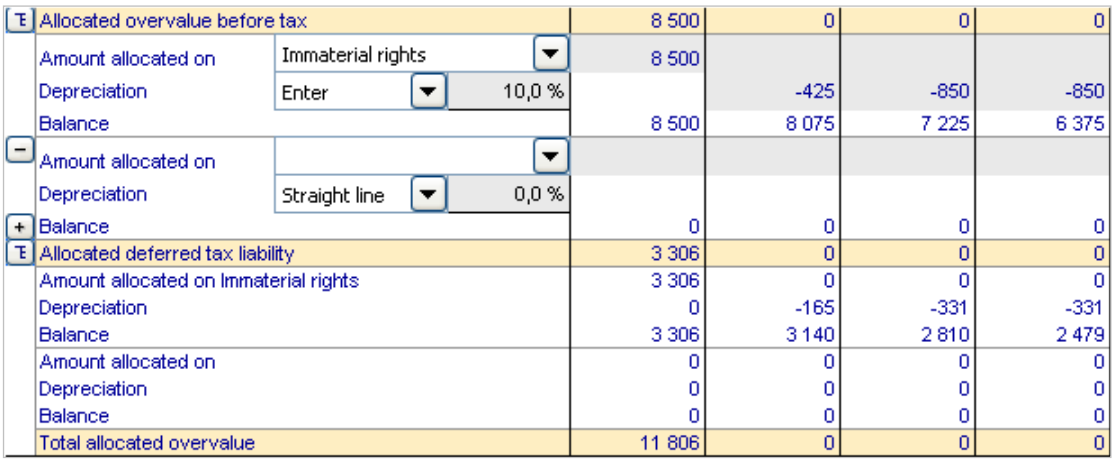


Both overvalue and corresponding deferred tax liability is depreciated using the same method, also when depreciations are entered manually (Enter).



Allocated overvalue before tax		8 500	0	0	0
Amount allocated on	Immaterial rights	8 500			
Depreciation	Enter 10,0 %		-425	-850	-850
Balance		8 500	8 075	7 225	6 375
Allocated deferred tax liability		3 306	0	0	0
Amount allocated on Immaterial rights		3 306	0	0	0
Depreciation		0	-165	-331	-331
Balance		3 306	3 140	2 810	2 479
Total allocated overvalue		11 806	0	0	0

To enter a new allocation, press [+]. A new allocation and tax liability appears:



Allocated overvalue before tax		8 500	0	0	0
Amount allocated on	Immaterial rights	8 500			
Depreciation	Enter 10,0 %		-425	-850	-850
Balance		8 500	8 075	7 225	6 375
Amount allocated on					
Depreciation	Straight line 0,0 %				
Balance		0	0	0	0
Allocated deferred tax liability		3 306	0	0	0
Amount allocated on Immaterial rights		3 306	0	0	0
Depreciation		0	-165	-331	-331
Balance		3 306	3 140	2 810	2 479
Amount allocated on		0	0	0	0
Depreciation		0	0	0	0
Balance		0	0	0	0
Total allocated overvalue		11 806	0	0	0

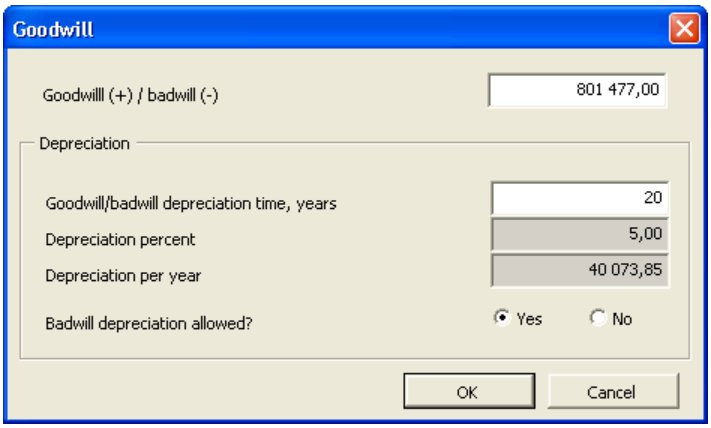
To remove an allocation, press [−]. To hide/unhide details, press [Ɛ].

A maximum of 12 allocations of overvalue can be specified. Any remaining overvalue after allocations is shown as Goodwill and is not depreciated (according to IFRS 3).

Note! This feature requires the Enterprise edition of Invest for Excel.

10.1.2 Depreciation of goodwill

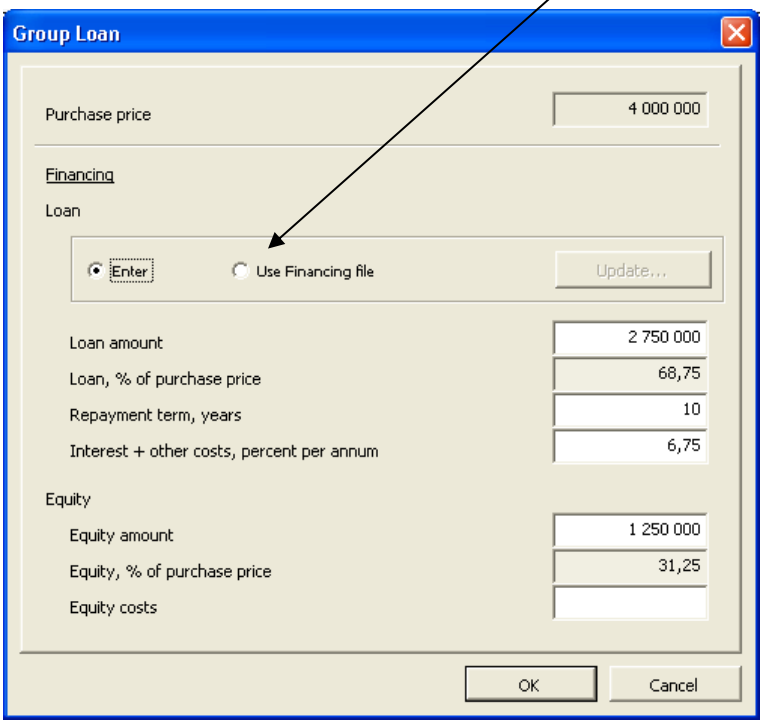
When "N Gaap" is selected as goodwill handling method, goodwill will be depreciated. By clicking on the depreciation row button a dialog box opens for entering the depreciation time in years.



Note that you can determine whether depreciation of negative goodwill (badwill) is allowed.

10.1.3 Financing

By clicking the ... button on the "interest-bearing long-term debt" row, the financing structure for the corporate acquisition can be specified. Enter the loan amount, repayment term and financing costs (annual percentage). Cash flows are calculated for the loan when you press OK. A financing file can also be used for specifying the loan.



10.2 Income statement

The expected income and costs of the future operations of Company B, i.e. the expected INCOME STATEMENT, is entered into the profitability calculation. The extra blue rows at the bottom of the calculation show the effects on parent company A. Enter the figures also in the working capital table. The opening balance is entered into the balance sheet.

The data preceding the year of the corporate acquisition is entered into the history columns selected under basic values. This information is used for estimating the business trend or continuity.

Chapter 0 gives further information on the Income statement. When calculating the profitability of a corporate acquisition compared to an ordinary investment, the difference will show at the bottom of the table as effect on the result and as indicators on group level.

Group			
Investment object result before taxes	0	-6 250	-11 563
Depreciation	0	-42 100	0
Financial and extraordinary items	0	0	0
Total tax effect	0	0	0
Group result effect (cum. fin. year)	0	-48 350	-11 563
Group Return on net assets (RONA), %		**-0,8 %**	**-1,4 %**
Group Economic Value Added (EVA)		**-85 835**	**-91 920**
Group Discounted Value Added (DCVA)		-78 032	-75 967
Group Cumulative Discounted Value Added		-78 032	-153 999
Group Operating profit		-6 250	-11 563
Group Net operating profit after tax		-4 438	-8 209
Group Net assets, average		813 977	837 102
Group Capital charge on net assets		81 398	83 710

10.3 Cash flow

The blue rows in the calculation will show how a corporate acquisition, possible sales profit/loss and taxes affect the cash flow.

Cash flow from operations	**0**	**0**	**49 503**	**43 731**
Asset investments and realizations	0	-31 250	-32 813	-34 453
Group items				
Acquisitions and realizations	-1 000 000	0	0	0
Group realization profits (+) / losses (-)	0	0	0	0
Tax effects	0	-12 209	0	0

10.4 Balance sheet

The goodwill of the corporate acquisition is shown under assets in the balance sheet offset by adjusted shareholders' equity and liabilities with interest.

ASSETS	**0**	**-6 250**	**31 691**
Group goodwill (acquisition)	801 477	801 477	801 477
GROUP ASSETS	**801 477**	**795 227**	**833 168**
SHAREHOLDERS' EQUITY AND LIABILITIES	**0**	**-6 250**	**31 691**
Check: Equity and liabilities - Assets	0	0	0
Equity correction	-198 523	-198 523	-198 523
Interest bearing long-term debt	1 000 000	1 000 000	1 000 000
GROUP EQUITY AND LIABILITIES	**801 477**	**795 227**	**833 168**
Check: Equity and liabilities - Assets (Group)	0	0	0

11 Impairment testing and IFRS functionality

11.1 Impairment testing

The Cash flow table and the Impairment test calculation table under the Balance sheet in Invest for Excel include a ”Value in use” row.

Value in use is the present value of future cash flows in continuous use and the realization value of the asset.

Value in use is needed when applying IAS 22, IAS 36 and IAS 38, to perform periodical impairment tests.

A control value is calculated by comparing the value in use to the tested assets book value. The method for calculating the control value differs if a corporate acquisition or an asset is tested.

A detailed Impairment test verification is available from the Home screen or the Result sheet.

11.1.1 Corporate acquisitions

In the case of a corporate acquisition the purchase price and net assets will generate goodwill in the balance sheet of the acquiring company. This goodwill is depreciated in 5 – 20 years. The depreciation affects the result. This obligation to depreciate goodwill is often questioned by companies. Why depreciate an assets value may even increase? According to IAS 22, no depreciation is done on assets without a specific lifetime, but these items must be impairment tested. This test is done by comparing *Value in use* to the company’s assets + goodwill.

Control value = value in use – total assets – goodwill

11.1.2 Fixed assets

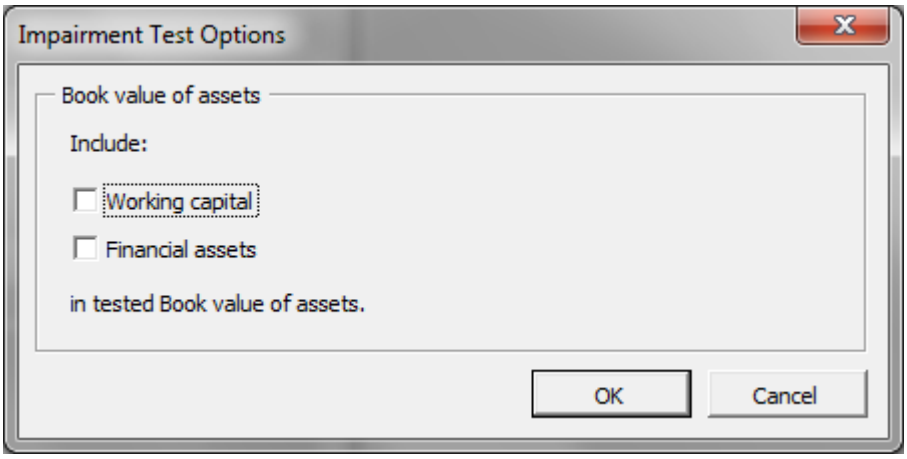
According to IAS 36 a company is required to recognize an impairment loss if the carrying amount of assets exceed their recoverable amount. The recoverable amount of an asset or a cash-generating unit is the higher of its fair value less costs to sell and its value in use. Invest for Excel is used when the recoverable amount is value in use.

Control value = value in use – total assets

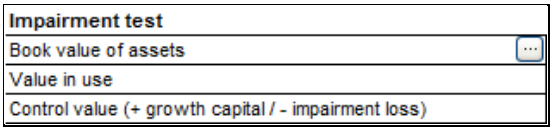
When the control value is positive, no impairment loss needs to be recognized.

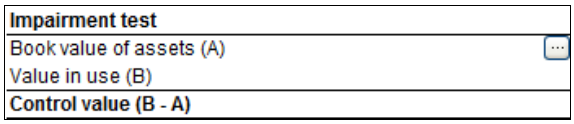
11.1.3 Impairment test options

Working capital and financial assets can be included in the tested assets (requires that the impairment test calculation file is created with version 3.4 or newer).



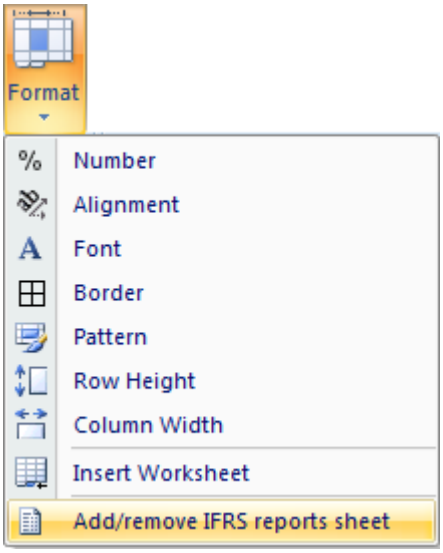
The Impairment test options-dialog box can be opened from the Book value of assets row beneath the Balance sheet and on the Result sheet:





11.2 IFRS report sheet

An IFRS report sheet can be added to an calculation file Available only in Enterprise edition..



The IFRS report sheet uses the forecast data on the Calculations sheet. Included reports:

- Consolidated income statement
- Consolidated balance sheet
- Consolidated cash flow statement

11.2.1 Consolidated income sheet

☐ Show key figures

Company acquisition	1000 €		
CONSOLIDATED INCOME STATEMENT	12/2010	12/2011	12/2012
Continuing operations			
Sales	38 453	40 488	42 472
Other income	15	16	16
Materials and services	-33 069	-34 819	-36 526
Employee benefit costs	-2 623	-2 762	-2 897
Depreciation, amortisation and impairment charges	-314	-335	-356
Other expenses	-1 592	-1 676	-1 759
Operating profit	**869**	**911**	**950**
Share of profit of associates and joint ventures	0	0	0
Net financial items	-511	-473	-435
Profit before income tax	**358**	**438**	**516**
Income tax expense	-100	-123	-144
Profit for the period from continuing operations	**258**	**316**	**371**
Discontinued operations			
Profit for the period from discontinued operations	0	0	0
Profit for the period	**258**	**316**	**371**
Attributable to:			
Equity holders of the company	258	316	371
Minority interest	0	0	0

A couple of non-IFRS standard key ratios can be included:

☑ Show key figures

Company acquisition	1000 €		
CONSOLIDATED INCOME STATEMENT	12/2010	12/2011	12/2012
Continuing operations			
Sales	38 453	40 488	42 472
Other income	15	16	16
Materials and services	-33 069	-34 819	-36 526
Employee benefit costs	-2 623	-2 762	-2 897
Depreciation, amortisation and impairment charges	-314	-335	-356
Other expenses	-1 592	-1 676	-1 759
Operating profit	**869**	**911**	**950**
Operating profit, %	*2,3 %*	*2,2 %*	*2,2 %*
Share of profit of associates and joint ventures	0	0	0
Net financial items	-511	-473	-435
Profit before income tax	**358**	**438**	**516**
Profit before income tax, %	*0,9 %*	*1,1 %*	*1,2 %*
Income tax expense	-100	-123	-144
Profit for the period from continuing operations	**258**	**316**	**371**
Profit for the period from continuing operations, %	*0,7 %*	*0,8 %*	*0,9 %*
Discontinued operations			
Profit for the period from discontinued operations	0	0	0
Profit for the period	**258**	**316**	**371**
Profit for the period, %	*0,7 %*	*0,8 %*	*0,9 %*
Attributable to:			
Equity holders of the company	258	316	371
Minority interest	0	0	0
Return on net assets (RONA), %	*8,3 %*	*8,9 %*	*9,6 %*
Economic Value Added (EVA)	*-439*	*-384*	*-325*

11.2.2 Consolidated balance sheet

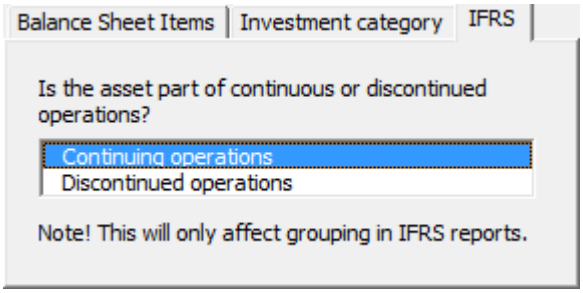
Company acquisition	1000 €		
CONSOLIDATED BALANCE SHEET	12/2010	12/2011	12/2012
ASSETS			
Non-current assets			
Intangible assets	6 066	5 785	5 503
Property, plant and equipment	3 972	3 936	3 883
Investments in associates	0	0	0
Other long-term investments	14	14	14
Deferred tax assets	0	0	0
Long-term interest bearing receivables	0	0	0
Total non-current assets	**10 052**	**9 735**	**9 400**
Current assets			
Inventories	3 107	3 271	3 432
Trade and other receivables	1 056	1 095	1 134
Cash and cash equivalents	-105	-79	11
Total current assets	**4 057**	**4 287**	**4 577**
Total assets	**14 110**	**14 023**	**13 977**
EQUITY			
Capital and reserves attributable the Company's equity holders			
Share capital	0	0	0
Other equity	126	441	813
Total	**126**	**441**	**813**
Minority interest	0	0	0
Total equity	**126**	**441**	**813**
LIABILITIES			
Non-current liabilities			
Interest-bearing liabilities	9 159	8 559	7 959
Deferred tax liabilities	652	566	479
Provisions	183	183	183
Other liabilities	64	64	64
Total non-current liabilities	**10 058**	**9 372**	**8 685**
Current liabilities			
Interest-bearing liabilities	708	708	708
Current tax liability	146	282	408
Trade and other payables	3 071	3 219	3 363
Total current liabilities	**3 925**	**4 209**	**4 479**
Total liabilities	**13 984**	**13 581**	**13 165**
Total equity and liabilities	**14 110**	**14 023**	**13 977**

11.2.3 Consolidated cash flow statement

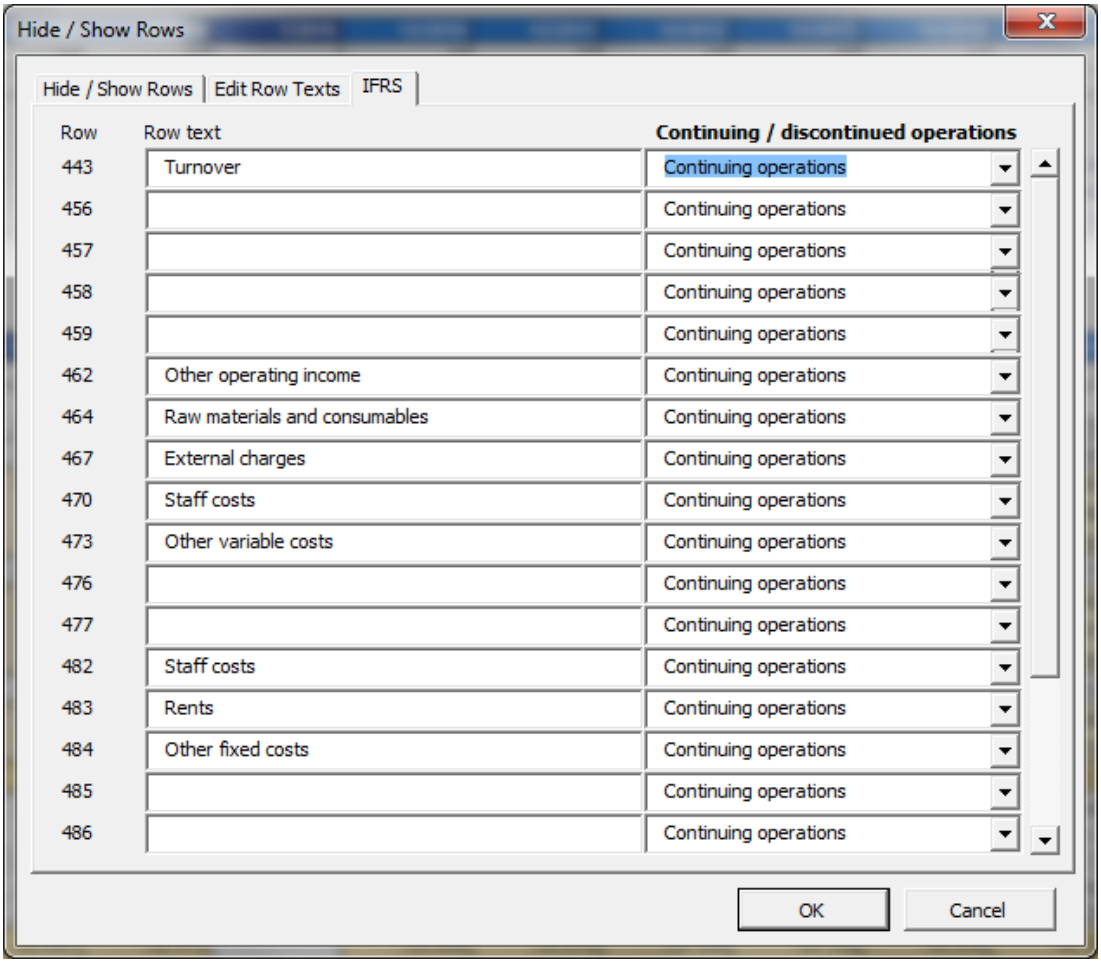
Company acquisition	1000 €		
CONSOLIDATED CASH FLOW STATEMENT	12/2010	12/2011	12/2012
Cash flow from operating activities			
Operating profit before depreciations continuing operations	**1 183**	**1 246**	**1 307**
Non-cash flow items and divesting activities	0	0	0
Net financial items	-511	-473	-435
Dividends received	0	0	0
Taxes	-100	-123	-144
Funds from operations continuing operations	**572**	**650**	**728**
Change in working capital	-134	-56	-55
Net cash from operating activities continuing operations	**437**	**594**	**673**
Net cash from operating activities discontinued operations	0	0	0
Total net cash from operating activities	**437**	**594**	**673**
Cash flow from investing activities			
Capital expenditures	-100	-104	-108
Acquisition of shares	-9 000	0	0
Proceeds from sales of fixed assets	0	0	0
Proceeds from sales of shares	0	0	0
Change in other investments	0	0	0
Net cash used in investing activities continuing operations	**-9 100**	**-104**	**-108**
Net cash used in investing activities discontinued operations	0	0	0
Total net cash used in investing activities	**-9 100**	**-104**	**-108**
Cash flow before financing activities	**-8 663**	**490**	**565**
Cash flow from financing activities			
Net change in loans	8 400	-600	-600
Dividends paid to the Company´s equity holders	0	0	0
Other financial items	0	0	0
Net cash used in financing activities continuing operations	**8 400**	**-600**	**-600**
Net cash used in financing activities discontinued operations	0	0	0
Total net cash used in financing activities	**8 400**	**-600**	**-600**
Total net increase (+)/decrease (-) in cash and marketable securities	**-263**	**-110**	**-35**
Total net increase (+)/decrease (-) in cash, continuing operations	**-263**	**-110**	**-35**

Calculation sheet items can be included in the IFRS reports either as "Continuing operations" or "Discontinued operations", if that's appropriate. As default all items are included in continuing operations.

Investments can be specified as part of continuing operations and discontinued operations in the Depreciation method dialog box:



Income statement rows can be divided in continuing and discontinued operations in the IFRS page of the Hide / Show Rows dialog box.



Note! This feature requires the Enterprise edition of Invest for Excel.

12 Hints

12.1 Creating links to Excel workbooks.

When you are working on an Invest for Excel calculation and you want to create a link to an Excel workbook saved earlier:

1) Select first File – Open and open the file you want to refer to.
2) Return to your Invest for Excel calculation by choosing the file name in the Window menu.
3) In Invest for Excel, activate the cell to which you want to place the reference, and enter the equals (=) sign in the cell.

4) Return to the Excel calculation, use the mouse to activate the cell where the source file is, and press the Enter key.

Now you have created a link between the workbooks. It is advisable to save both workbooks!

Later on, when you reopen the Calculation file, Invest for Excel will ask, whether you want to update the existing link to the Excel-calculation. If you choose Yes, Invest for Excel will update the Calculation file with all changes made in the Excel-workbook.

You can, of course, also make links to extra sheets within the Invest for Excel Workbook (*Insert - Worksheet*).

12.2 Using templates

If you use regularly the same rate of return requirement or other such information, it makes sense to create a file called template. You can save the template in any folder you choose (see 2.1.3 *Template Files*). The Company can limit and direct the use of calculations related to certain investments by setting default values. When starting a new investment calculation, open this template file and *only enter the missing values* into it. Separate template files can be made for various types of recurring investments. When similar types of investments are made repeatedly, you don't have to do everything again from the start; instead, changing a few figures will suffice.

12.3 Including positive tax effects.

(See the bottom left corner of the text Basic Values screen, and the chapter Income Tax Rate above. Example:

Investment X results in a loss of -100,000 USD in the first interval.
The result of the company's remaining business shows a profit of 1,000,000 USD. The corporate tax rate is 29%.

1) Without investing in X

Our profit from other activities	1 000 000	
Tax (29%)		- 290 000

2) We invest in object X

Our profit from other activities	1 000 000	
Result of investment		- 100 000
Total profit		900 000

Tax (29%)	-261 000

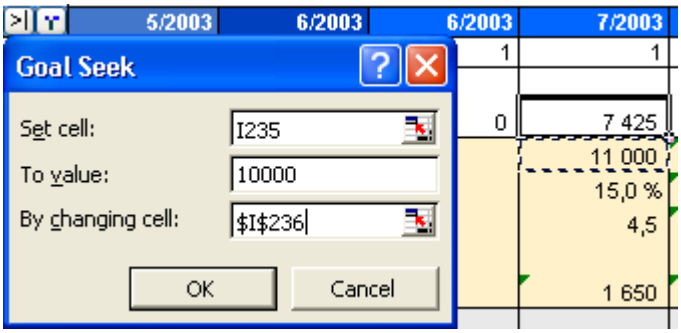
If we choose Include positive tax effects, the cash flow will increase by 29,000 USD during the first interval (i.e. 290,000 - 261,000 = 29,000).

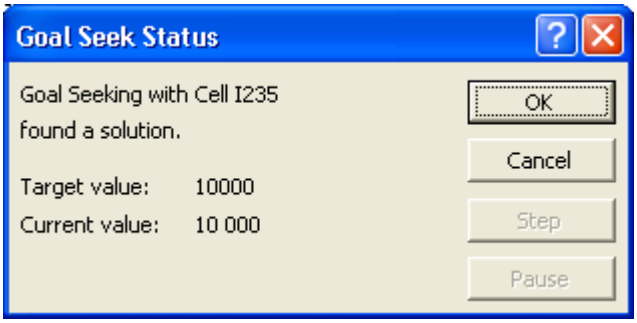
12.4 Excel's Goal Seek function

Example:

How many products XY have to be produced, before earnings reach a certain level.

1) First, choose **Excel menus** from Invest for Excel's menu.
2) Move the cursor to the cell, the value of which you want to set at a specific level.
3) Choose from Excel's Data – What if analysis menu - **Goal Seek** and enter the goal value (**To value**) in the dialog-box.
4) Specify the variable you want to analyse. To do that, activate the first cell containing a value of an input row in the calculation table.
5) Choose **OK** in the **Goal Seek** window.





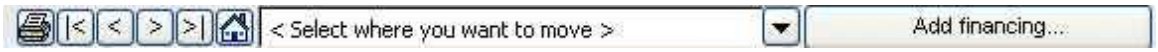
The result will be shown in the **Goal Seek Status** window and in the calculation.

13 The Financing module (Enterprise edition)

13.1 General

The Financing file (*InvFin*) consists initially of the following sheets:

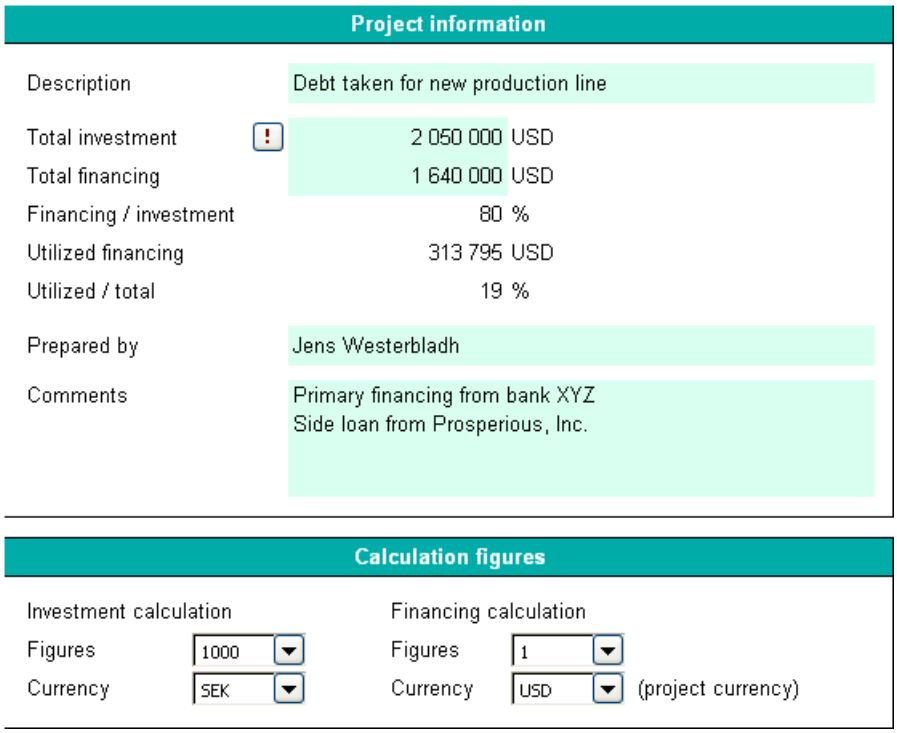
- **Project**, general information and synchronization between investment calculation file (*InvFile*) and the financing file.
- **Currency**, currency rates for synchronization between investment calculation and project financing.
- **InvSpec**, will include cash flows from calculation file once you have updated the numbers with the exclamation mark button in Project sheet.
- **01Param**, here define the parameters of loan # 1. This is the main input sheet.
- **01Spec**, in this sheet you will see all details of loan1 payment schedule
- **01View**, is a report of the loan payment schedule and other financing costs.
- **TotalSpec**, shows all specified loans payment schedules consolidated in detail.
- **TotalView**, is a report showing all loan payment schedules aggregated.



On the top, there is a bar with buttons and a drill-down menu.
The functionality explained (from left to right):

- print function for printout of current sheet
- moves to the leftmost sheet
- moves one sheet left
- moves one sheet right
- moves to the rightmost sheet
- moves to start-screen
- the drill-down menu lets you select which function you move to
- the Add financing button adds more sheets for more loans (e.g. 02Param, 02Spec & 02View)

13.2 Project sheet



Description Describe your project financing plan, the purpose of this financing or who is the financier.

Total investment The sum of investments (capital expenditures) from your calculation file. Is updated by pressing the exclamation mark on the left *.

Total financing Enter how much debt you are planning to take for this project.

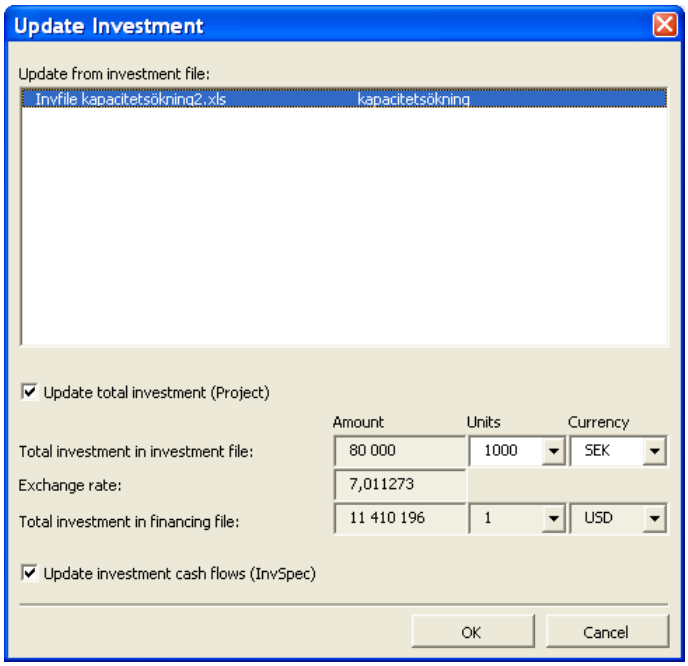
Financing/ investment The percentage ratio of Total financing vs. Total investment.

Utilized financing Once you have entered the debt parameters and the withdrawals, the sum of debt taken will show here.

Utilized / total Shows the ratio between the sum of entered withdrawals vs. planned total financing.

Calculation figures In order to synchronize the numbers for updating from calculation file you need to select the figures and currency of both investment calculation file and financing file. In the example above, the investment calculation was done in 1000 SEK, but the financing plan will be done in 1 USD. When exchanging data both ways, the numbers are automatically converted.

* Pressing the exclamation mark will open this dialog box:



Open *Investment calculation* files will be listed. Select the one whose cash flow you want to import.

Notice the amounts, units, currency and exchange rate. Press OK, to update, Cancel to cancel.

13.3 Currency sheet

This sheet is only for currency exchange rates used when updating numbers between *investment calculation file* and *financing file*. You only need to enter a currency exchange rate when you use it. There is no need to update other exchange rates.

	Currencies		
	Currency	Rate	
Reference	EUR	1,000000	EUR/EUR
	USD	1,206300	USD/EUR
	JPY	135,070000	JPY/EUR
	AUD	1,598500	AUD/EUR
	NZD	1,774500	NZD/EUR
	CYP	0,573800	CYP/EUR
	ZAR	8,052000	ZAR/EUR
	PLN	4,120200	PLN/EUR
	CZK	30,203000	CZK/EUR
	RON	3,559200	RON/EUR
	BGN	1,955700	BGN/EUR

Currency prefixes		
Figures	Prefix	Example
1		EUR
1 000	T	TEUR
1 000 000	M	MEUR
1 000 000 000	B	BEUR

13.4 InvSpec sheet

The cash flows from your investment calculation file are brought to this sheet.

Although your investment calculation might have been e.g. on annual basis, the financing file is always on monthly basis:

Figures: USD		Investment					
(All transactions at end of month)		Cash flow from operations		Investments and realizations		Investment net cash flow	
		Per period	Cumulative	Per period	Cumulative	Per period	Cumulative
Month	Totals:	7 278 812,85	7 278 812,85	-2 895 120,00	-2 895 120,00	4 383 692,85	4 383 692,85
	1/2006			-603 150,00	-603 150,00	-603 150,00	-603 150,00
1	2/2006			-603 150,00	-1 206 300,00	-603 150,00	-1 206 300,00
2	3/2006			-1 688 820,00	-2 895 120,00	-1 688 820,00	-2 895 120,00
3	4/2006				-2 895 120,00		-2 895 120,00
4	5/2006				-2 895 120,00		-2 895 120,00
5	6/2006				-2 895 120,00		-2 895 120,00
6	7/2006				-2 895 120,00		-2 895 120,00
7	8/2006				-2 895 120,00		-2 895 120,00
8	9/2006				-2 895 120,00		-2 895 120,00
9	10/2006				-2 895 120,00		-2 895 120,00
10	11/2006				-2 895 120,00		-2 895 120,00
11	12/2006	224 204,26	224 204,26		-2 895 120,00	224 204,26	-2 670 915,74
12	1/2007		224 204,26		-2 895 120,00		-2 670 915,74
13	2/2007		224 204,26		-2 895 120,00		-2 670 915,74
14	3/2007		224 204,26		-2 895 120,00		-2 670 915,74
15	4/2007		224 204,26		-2 895 120,00		-2 670 915,74
16	5/2007		224 204,26		-2 895 120,00		-2 670 915,74
17	6/2007		224 204,26		-2 895 120,00		-2 670 915,74
18	7/2007		224 204,26		-2 895 120,00		-2 670 915,74
19	8/2007		224 204,26		-2 895 120,00		-2 670 915,74
20	9/2007		224 204,26		-2 895 120,00		-2 670 915,74
21	10/2007		224 204,26		-2 895 120,00		-2 670 915,74
22	11/2007		224 204,26		-2 895 120,00		-2 670 915,74
23	12/2007	573 253,19	797 457,45		-2 895 120,00	573 253,19	-2 097 662,55

Three cash flows are brought:

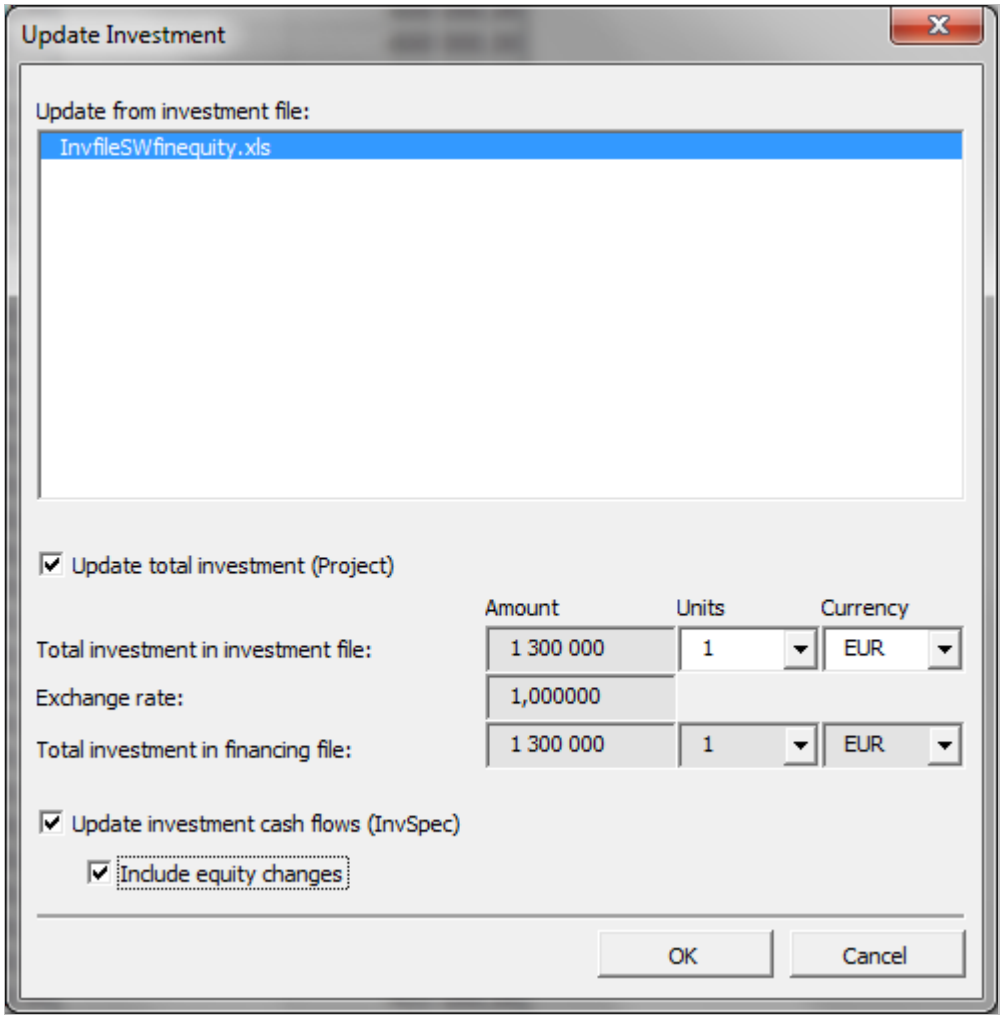
- Cash flow from operations
- Investments and realizations
- Free cash flow (net cash flow)

All three are also shown as cumulative. The reason for importing cash flows from investment calculation is to have a better idea of how much debt financing is needed, when withdrawals need to made and how soon can the debt be repaid? The best indicator for the need of financing is cumulative investment net cash flow (free

cash flow). Think of it as the debt balance needed. But remember that you need more than that in order to pay financing costs (e.g. interest).

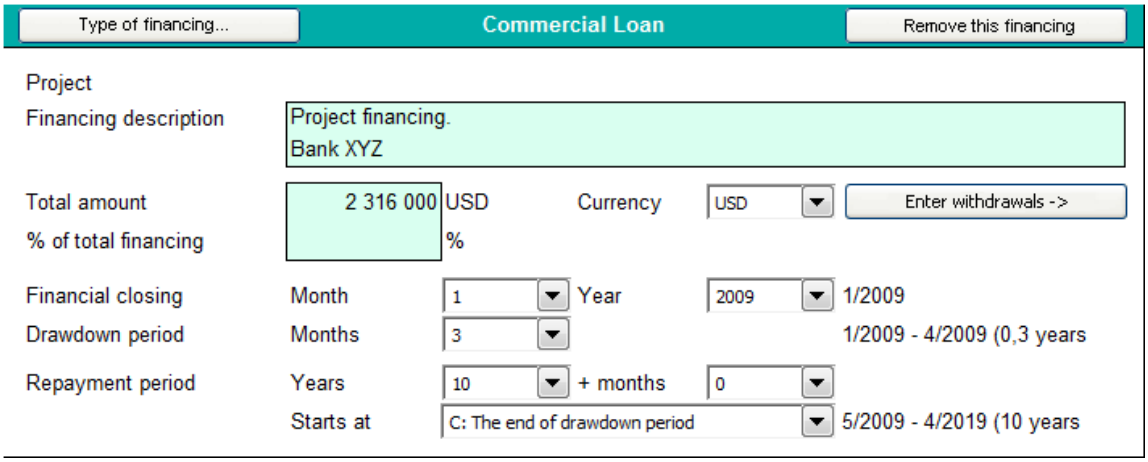
13.4.1 Include equity changes

Equity changes can be included when updating financing file cash flows from the calculation file. This way it's easy to see the financing need after equity for each period.



13.5 01Param sheet

Enter parameters for debt financing.



The picture above shows the upper part of *01Param* sheet.

Type of financing…: You may choose from 2-types: *Commercial loan* and *ECA*.

ECA is short for Export Credit Agency. ***Export Credit Agencies***, commonly known as ***ECAs***, are public agencies and entities that provide government-backed loans, guarantees and insurance to corporations from their home country that seek to do business overseas in developing countries and emerging markets. Most industrialized nations have at least one ECA. Selecting ECA here, means that certain parameters for the loan are given, it will a typical ECA standard debt under guidelines set by the OECD.

IN ALL OTHER CASES (not ECA), USE *COMMERCIAL LOAN* AS TYPE OF FINANCING.

<u>Please use following working order, while entering parameters for debt:</u>

Financing description: Please feel free to describe this debt with own words.

Currency: Select the currency of the loan.

Total amount: Enter the size of the loan to be taken or *% of total financing* (if you entered the debt amount on *Project* -sheet).

Financial closing: Date when the loan is granted and possible startup costs are paid. Select month and year.

Drawdown period: Loan withdrawal period. E.g. the length of the construction period of a project. **Enter the length of the drawdown period.** The drawdown period is defined as the time from the first drawdown to the starting point of credit (i.e., the beginning of the repayment period which usually falls six months before the first repayment of principal). If the transaction involves only a single loan withdrawal, the drawdown period is usually zero. In all other cases, enter the anticipated number of months between the first draw and the starting point of credit.

Repayment period: The term for repayment of loan in years + months. E.g. 10 years, 0 months.

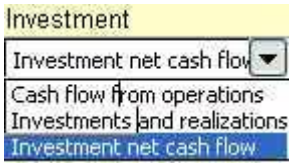
Starts at: Starting Point of Credit. Three options: A) Financial closing, B) First draw and C) The end of drawdown period (default). When option A is selected the repayment period begins immediately from financial closing. When option B is selected the repayment period starts from first withdrawal. When option C is selected the repayment period starts at the end of the Drawdown period.

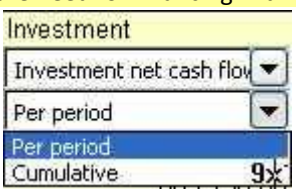
Now, press the **Enter withdrawals** button (Enter loan withdrawals). The 01Spec sheet is activated and you have the following view:

Figures:	USD	Investment	Total amount:	2 316 096
(All transactions		Investment net cash flow	Drawdown	
at end of month)		Per period	USD	% of total
Month	Totals:	4 383 692,85	2 316 015,95	100,00
0	1/2006	-603 150,00	700 000,00	30,22
1	2/2006	-603 150,00	700 000,00	30,22
2	3/2006	-1 688 820,00	916 015,95	39,55
3	4/2006	0,00		
4	5/2006	0,00		
5	6/2006	0,00		
6	7/2006	0,00		

In the 2nd column the color shows different phases: light turquoise is Financial closing, turquoise represents Drawdown period and dark turquoise represents repayment period.

In the yellow column you have cash flows imported from your investment calculation. This helps you to synchronize the need for financing with the financing. You may select from Cash flow from operations, investments and realizations and Investment net cash flow (Free cash flow). You may also select whether you prefer cash flow per period or cumulative.

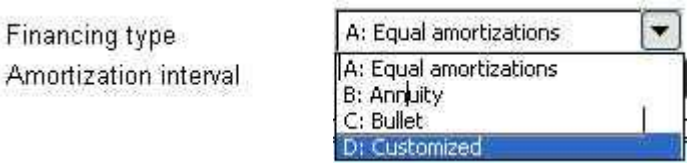




In the 4th and 5th columns, here labeled Drawdown you enter the debt Withdrawals. For each withdrawal, you may enter either as value or percentage. See example above

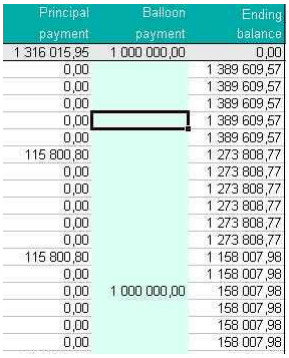
Next, please return to *01Param* sheet.

Select type of loan:



- **Equal amortizations**: each amortization is of same size, payment and interest varies. Each payment will be smaller than previous.
- **Annuity**: each payment is of same size, amortization and interest varies.
- **Bullet**: only interest is paid. One amortization of the whole loan at the end of the loan term.
- **Customized**: totally flexible amortization. You enter the amortizations by pressing the "*Enter principal payments*" –button:

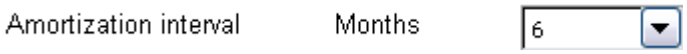
Balloon payment is one extra amortization in order to accelerate repayment. Select only when applicable. be used with all loan types. Select Balloon payment and press “Enter balloon ->” button. You may then enter the balloon payment in the period of your choice.



Principal payment	Balloon payment	Ending balance
1 316 015,95	1 000 000,00	0,00
0,00		1 389 609,57
0,00		1 389 609,57
0,00		1 389 609,57
0,00		1 389 609,57
0,00		1 389 609,57
115 800,80		1 273 808,77
0,00		1 273 808,77
0,00		1 273 808,77
0,00		1 273 808,77
0,00		1 273 808,77
0,00		1 273 808,77
115 800,80		1 158 007,98
0,00		1 158 007,98
0,00	1 000 000,00	158 007,98
0,00		158 007,98
0,00		158 007,98
0,00		158 007,98

Can

Select amortization interval of loan:



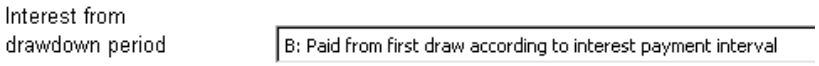
You may select between 1,2,3,4,6,12 months interval or “Enter”.

If you select “Enter” you may input customized irregular amortizations by pressing the “Enter principal payments” –button:

Next section is about interest rates

First field is for information only:

Next field is about how interest will be handled during the drawdown period:



The alternative methods and their explanations:

A. Paid monthly from financing
   - interest calculated on loan amount and paid monthly
B. Paid from first draw according to interest payment interval
   - interest paid according to selected payment interval, starting from first loan withdrawal
C. Paid at first principal payment after drawdown period
   - the first interest payment paid at the first amortization
D. Capitalized on financing and paid according to repayment plan
   - during drawdown period interests are not paid, accrued interests are put on top of loan, so the loan amount will be bigger.

Enter interest rate

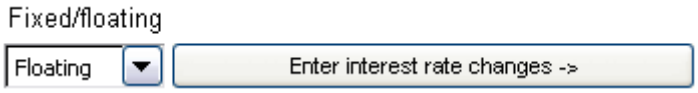
In the example to the right the benchmark rate (Euribor 6 m.) is entered + a margin.

It is not necessary to break the interest in two parts.

Yield (p.a.) is effective annual rate.

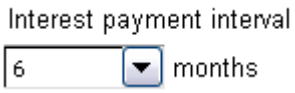
Interest		
Interest rate (p.a.)	2,91800	%
Interest margin (p.a.)	0,50000	%
Total rate (p.a.)	3,41800	%
Yield (p.a.)	3,44721	%

When interest rate is floating, you may enter forecasted interest rates for future periods by pressing the "Enter interest rate changes ->" –button. You can always stick to the initial interest rate if you don't think you can predict the future.

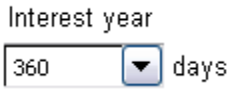


Select interest payment interval

Typically interest payments follow the amortization schedule, but not always. You may select 1, 2, 3, 4, 6 or 12 months interest payment intervals.



Interest is calculated either based on the assumption of 360 days per year or 365 days per year. The simplified 360 days is more common.



Entering other costs related to the debt financing

In the left column "Fees" you may name the fees.

In the 2nd column you enter either a percent or a monetary value.

Please do not use %-format.

Then select from the dropdown menu, how the fee is calculated.

Fees	% / USD	Type	Payment interval
Loan arrangement fee	0,50000	A: Upfront % of total financing at financial closing	
Guarantee fee	0,30000	F: % of balance in advance, repayment period	3
Billing charge	10,00	I: Fixed fee in arrears	6
		(Not in use)	
		(Not in use)	
		(Not in use)	
		(Not in use)	
		(Not in use)	
		(Not in use)	
		(Not in use)	

All-in rate (p.a.)	3,85499 %	Total finance cost	476 433 USD

You may select from 15 options.

(Not in use)

- use this option when you don't want to calculate a fee

A: Upfront % of total financing at financial closing

- the fee is calculated as a percentage of total debt, paid immediately at financial closing

B: Upfront amount at financial closing

- the fee is entered (not calculated), payable immediately at financial closing

C: Flat % on each disbursement

- the fee is a percentage of each withdrawal, paid at the time of corresponding withdrawal

D: % of undisbursed balance on each disbursement

- the percentual fee is calculated on the unused loan reservation, paid each month there is a withdrawal.

E: % of paid interest

- a percentage fee calculated on paid interest, paid each time interest is paid

F: % of balance in advance, repayment period

- a percentage fee calculated on loan balance, paid according to amortization schedule, but upfront.

G: % of balance in arrears, repayment period

- a percentage fee calculated on loan balance, paid according to amortization schedule.

H: Fixed fee in advance

- the fee is entered, paid according to amortization schedule, but upfront.

I: Fixed fee in arrears

- the fee is entered, paid according to amortization schedule.

J: % of disbursed balance in advance

- otherwise like option “F” but payments start already at financial closing, continuing according repayment interval (upfront).

K: % of disbursed balance in arrears

- otherwise like option “G” but payment schedule starts already at financial closing, continuing according repayment interval.

L: % of undisbursed balance in advance, drawdown period

- a percentage fee calculated on unused loan reservation, paid upfront at selected payment interval but only during drawdown period.

M: % of undisbursed balance in arrears, drawdown period

- a percentage fee calculated on unused loan reservation, paid at selected payment interval but only during drawdown period.

N: Entered

- when you select this option, press the arrow on the right and you get to enter fees manually.

13.6 01Spec sheet

This sheet is a detailed report of one specified loan.

Project financing. Loan from Bank XYZ.			Interest (fixed)				Fees					
Capitalized interest	Principal payment	Ending balance	Euribor 6 months				Loan arrangement fee		Guarantee fee		Billing charge	
			Rate	Calculated	Accrued	Paid	Calculated	Paid	Calculated	Paid	Calculated	Paid
0,00	2 316 015,95	0,00		428 175,77	428 175,77	428 175,77	211 022,67	134 674,67	36 477,25	36 477,25	200,00	200,00
		700 000,00	3,41800				0,00	134 674,67	0,00	0,00		
0,00	0,00	1 400 000,00	3,41800	1 993,83	1 993,83	0,00	134 674,67	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	3 987,67	5 981,50	0,00	76 341,33	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	6 596,79	12 578,29	0,00	6,67	0,00	1 737,01	1 737,01	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	6 596,79	19 175,07	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	6 596,79	25 771,86	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	6 596,79	32 368,64	0,00	0,00	0,00	1 737,01	1 737,01	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	6 596,79	38 965,43	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 316 015,95	3,41800	6 596,79	45 562,21	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	115 800,80	2 200 215,15	3,41800	6 596,79	52 159,00	52 159,00	0,00	0,00	1 650,16	1 650,16	10,00	10,00
0,00	0,00	2 200 215,15	3,41800	6 266,95	58 425,94	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 200 215,15	3,41800	6 266,95	64 692,89	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 200 215,15	3,41800	6 266,95	70 959,84	0,00	0,00	0,00	1 650,16	1 650,16	0,00	0,00
0,00	0,00	2 200 215,15	3,41800	6 266,95	77 226,78	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 200 215,15	3,41800	6 266,95	83 493,73	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	115 800,80	2 084 414,36	3,41800	6 266,95	89 760,67	37 601,68	0,00	0,00	1 563,31	1 563,31	10,00	10,00
0,00	0,00	2 084 414,36	3,41800	5 937,11	95 697,78	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 084 414,36	3,41800	5 937,11	101 634,89	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 084 414,36	3,41800	5 937,11	107 572,00	0,00	0,00	0,00	1 563,31	1 563,31	0,00	0,00
0,00	0,00	2 084 414,36	3,41800	5 937,11	113 509,10	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	2 084 414,36	3,41800	5 937,11	119 446,21	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	115 800,80	1 968 613,56	3,41800	5 937,11	125 383,32	35 622,64	0,00	0,00	1 476,46	1 476,46	10,00	10,00
0,00	0,00	1 968 613,56	3,41800	5 607,27	130 990,58	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	1 968 613,56	3,41800	5 607,27	136 597,85	0,00	0,00	0,00	0,00	0,00	0,00	0,00
0,00	0,00	1 968 613,56	3,41800	5 607,27	142 205,12	0,00	0,00	0,00	1 476,46	1 476,46	0,00	0,00

Columns from left to right (see picture above)

1. **Capitalized interest** If option is chosen: Interest from drawdown period is D: Capitalized on financing and paid according to repayment plan, then the capitalized interests will show here.
2. **Principal payment** Amortization of loan.
3. **Ending balance** Loan amount after amortization
4. **Interest Rate** The interest rate applied for that month
5. **Interest Calculated** The imputed interest for that month
6. **Interest Accrued** Cumulative unpaid interest
7. **Interest Paid** Interest payments, according to interest payment schedule
8. **Fees Calculated** The 1st fee specified in 01Param sheet is calculated here
9. **Fees Paid** The payments of the 1st fee specified in 01Param sheet
10. **Fees Calculated** The 2nd fee specified in 01Param sheet….

	IRR:	5,06378 %
Fees	Total cash flow	
Total	Cash flow	Cumulative
171 351,92	-599 527,69	-599 527,69
134 674,67	565 325,33	565 325,33
0,00	700 000,00	1 265 325,33
0,00	916 015,95	2 181 341,28
1 737,01	-1 737,01	2 179 604,27
0,00	0,00	2 179 604,27
0,00	0,00	2 179 604,27
1 737,01	-1 737,01	2 177 867,26
0,00	0,00	2 177 867,26

IRR: The effective cost of finance including all fees and interests, calculated with Internal Rate of Return method.

Fees Total: Sum of the fees paid per month according to specification on 01Param sheet.

Cash flow: Total monthly cash flow of this debt, including loan withdrawals, loan repayments, interest payments and all fees.

Cumulative: Total cash flow of this debt cumulated.

13.7 View sheet

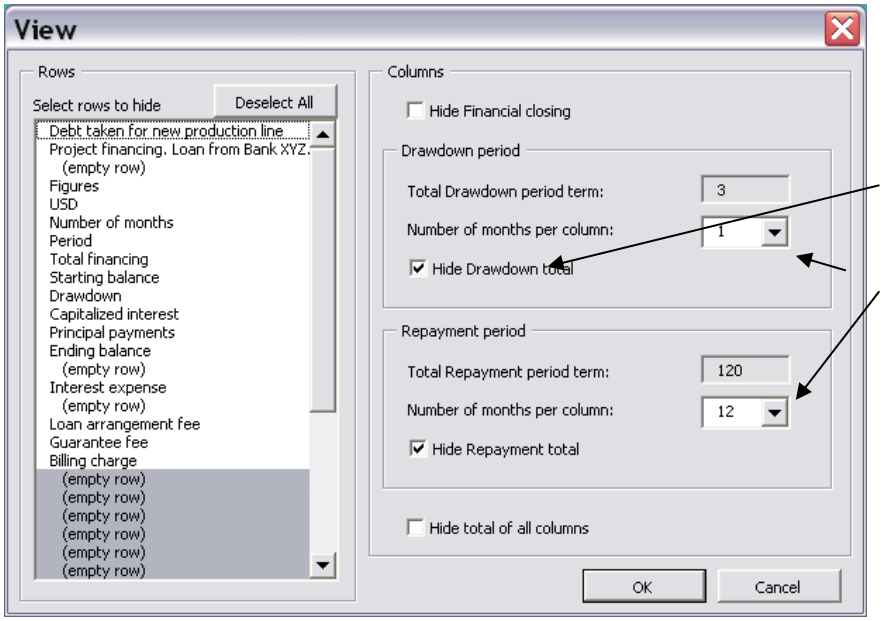
A report view of current debt. Gives a good overview. You may modify line and period settings by pressing button *.

Debt taken for new production line
Project financing. Loan from Bank XYZ.

Figures USD		1/2006	2/2006 - 2/2006	3/2006 - 3/2006	4/2006 - 4/2006	5/2006 - 4/2007	5/2007 - 4/2008	5/2008 - 4/2009
Number of months			1	1	1	12	12	12
Period		Fin. closing	Drawdown period (3 months)			Repayment period (10 years)		
Total financing		2 316 096						
Starting balance			700 000	1 400 000	2 316 016	2 316 016	2 084 414	1 852 813
Drawdown	a)	700 000	700 000	916 016				
Capitalized interest								
Principal payments	b)					231 602	231 602	231 602
Ending balance		700 000	1 400 000	2 316 016	2 316 016	2 084 414	1 852 813	1 621 211
Interest expense	c)					89 761	69 266	61 350
Loan arrangement fee		134 675						
Guarantee fee					1 737	6 601	5 906	5 211
Billing charge						20	20	20
Total fees	d)	134 675			1 737	6 621	5 926	5 231
Total debt service	(b+c+d)	134 675			1 737	327 983	306 794	298 183
Total cash flow	(a-b-c-d)	565 325	700 000	916 016	-1 737	-327 983	-306 794	-298 183
Cumulative cash flow		565 325	1 265 325	2 181 341	2 179 604	1 851 621	1 544 828	1 246 645

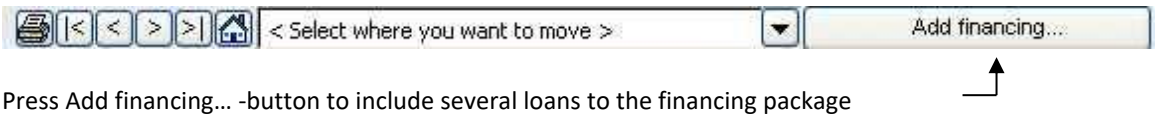
All-in rate (p.a.)	5,064 %
Total finance cost (Total interest and fees paid)	599 528

All-in rate (p.a.) is the total cost of financing, shown as an annual interest.
Total finance cost is the total costs paid for this debt.

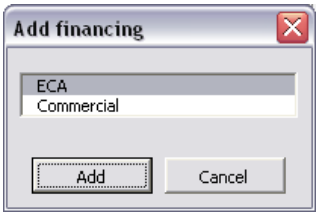


* Clicking on dialog box button gives you the opportunity to
1) select rows to be hidden, to
2) select columns to be hidden and
3) select column intervals separately for drawdown period and repayment period.

13.8 Handling of multiple loans



Press Add financing… -button to include several loans to the financing package



Select type of Loan:

Select ECA only for Export Credit Agency types of loans,
select "Commercial" for all other loans!

Three new sheets are generated:
e.g. 02Param, 02Spec and 02View.
The same rules apply for these, as for the first loan already described.

Please note that you also have sheets *TotalSpec* and *TotalView.* These sheets show all specified loans summed up together as consolidated reports.

Please save your Financing file.

13.9 Updating your Calculation file with financing

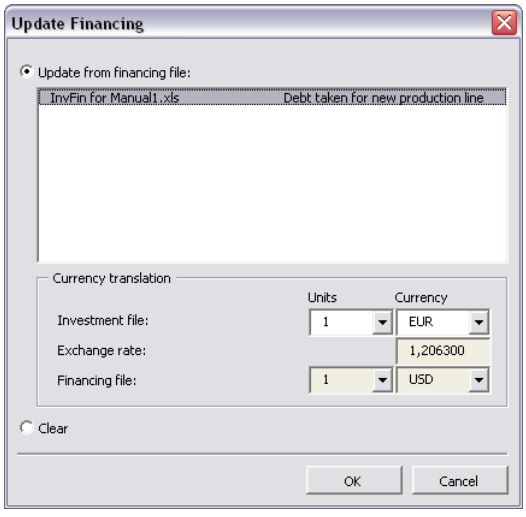
Now you may return to your Calculation file for importing of financing items.
In the Income statement and the Cash flow statement you will find buttons with exclamation marks for importing financing:

EBIT; Operating income
(cumulative financial year)
% (cumulative financial year)
Financing income and expenses
Financing income and expenses
Financing income and expenses ProFinance
EBT; Income after financing items

Left above, Income statement.
To the right Cash flow statement.

Free cash flow (FCF)
Discounted free cash flow (DFCF)
Cumulative discounted free cash flow
Value in use
Financial cash flow
Financial income and expenses
Long-term debt, increase (+) / decrease (-)
Changes in interest-bearing long-term debt
Long-term debt, increase (+) / decrease (-
Changes in long-term debt, ProFinance
Changes in interest-free long-term debt
Equity, increase (+) / dividends (-)
Changes in short-term borrowings
Total cash flow

Pressing the button gives following dialog box:



Open *Financing files* are listed. Select the one you want to import from. If none is listed, please open one. The currency and unit of the 2 files are listed here. Invest for Excel converts automatically, when importing.

The *Clear* function can be used for removing of imported values.

Press OK. Now financing costs are updated to Income statement (income statement) and to Cash flow statement. Also loan withdrawals and repayments are updated in cash flow analysis. Balance sheet is updated with debt.

EBIT; Operating income	**0**	**122 500**	**245 833**
(cumulative financial year)	0	122 500	245 833
% (cumulative financial year)		16,3%	21,4%
Financing income and expenses			
≡ Financing income and expenses			
! Financing income and expenses ProFinance	0	-47 495	-65 902
EBT; Income after financing items	**0**	**75 005**	**179 931**

Income statement (Income statement) is updated

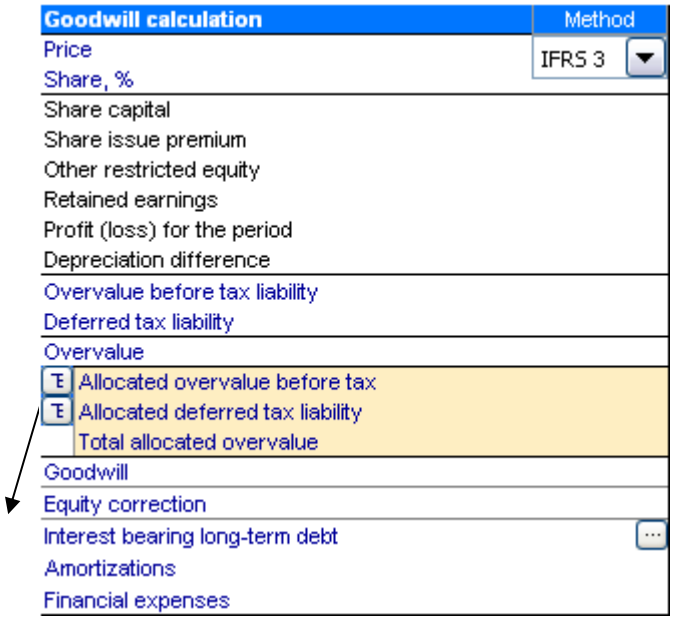
Financial cash flow			
Financial income and expenses	0	-47 495	-65 902
Long-term debt, increase (+) / decrease (-)	1 339 647	-95 997	-191 993
Changes in interest-bearing long-term debt	1 339 647	-95 997	-191 993
≡ Long-term debt, increase (+) / decrease (-)			
! Changes in long-term debt, ProFinance	1 339 647	-95 997	-191 993
Changes in interest-free long-term debt			
Equity, increase (+) / dividends (-)	0	0	0
Changes in short-term borrowings			
Total cash flow	**339 647**	**-920 064**	**97 563**
Cumulative total cash flow	339 647	-580 417	-482 854

Cash flow statement is updated

Liabilities			
Long-term liabilities	1 243 650	1 051 657	859 663
Interest-bearing long-term debt	1 243 650	1 051 657	859 663
Interest-free long-term debt	0	0	0
Short-term liabilities	95 997	218 534	207 232
Accounts payable	0	38 889	44 722
Total liabilities	1 339 647	1 270 190	1 066 896
SHAREHOLDERS' EQUITY AND LIABILITIES	**1 339 647**	**1 325 694**	**1 255 549**

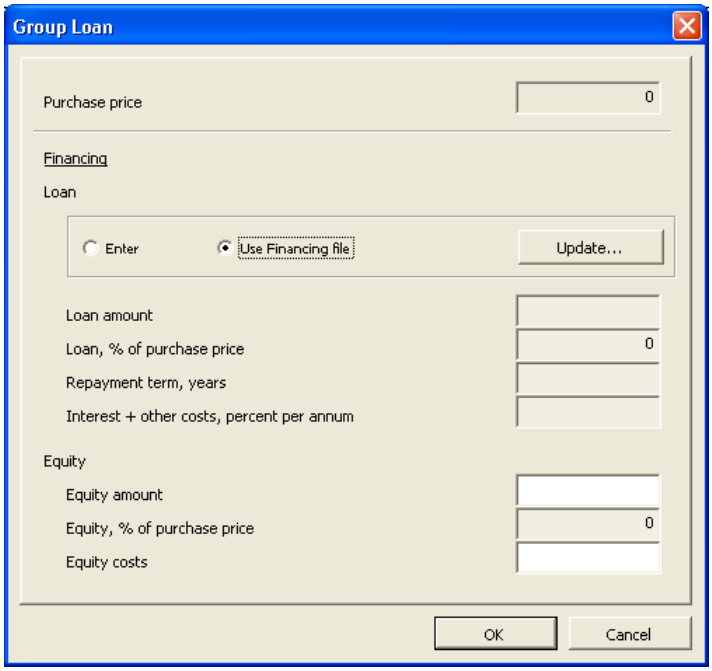
Balance sheet is updated.

When working with ACQUISITIONS you may also use the Financing module for planning a financing for the acquiring corporation.



To update: In the acquisition template, in the Goodwill calculation, you will find a button for financing of acquisition.

Press the button. A Dialog box will appear:

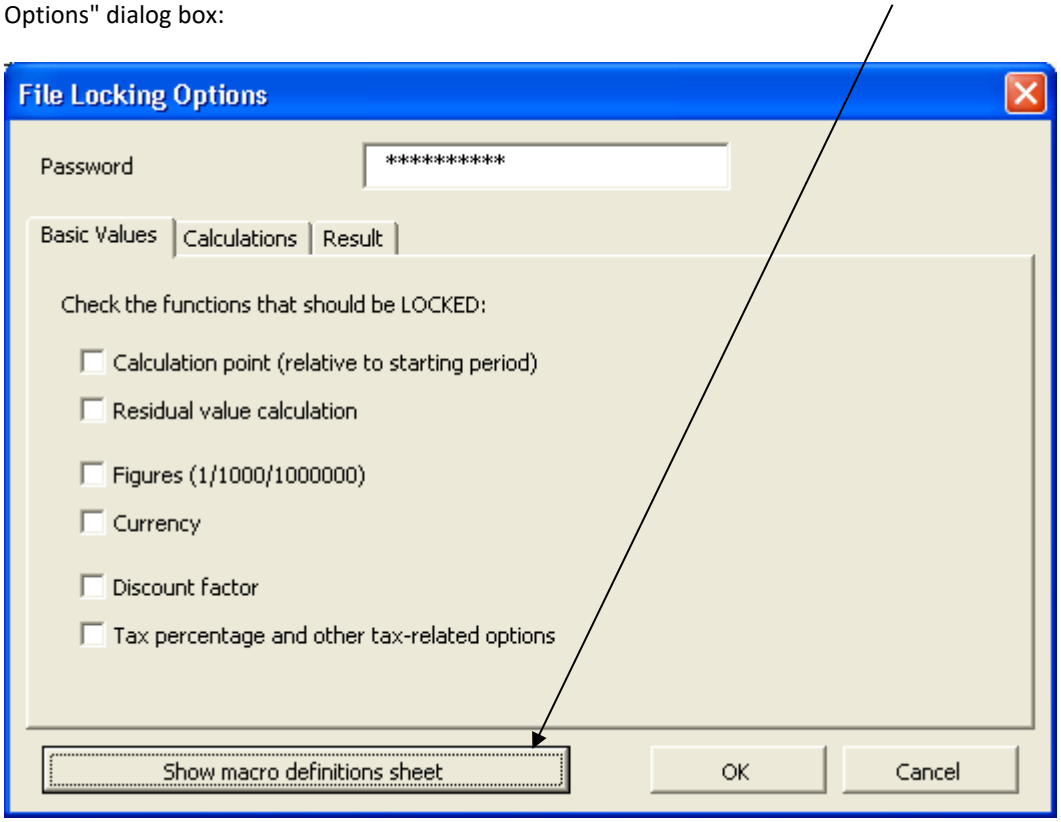


Select “Use Financing file”, and press Update…

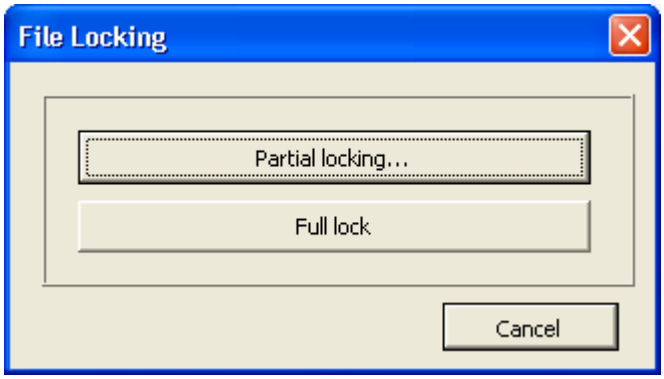
14 Custom macros

Use the macro definitions sheet to use macros with the calculation file.

The macro definitions sheet can be shown by clicking "Show macro definitions sheet" in the "File Locking Options" dialog box:



The dialog box is opened by pressing the  button in Basic values and selecting "Partial locking":



If a password has been entered for the locking settings of the file, you need to enter the password before the "File Locking Options" dialog box is shown.

The macro definitions sheet can be hidden by pressing the  button in the upper right corner of the macro definitions sheet.

Custom macros can be assigned to buttons etc. on your own sheet without direct linking by the use of the macro definitions sheet:

Macro workbook name	Term change macro	Description (optional)
Personal.xls	**TermChangeMacro**	Updates the columns in my sheets when calculation term is changed.
Assignable macros	Macro to run in Personal.xls	Description (optional)
AssignableMacro01	**OutlineMySheet**	Outlines my sheets (Buttons 1-4)
AssignableMacro02	**ShowHideResidual**	Shows/hides residual column my sheet (Residual button)
AssignableMacro03	**PrintReport1**	Prepares and prints report 1 (button Report 1)
AssignableMacro04	**PrintReport2**	Prepares and prints report 2 (button Report 2)
AssignableMacro05		
AssignableMacro06		
AssignableMacro07		
AssignableMacro08		
AssignableMacro09		

Enter the name of file holding your macros under "Macro workbook name":

Note that the file is assumed open when a macro is run.

If you want to run a macro of your own after a calculation term change in Invest for Excel, enter the name of the macro under "Term change macro":

The specified macro workbook should contain the macro:

Personal.xls

```
Option Explicit

' These macros used with the custom sheeta in the Invest for Excel investment file
' Contact info: thisis.me@mycaompany.com

Const mSheetPassword = "ThePassword"    ' General sheet password

Sub TermChangeMacro()
' This macro is run after a calculation term in the company template
' Updates the custom sheets periods to correspond to Calculation sheet
Dim intMyCol1 As Integer                ' First column (after zero period)
Dim intMyCol2 As Integer                ' Last column (before residual)
Dim intMyNoOfCols As Integer            ' Number of columns
Dim iTemp As Integer, sTemp As String   ' Temporary variables
Dim iTemp2 As Integer                   ' More temporary variables
Dim intCalcSheet As Integer             ' Calculations sheet index
Dim intZeroCol As Integer               ' Zero column index in calculations sheet
Dim intResidualCol As Integer           ' Residual column in calculations sheet
Dim intCalcCol1 As Integer              ' First column, calculations sheet
Dim intCalcCol2 As Integer              ' Last column, calculations sheet
Dim intCalcNoOfCols As Integer          ' Number of columns, calculation sheet
Dim intMySheet As Integer               ' Sheet index
Dim fWasProtected As Boolean            ' Protect sheet afterwords only if it was protected
'*****************************************************************
On Error Resume Next                    ' Don't stop for any error
'*****************************************************************
' First custom sheet (Investment file assumed active)
intMySheet = iReturnMySheet(1, ActiveWorkbook)
Err = 0
With Sheets(intMySheet)
    If Err <> 0 Then Exit Sub           ' No sheet found
```

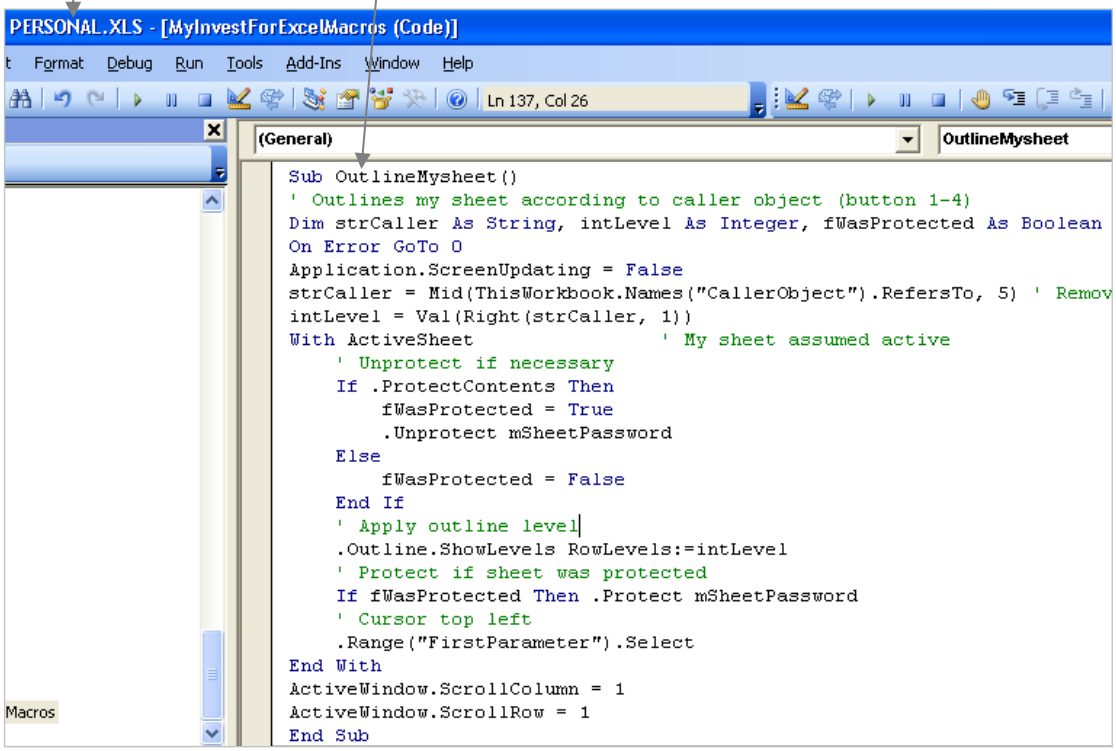
Note! The term change macro should be carefully programmed, so that any program code execution of Invest for Excel is not compromised.

A total of 99 assignable macros are reserved for buttons etc. on your own sheets in an calculation file. To use an assignable macro, follow these steps:

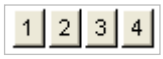
Enter the name of the macro:

Macro workbook name	Term change macro
Personal.xls	**TermChangeMacro**
Assignable macros	Macro to run in Personal.xls
AssignableMacro01	**OutlineMySheet**

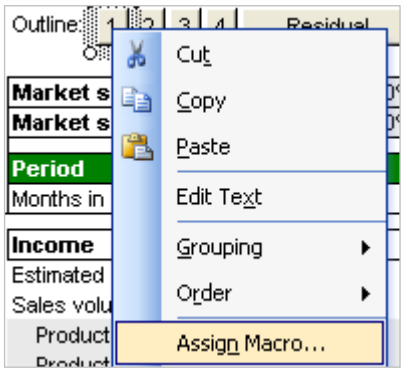
The macro should be located in the specified macro workbook:



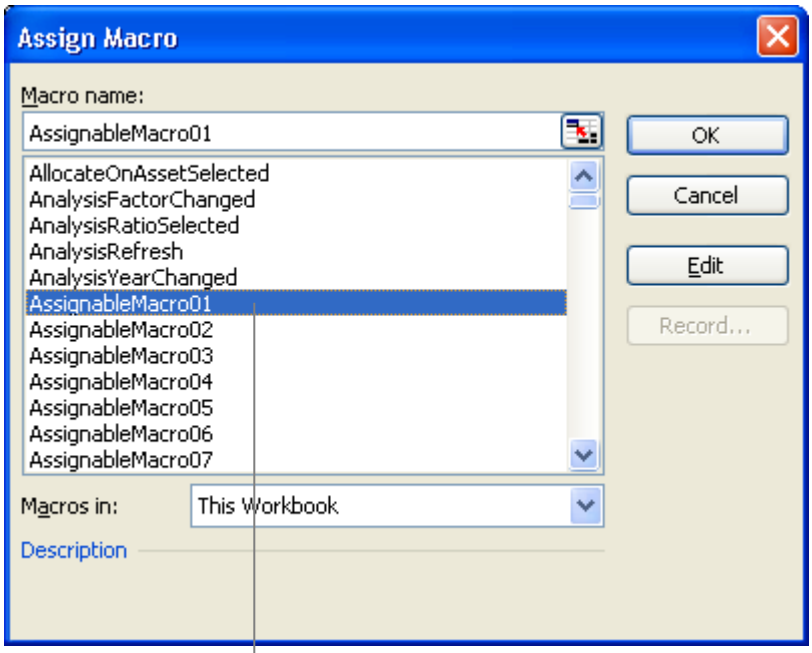
Enter, for example, a button (or buttons) on your own sheet:



Assign a macro to the button(s):



Select the assignable macro:



The selected assignable macro should correspond to the one that you used in the macro definitions sheet:

Macro workbook name	Term change macro
Personal.xls	**TermChangeMacro**
Assignable macros	Macro to run in Personal.xls
AssignableMacro01	**OutlineMySheet**
AssignableMacro02	**ShowHideResidual**
AssignableMacro03	**PrintReport1**
AssignableMacro04	**PrintReport2**

When the button is clicked in this example, the "OutlineMySheet" macro located in Personal.xls is excecuted.

The advantage of assigning custom macros using the macro definitions sheet is that no linking between files is required.

15 Features of Invest for Excel

Features of Invest for Excel	Enterprise	Pro	Standard	Lite
Invest for Excel *Lite*				
Flexible definition of calculation term	■	■	■	■
Asset depreciation and realization calculation	■	■	■	■
Income statement for specifying income and costs	■	■	■	■
Working capital changes calculation	■	■	■	■
Cash flow statement	■	■	■	■
Investment performance ratios: NPV, IRR, payback etc.	■	■	■	■
A great variety of sensitivity analysis	■	■	■	■
Break-even can easily be found on input variables	■	■	■	■
Invest for Excel *Standard*				
Comparison of investment alternatives	■	■	■	
Marginal effect	■	■	■	
Function for creating custom graphics and sensitivity analysis	■	■	■	
Flexible adding of input and calculation rows	■	■	■	
Invest for Excel *Pro*				
Balance sheet	■	■		
Investment proposal form	■	■		
Currency conversion	■	■		
Languages (English, German, Swedish, Finnish, Polish, Spanish, Russian, Bulgarian and Serbian)	■	■		
Locking (partial/full)	■	■		
Renaming of headers, rows and key factors	■	■		
Rolling forecast	■	■		
Report sheets	■	■		
Monte Carlo simulation	■	■		
Financial ratios and DuPont analysis	■	■		
Data extract	■	■		
Invest for Excel *Enterprise*				
Project financing module	■			
Consolidation, the cooperative action of several investments	■			
IFRS and US Gaap impairment test	■			
Acquisitions and business planning	■			
Perpetuity / extrapolation term	■			
Profitability calculation based on Free Cash Flow to Equity (FCFE)	■			
SharePoint server integration	■			

