

# Excel-Financial-Model

## Classic Economy



Integrated Financial Forecasts with Excel

The easy way to plan, launch and run your business

by Smart Cap GmbH

**Version: Classic Economy**

**2.03.1001**

Last update of this manual: 14 Mar 2018

# Excel-Financial-Model

The easy way to plan, launch and run your business!

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*Financial Modelling Videos*

*„Tell me and I forget.  
Show me and I remember.  
Let me do and I understand.“*

*Confucius (551 B.C. - 479 B.C.)*

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Using this Manual

# Part



# 1 Using this Manual

## Notice to Users

This manual and the associated software Excel-Financial-Model (EFM) are supplied under a license agreement and may be used only in accordance with the terms and conditions of the licence agreement set out [in detail here](#)<sup>8</sup>.

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This manual relates to the software:

**Excel-Financial-Model (Classic Economy)**

Version:

**2.03.1001**

Last update of this manual: 14 Mar 2018

## Offline Help File

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We also offer you a compiled HTML help file (.chm) with some extra features. Download the [CHM-help-file here](#).

## Additional Information

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In addition to this manual the Excel-file contains a sheet named "**Quick Start Guide**" with some introductory information. Furthermore we have added numerous explanatory notes as cell comments. When a cell contains a comment, a small, red triangle is displayed in the upper-right corner of that cell. The comment is visible when you hover over the cell that contains the comment.

Where possible, data validation option of Excel has been used to prevent data input errors and avoid miscalculations.

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Legal Disclaimer and License Agreement

# Part



## 2 Legal Disclaimer and License Agreement

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About the Author and Financial Modelling Videos

**Part**



### 3 About the Author and Financial Modelling Videos

#### About the Author



Dirk Gostomski, founder and CEO of Financial Modelling Videos, has extensive experience in the development and review of financial models. Dirk has been building complex project and operational models and valuating financial models for a broad range of industries including mining, infrastructure, and energy for more than 17 years. He is also engaged in developing and reviewing corporate planning and budgeting models for both established and start-up companies.

Working as a consultant for SMEs and venture capital firms - offering business planning, financial due diligence and capital raising services - the idea was born to develop and provide flexible, easy-to-use and robust Excel-based financial modelling tools. The primary objective is to help entrepreneurs, senior managers and investors create detailed financial models to gain full visibility into all of the assumptions, cash requirements, profitability, scalability and the ramp-up of their respective business. You need not fear the financial section of your business plan, and you do not need an MBA to get it right.

#### About Financial Modelling Videos

Financial Modelling Videos enables its customers to develop flexible and robust financial plans and cash-flow models using Excel. The Germany based company provides a broad range of financial modelling related services for clients across many industry sectors.

Our financial modelling video training courses are “hands-on” with users learning concepts by building Excel financial models from scratch.

Our templates and excel tools are designed and built to be flexible, future-proof, robust and user-friendly.

Our seminar and workshop training services, enable entrepreneurs, corporate clients, and investors to apply best practices when developing financial models. These tools support and enhance their business decisions, transactions and strategies.

**What Financial Modelling Videos can do for you:**

- Ready-to-use Excel tools and templates for corporate planning, budgeting, valuation, cash-flow planning and project finance
- Development of tailor-made, individual models
- Model review, optimization and audit
- Seminars and workshops

## Contact us

Financial Modelling Videos is offered by Smart Cap GmbH.

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Getting Started

**Part**

**IV**

## 4 Getting Started

In this section you will learn how to load and use the Excel template file, remove worksheet protection, how to use and modify cell styles and we will introduce you to the general layout and structure of EFM.

### 4.1 Loading and Using the Excel-File

#### Loading and Using the Excel-File

Excel-Financial-Model has been developed for Excel 2007 (v12.0) and later for PCs and Excel 2011 (v14.0) and later for Macs.

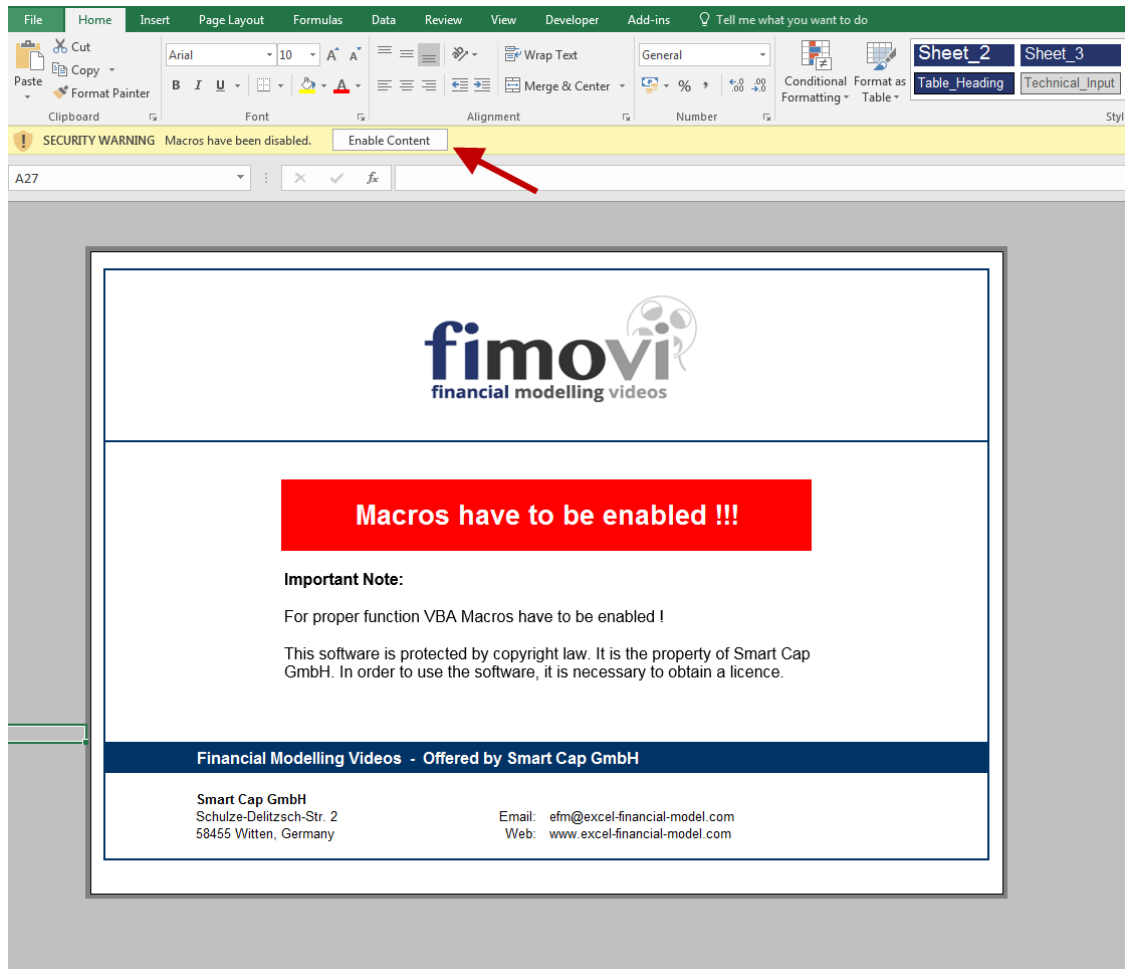
Currently usage of EFM with Office 365 (Excel Online) is not recommended, due to limited Excel functionality. EFM does not work in any other spreadsheet software or application such as Google Sheets, Numbers, or Open Office.

The file contains VBA code you must enable macros to use the tool with its full functionality.

**Important Note:** You must always save Excel-Financial-Model files in the xlsx (macro-enabled) file format. Saving the file in the xlsx-format removes all macros, and the file will show errors and cease to function after a few days.

Before using Excel-Financial-Model for the first time, prevent all macros from running by setting the Excel Trust Center macro settings to “Disable all macros with notification”. When you open the file, however, if the workbook contains macros, you are provided with an option, to allow the macros to run.

When loading Excel-Financial-Model, click on the “Enable Content” option (see screenshot).



*Click image to enlarge*

## Accessing and Changing the Excel Macro Security Settings

To access and change the Excel macro security settings proceed as follows:

### In Excel 2007:

1. Select the main Excel menu (by selecting the Excel Logo or File menu on the top left of the spreadsheet), and from the bottom right of this menu, select Excel Options;
2. From the window that pops up, select the Trust Center Option, and from within this, click on the "Trust Center Settings..." button;
3. From within the Macro Settings option, select one of the settings and click OK.

**In Excel 2010 and later:**

1. Select the File tab, and from this, select Options;
2. From the window that pops up, select the Trust Center Option, and from within this, click on the “Trust Center Settings...” button;
3. From within the Macro Settings option, select one of the settings and click OK.

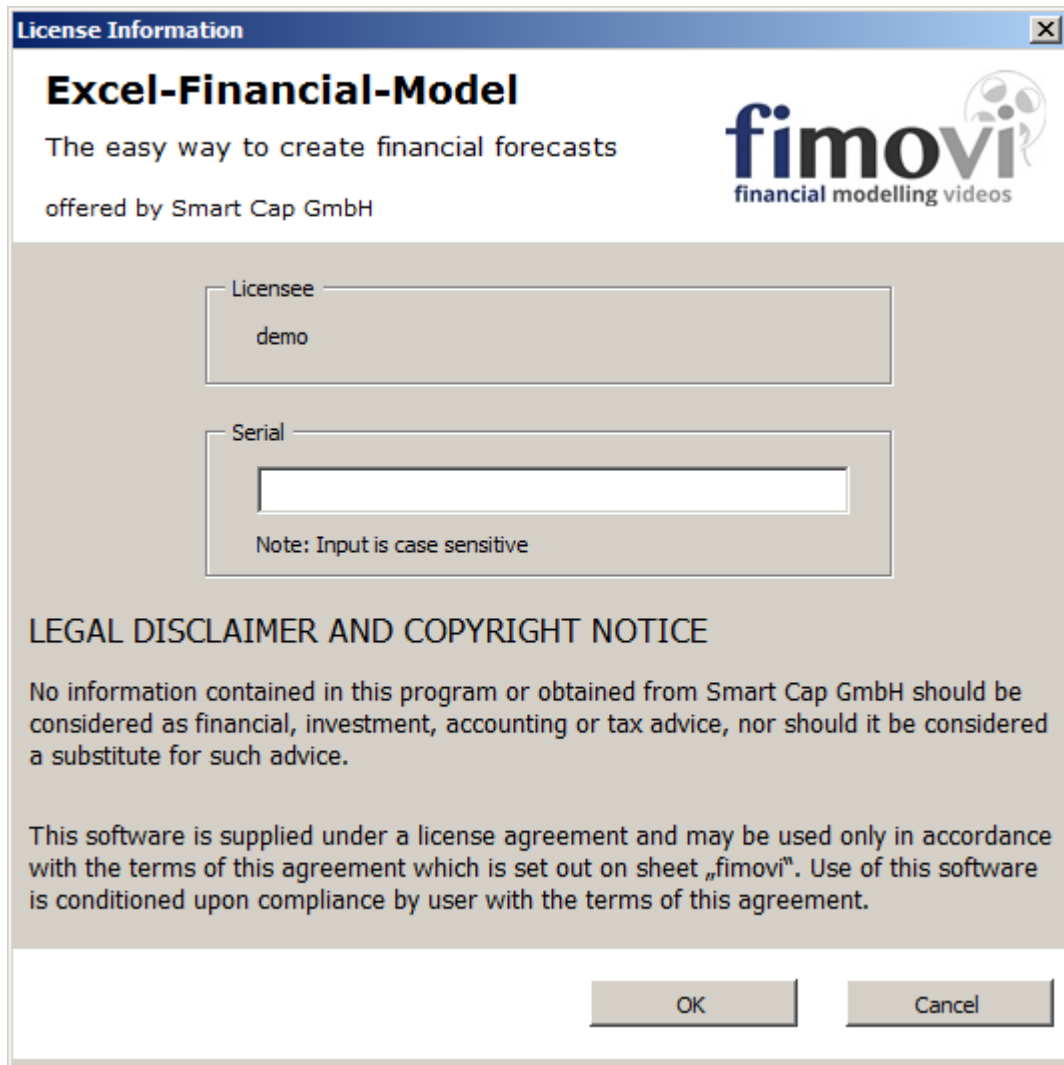
**Note**

When you change your Excel macro security setting, you will need to close down and re-start Excel for the new setting to take effect.

### Starting the Excel File - Product Activation

Excel-Financial-Model is protected and has a built-in activation process that includes an “Enter Serial Number” dialog that only appears when macros are enabled.





The screenshot shows a dialog box titled "License Information" for "Excel-Financial-Model". The dialog box contains the following elements:

- Title:** Excel-Financial-Model
- Subtitle:** The easy way to create financial forecasts
- Offered by:** Smart Cap GmbH
- Logo:** fimovi financial modelling videos
- Licensee field:** A text box containing the word "demo".
- Serial field:** An empty text box for entering the serial number.
- Note:** "Note: Input is case sensitive" located below the serial field.
- Legal Disclaimer:** A section titled "LEGAL DISCLAIMER AND COPYRIGHT NOTICE" containing two paragraphs of text.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Start your copy of Excel-Financial-Model by entering the serial number you received by email during the order process.

Note: You can use the Software with your license data on any computer, laptop, notebook, or device that has Excel installed (see minimum version requirements). The drawback of this flexibility is, that you need to enter your license serial number each time you open the file.



### Tip

You can copy the serial number using Windows clipboard (**CTRL+C**) from your order confirmation email or any other source

and paste (**CTRL+V**) it directly into the serial number box. In case you experience any problems during the activation of the software, contact our technical support via email at: [efm@excel-financial-model.com](mailto:efm@excel-financial-model.com)

## 4.2 Password for changing and editing worksheets

### Password for changing and editing worksheets

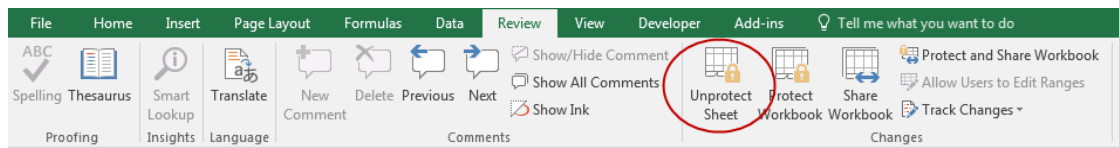
All Excel-Financial-Model worksheets are password protected when supplied in their delivery state.

Users are thereby prevented from accidentally moving, deleting, or corrupting important data and formulas they contain, while not restricting the potential for expansion or custom-tailoring.

However, by default, you can select and change unlocked input cells. Press the TAB key to move between these unlocked input cells quickly.

Experienced users can remove the worksheet protection to change or edit formulas, expand the model, or add diagrams, and so on.

1. On the Review tab, in the Changes Group, click Unprotect Sheet.



2. If prompted, type the password "0000" to unprotect the worksheet.



#### Note

The Protect Sheet option changes to Unprotect Sheet only when a worksheet is protected.

## 4.3 Financial Modelling and FAST Standard

### Financial Modelling and FAST Standard

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All our Excel-based financial models and tools, including Excel-Financial-Model, are compliant with FAST modelling standard. The FAST standard is the most widely adopted, independently administered financial modelling standard in use today.

The FAST acronym stands for **F**lexible, **A**ppropriate, **S**tructured and **T**ransparent models. The FAST Modelling Standard is a set of rules providing guidance on the structure and design of efficient spreadsheets for financial models, including a common style platform.

Adopting this standard increases your productivity, reduces errors within your models, and makes them easier to understand and review.

For more information visit [www.fast-standard.org](http://www.fast-standard.org), where you can also download the latest version of the standard in PDF format.



## 4.4 Custom cell style set

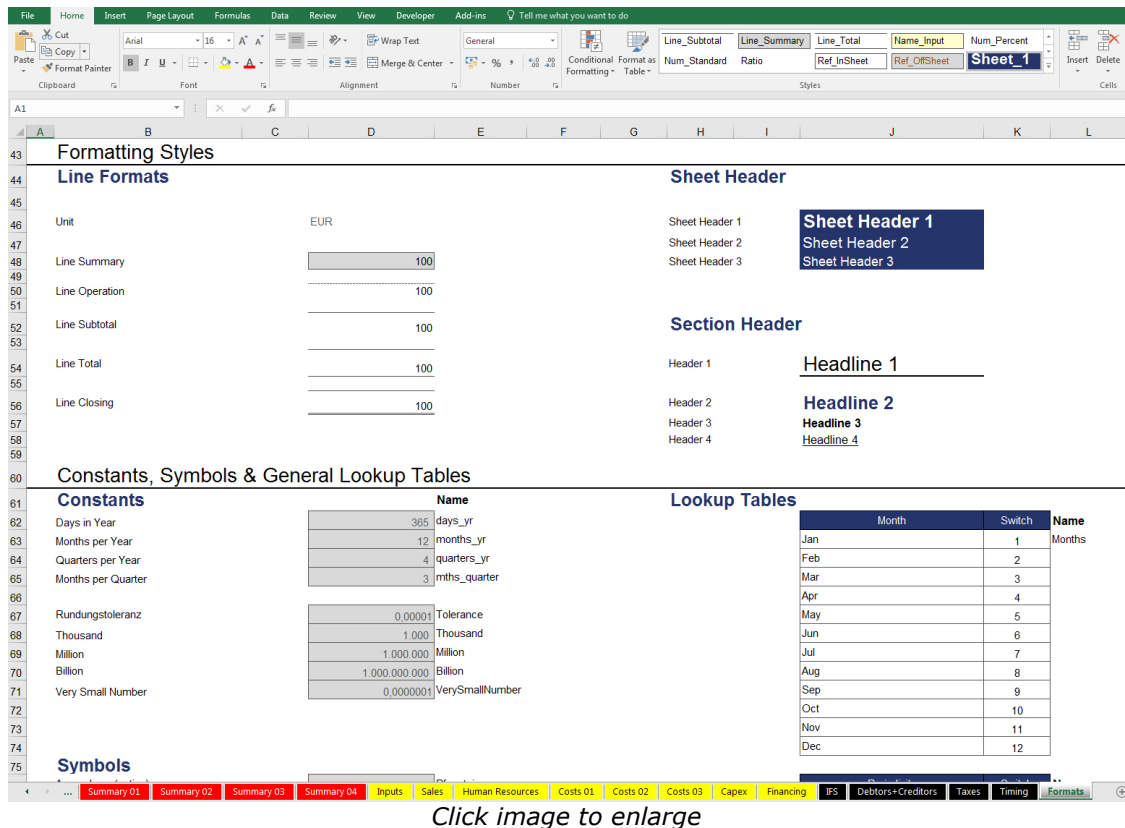
### Advantages of using cell styles

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We consistently use cell styles throughout the whole Excel-Financial-Model allowing quick and easy formatting. Professional cell styles enhance the presentation and readability of the Excel-Tool for those not involved in its initial development and setup. These styles also simplify ongoing model audit and add a level of consistency and professionalism.

The Excel-Financial-Model comes with a complete set of more than 40 distinct cell styles. These styles have a proven track record in financial modelling and can be used for all

kinds of calculations and models. You can find a style guide on the **"Formats"** sheet of the Excel-Financial-Model (see below screenshot).



*Click image to enlarge*

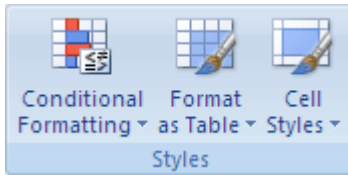
We recommend having at least a quick look at this style guide to familiarize with the most common styles used in Excel-Financial-Model (Input, OffSheet Reference, Line Summary, Line Closing, Empty Cell, etc.).

For all changes and enhancements to the model, we recommend the usage of the predefined custom styles to maintain consistency and transparency. If needed, you can quickly adapt each style according to your preferences, needs, or corporate design guidelines (colors, fonts, number format, etc.) and they will update immediately throughout the whole model.

## Application of a Cell Style

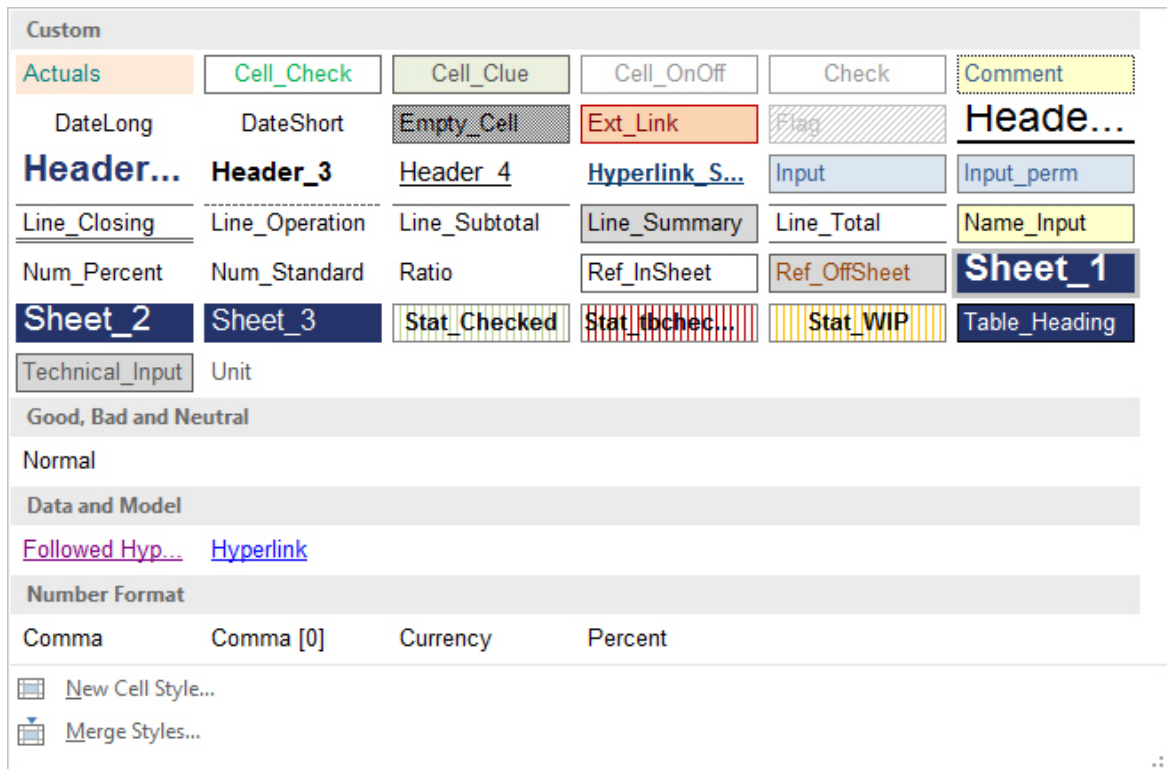
Before applying or changing cell styles, remove workbook password protection (password: "0000").

To apply a Cell Style to one or more cells, highlight the cell(s) that you wish to format and click on the Cell Styles button in the "Home" tab.



**Tip:** If you do not see the Cell Styles button, click "Styles", then click the "More" button next to the cell styles box.

The box shown below appears.



Now simply choose the cell style which you want.



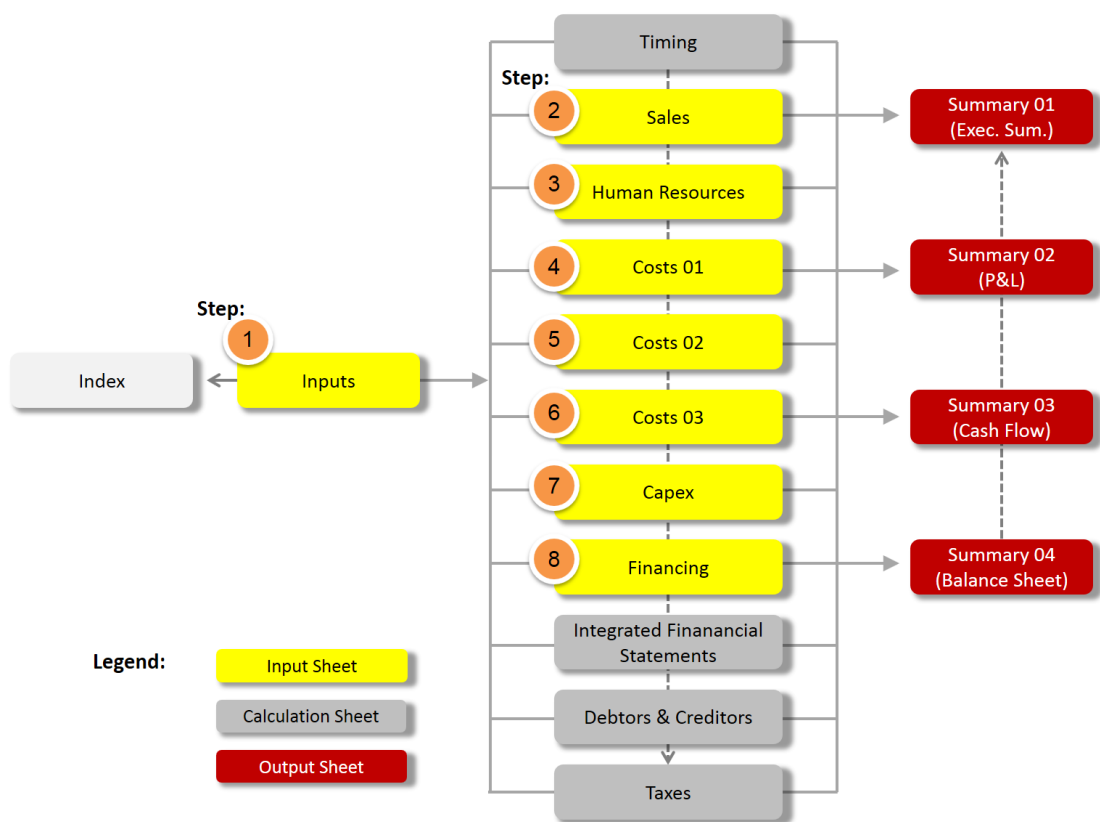
### Note

Sometimes it makes sense to use two cell styles in combination. For example, you can combine one of the styles that only contain the Number formatting attribute (Date, Number Standard, or Number Percent) with another like Line Closing or Input (which contain all the other formatting attributes except "Number" ("Alignment", "Font", "Border", "Fill", or "Protection")).

## 4.5 Overview and Familiarization

To become familiar with the general layout and structure of Excel-Financial-Model, have a look at the model flow chart and try adding or changing some of the supplied assumptions in the example model. Click the sheet tabs to navigate through the model's input sheet and view the different calculation and output sheets.

For a better overview and quick navigation, the data in each worksheet is outlined (grouped). Outline symbols are on the left side of the worksheet. You can display different levels of data by using the mouse to click on the various symbols. To display rows for a level, click the appropriate outline symbol (one, two, three, etc.). We recommend starting by clicking "one", which gives you a quick overview at the top level (everything collapsed). To expand or collapse specific data in your outline, click the plus and minus outline symbols.



*Click image to enlarge*

The numbers outline the recommended order of planning steps in preparing a new model (see next chapter => Quick Start Guide).

# Part



## 5 Quick Start Guide

The intent of this Quick Start Guide for Excel-Financial-Model is to get you up and running with the tool and give you a brief overview of the most important steps and order of your inputs (without reading the entire manual). It gives you an overview of a “recommended planning procedure”. Further guidance and details on entering assumptions are in the [planning process](#) <sup>29</sup> chapter.

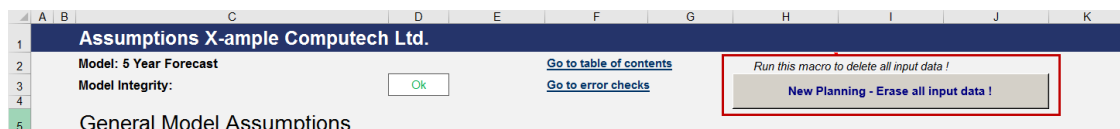
### How to build a new model

#### 1. Open Excel-Financial-Model and save new file

To start constructing a new model, load the original (or a modified) xlsx-file and immediately save it with an appropriate new file name.

#### 2. Remove all existing assumptions and input data

As the original file comes with a fictive example planning, click the button „New planning - erase all input data“ on the **“Inputs”** sheet. After running this macro (this may take 20 to 30 seconds), you have an empty template.



#### 3. Enter general model assumptions

Go to the **“Inputs”** sheet and fill in the general model assumptions. Important: Default currency and denomination should not be changed later on as the input values (currencies) will not be converted. Only the variable descriptions and unit descriptions change accordingly.

#### 4. Enter assumptions for products and services

On the **“Inputs”** sheet fill in descriptions for up to 10 different products or services, corresponding input/output taxes (if applicable, otherwise choose zero rate), revenue share per product and bad debts (both optional).



## 5. Enter assumptions for human resources

On the **"Inputs"** sheet fill in names or position for up to 5 divisions (Direct Labor Staff, Management & Administration Staff etc.). Note: Base salary has to be for 12 months, without income taxes or social insurance. The detailed staff planning (monthly deployment schedule) will be covered later on the **"Human Resources"** sheet. Fill in percentage for income taxes & social insurance and assumptions about "Other Staff Costs" (optional).

## 6. Enter financing assumptions

Financing Assumptions should be entered at the end of the planning process since the funding requirements depend on all the other input data. To avoid funding shortfalls during the planning process, we recommend temporarily setting "Initial Equity" to a very high number (e.g. 5 million) and set "cash-in at first month" to "NO" (details about the funding waterfall in the [financing chapter](#)<sup>50</sup>).

## 7. Enter payment targets and tax assumptions

On the **"Inputs"** sheet fill in the remaining assumptions (payment targets and taxes). These inputs can be easily changed at any time during or after the planning process. Be aware that any change later on may have (positive or negative) effects on funding requirements.

## 8. Enter assumptions for inventory planning and opening balance

If you would like to include detailed inventory planning, please activate corresponding selection on the **"Inputs"** sheet. Profit & Loss items and Balance Sheet items can be planned later on. The opening balance is optional. For "new" companies (foundations) or projects leave input cells blank.

## 9. Enter Sales

Go to the **"Sales"** sheet and enter monthly sales quantities and prices. For each product/service you have two input options, 1. Manual direct input and 2. Price multiplied by quantity.

## 10. Enter monthly personnel deployment schedule

Go to the **"Human Resources"** sheet and decide for each position/employee whether social security contributions should be calculated and fill in monthly number and availability (Direct Labor Staff will be planned separately later on).

## 11. Enter Cost of Materials/Packaging or Goods required and target inventory

Go to the **"Costs 01"** sheet and enter cost of materials or goods required for each of your product/service. There are 3 different planning methods available. You are free to use one of them, two or all three at the same time.

If inventory planning is switched on (=> **"Inputs"** sheet) you can enter individual inventory targets for each product as percentage of net sales.

## 12. Enter direct costs

Go to the **"Costs 02"** sheet to enter direct labor costs and other direct costs. Planning logic for direct labor costs is the same as for other employees (=> **"Human Resources"** sheet). For other direct costs variable descriptions (input cells) can be changed.

## 13. Enter indirect costs (Overheads)

Go to the **"Costs 03"** sheet to enter all indirect costs. There are 5 different groups (Management & Administrative, Operational, Sales & Marketing etc.). You can change the variable descriptions (input cells) according to your needs. Note: Payroll costs are directly linked from the **"Human Resources"** sheet (no input here).

## 14. Enter capital expenditures

Go to the **"Capex"** sheet to enter capital expenditures. You will find separate groups for intangible, tangible and financial assets. There are also options for finance lease, sale of assets and capitalization of company produced assets. For more details refer to the [capex chapter](#)<sup>48</sup>.

## 15. Enter financing assumption (final step)

Before going to the **"Financing"** sheet to fine-tune funding sources and structure, enter tax advances (prepayments) on the **"Inputs"** sheet. Below the input row you can see the actual amounts, calculated by the tool based on your inputs and assumptions.

Back on the **"Financing"** sheet the drawdown of capital tranches is organized by a default funding waterfall (aka "funding cascade"). After calculation of monthly funding needs, equity will be used first, followed by different debt tranches and an overdraft facility at the end of the cascade. See details in the [financing chapter](#)<sup>50</sup>, for example how to control and limit the various funding sources to optimize your funding structure.



### Tip

To be on the safe side, be sure to save the model at regular intervals (**CTRL+S**).

# Part

# VI

## 6 Planning Process - Guidance on Entering Assumptions

This section offers detailed guidance on entering assumptions into the various sheets. Any currency symbols and denominations are for illustrative purposes only.

Excel-Financial-Model contains many variables and features that may not be required by all users. These can be left blank or filled with zero values. The entry of assumptions for the opening balance is entirely optional and only makes sense for existing companies with historical data.

**Note:** Assumptions should be entered only in dedicated, specially formatted input cells (cell style "Input" or "Input\_perm").

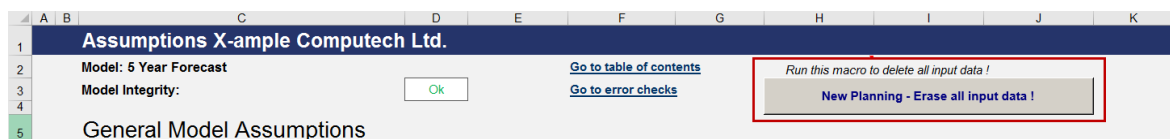
Where possible, Excel's data validation option has been used to prevent data input errors and avoid miscalculations. Some cells have a drop down arrow to select from a list of options. In other cases there are error (stop) alerts when entering invalid data, indicating which inputs are acceptable (only negative numbers, only integers between 1 and 12, etc.).

The following sections give guidance on entering some important and critical assumptions (self-explanatory assumptions are not covered here) as well as background information where helpful. The sections cover each sheet in the recommended processing order (as described in chapter "[Overview and Familiarization](#)"<sup>22</sup>).

### 6.1 Sheet Inputs

#### General Model Assumptions

To start a new plan, click the "New Planning - Erase all input data" button (see macro button in the screenshot below). This permanently clears all input data and cannot be undone. If necessary cancel and save the workbook before continuing. This macro operation can take 20-30 seconds to erase data across all sheets.



The input fields in the section "Names and Information" ("Legal Form" through "Last Update") are for information purposes only. The link to the cover sheet and the top of each sheet.

## Language/Terminology

To be as flexible as possible, Excel-Financial-Model allows for changing between UK/International or US/Canadian accounting formats and terminologies. The main differences relate to spelling (labour vs. labor for example), terminology (see table below for examples), and the accommodation of taxes on sales, valued added (VAT) and goods & services (GST).

**Note:** Printer page sizes (European A4 vs. US Letter) must be set individually within Excel according to your needs.

Selected differences between UK/International and US/Canadian terminology:

UK / International	US / Canadian
Profit & Loss (or P&L)	Income Statement
Stocks	Inventory
Debtors	Receivables
Creditors	Payables

This feature is implemented by using Excel's CHOOSE function.

**Syntax:** CHOOSE(index\_num, value1, [value2], ...)

with index\_num being the named cell "language". This argument can be 1 or 2. If index\_num (language) is 1, CHOOSE returns value1 (= UK Terminology); if it is 2, CHOOSE returns value2 (US Terminology); and so on.

**Example:** =CHOOSE(language;"Profit and Loss Statement";"Income Statement")

Flexibility is high priority within Excel-Financial-Model, you may change the terminology or add additional text as needed.

## Currency (code or symbol and denomination)

You can define different currencies codes or symbols (GBP or £, USD or \$, EUR or €, etc.) and denominations (1 or 000s). Currency inputs are independent of your language settings (UK vs. US). We recommend the international standard three-letter ISO 4217 currency codes (EUR, USD, GBP, AUS, etc.).

For more information:  [http://www.iso.org/iso/home/standards/currency\\_codes.htm](http://www.iso.org/iso/home/standards/currency_codes.htm)



### Note

Default currency and denomination should be defined at the beginning of a planning process and not be changed later as input values (currencies) will not be converted. Only variable descriptions and unit descriptions change accordingly.

## Timing and Fiscal Year

In this section, enter a start date and the planning horizon. The start date has to be the first day of a month. Otherwise, you will get an error message.

### Fiscal Year

It is possible to define fiscal years (FY) which differ from calendar years (CY). In this case use input cell “Last month of financial year” to choose a specific timing. In case the input value is December (Month 12) fiscal year and calendar year are the same. The terms “fiscal year” and “financial year” are synonymous. They both refer to an accounting period of 12 consecutive months beginning on a date other than January 1.

However, to qualify for a different fiscal year, you must meet certain requirements, depending on country-specific laws. We cannot give any advice at this point, as this would go beyond the scope of this manual.

### Tax year

A tax year is the accounting period you choose to calculate your income and expenses for taxation purposes. In the current version of Excel-Financial-Model the tax year always equals the fiscal year (i.e. if you set the last month of the fiscal year to December => fiscal year = tax year = calendar year).

### Planning Horizon

Excel-Financial-Model allows for a maximum planning horizon of 5 Years (start year plus max. 4 additional years). Depending on the start date and fiscal year you have entered, the first year may be a short (less than 12 months) business year.



#### Note

It is possible to shorten the planning horizon at any time, even if you have entered data for the full 5 years. All reports and tables reflect figures within the selected time frame (= model life).

## Products and Services

In this section basic assumptions regarding sales will be entered. For up to 10 different products/services a description can be defined. These names will be used throughout the complete model. However, the detailed monthly sales forecasts (quantities and sales prices) for each product/service will be defined on sheet "**Sales**".

### Input/output taxes and Revenue Share

When using input/output taxes select the appropriate rate. In case you are planning without VAT, GST or Sales Tax, set rate to "zero rate" for each product/service (for more details on input/output tax settings see paragraph taxes => "[VAT / Sales Tax](#)"<sup>39</sup>).

In addition for each product/service a specific revenue share in percent can be entered. The percentage of revenue entered here will go to the partner, agent, broker, service provider, platform etc.

### Allocation of other direct costs to products/services

Some direct costs (direct operational costs on the "**Costs 02**" sheet) need to be allocated to the appropriate product group to allow for product/service specific cost and profit analyses. This can be done either on

1. the basis of the corresponding direct payroll costs,
2. based on the relevant sales of the product/service groups, or
3. based on a manually set percentage distribution.

Select the desired allocation basis via the drop-down menu (see screenshot). You can change your selection at any time. For this allocation to work as indicated, direct



labor levels, sales, or percentage values need to be entered for each product/service group used. If this is not the case, you may get an error message, because the automatic allocation of the total direct costs is not possible.

### Assumptions: Products and Services

Title for Product/Service Categories		Input/output Taxes (sales taxes, GST, VAT etc.)		Revenue Share
	<b>Description (used throughout the model)</b>	<b>Select VAT Rate</b>	<b>VAT Rate</b>	<b>Revenue Share</b>
1	Desktops	Rate 1	20,0%	-
2	Workstations	Rate 2	10,0%	5,0%
3	Notebooks	Rate 2	10,0%	
4	Software Products	Rate 1	20,0%	10,0%
5	Net work infrastructure solutions	Rate 3	8,0%	
6	Repair Services	Rate 1	20,0%	
7	Integration Services	Rate 1	20,0%	
8	Consulting Services	Rate 1	20,0%	
9	Spare Parts	Rate 1	20,0%	
10	License Fees	Zero Rate	-	

=> Individual rates can be changed on this sheet in row 183 ff.

**Allocation of other direct costs to products/services**  
Based on 1. direct payroll costs, 2. sales, or 3. percentage inputs

**Bad Debts**  
Bad debts (as % sales)

Selection

Sales

Direct Payroll Costs

Sales

Percentage

% sales

1,50%

*Click image to enlarge*

If there are neither direct labor nor sales projected for a particular month, you may get an error message, because the automatic allocation of the total direct costs is not possible. In this case, complete the missing data or change the allocation basis to percentage distribution. You can set the specific percentage values for each product/service in the "Allocation of other direct costs to products/services" section on the "**Costs 02**" sheet.



**Note**

The informative value of direct cost allocation is dependent on your inputs in one of the above sections (i.e. direct payroll costs, sales or percentage distribution).

**Bad Debts**

You may optionally globally determine bad debts as a percentage of sales within this input section. Sales receipts and input/output taxes (sales taxes, GST, VAT) are automatically adjusted to take the bad debt percentage into account. The cost of bad debts is treated as an expense in the income statements (P&L).

Monthly sales forecasts (quantities and sales prices) for each product/service are defined on the **"Sales"** sheet.

## Human Resources

This section covers basic assumptions regarding personnel expenses. Enter employee names or clearly-identifiable descriptions for each position in up to 5 divisions (Direct Labor Staff, Management & Administration Staff etc.).

### Salary

Enter a base salary (for the first planning year) and an appropriate annual raise (optional) for each employee/position. If necessary you can also overwrite formulas in the years following the base year (see tip below).

**Note:** The base salary always refers to a period of 12 months (= annual salary), without income taxes and social insurance, even if an employee is only expected to work a few months of a year. Do your detailed staff planning (monthly deployment schedule) on the **"Human Resources"** sheet.

Human Resources		Wages & Salaries					
Variable descriptions (input cells) can be changed		Base Salary p.a.		2017	2018	2019	2020
1.	Direct Labour Staff	Annual Raise	2016	2017	2018	2019	2020
	Fill in name or position here	EUR 1,0%	20.000	20.200	20.402	20.606	20.812
	Fill in name or position here	EUR 1,5%	35.000	35.525	36.058	36.599	37.148
	Fill in name or position here	EUR 1,5%	30.000	30.450	30.907	31.370	31.841
	Fill in name or position here	EUR		-	-	-	-
2.	Management & Administration Staff						
	Fill in name or position here	EUR 2,5%	50.000	51.250	52.531	53.845	55.191
	Fill in name or position here	EUR					



### Tip

If the annual raise does not fit your purposes it is possible to overwrite calculated annual salaries for the years 2 to 5 with hard coded numbers (see red marking in the screenshot above). In this case the automatic percentage increase formula will no longer function. We also recommend applying the cell style "Input" to clearly indicate that an input value is necessary for the "new" cell(s). **Note:** [Remove worksheet protection](#)<sup>18</sup> to enable editing.

## Social security contributions and taxes

Fill in a percentage (of base salary) for income taxes and social insurance. It is possible to turn on/off the calculation of Social security contributions and taxes for each employee/position on the "**Human Resources**" sheet.

## Other Staff Costs

For each division assumptions for additional staff costs can be entered. Apart from the first row item ("*Recruiting Costs (one-time upon hiring)*") descriptions can be changed according to your needs. Note: Pay careful attention to the units (column E) of each row item (e.g. USD/FTE/month vs. % of base salary etc.). If you change a unit, the formulas on the "**Human Resources**" sheet need to be edited accordingly (recommended only for experienced excel users).

## Financing

One of Excel-Financial-Model's main USPs is its implied funding waterfall. This is an ordered cascade of equity and debt draws with alternative funding priority.

As with modelling any cash flow waterfall, the process is expedited by calculating the monthly deficit cash flow, setting up criteria for the maximum amount of equity and debt that is still available for funding and making all calculations regarding fees, interest, repayments etc. to get the associated balance sheets accounts.

The model consists of the following capital funding elements (= sources) which are used in a defined order: Two equity tranches and (up to) five different debt tranches.

## Equity

### Initial Equity

For the first equity tranche (= initial equity) you have to decide whether the full amount should go into the model in the first month (select "Yes") or if you prefer a draw down on an as-needed basis. In the latter case the amount entered in "share capital" can be understood as maximum and may not be fully needed (if the total funding requirement is less).

Financing			
<b>Equity</b>			
<b>Initial equity</b>			
Share Capital (maximum)	EUR	75.000	=> cash-in at 1st month ? <input type="checkbox"/> No
<b>Additional equity</b>			
Share Capital	EUR	25.000	=> cash-in on <input type="text" value="01 Apr 16"/>
			<div style="border: 1px solid black; padding: 2px;">           01 Apr 16            01 May 16            01 Jun 16            01 Jul 16            01 Aug 16            01 Sep 16            01 Oct 16            01 Nov 16         </div>

### Additional Equity

For the second (optional) equity tranche (= additional equity) you can enter an amount and the date the money will be made available (see above screenshot).



#### Note

We assume that both equity tranches are relevant for liquidity. In case you have set up an [opening balance](#)<sup>41</sup>, these amounts are added to the share capital defined there. If there is no further increase in share capital during model life (i.e. no equity funding), leave these input fields blank.

## Debt

Four different loans (debt tranches) and an additional automatic overdraft facility are included in the funding waterfall.

### Debt 1 to 4

The first loan (debt 1) is a fully automatic annuity with quarterly interest and principal repayment. This debt can be switched on/off at any time by “one click” and allows for automatic coverage of capital requirements up to the maximum debt limit.

While using this mechanism you see the direct impact of any change in assumptions on the capital requirement (e.g. when running different scenarios).

If debt 1 has been switched on you can enter the following assumptions:

- Facility description => goes through the full model and allows easy identification (e.g. in balance sheet, etc.)
- Maximum debt => limit for this tranche
- Drawdown Period => drawdowns are only possible during this period

- Tenor => period starts after drawdown period
- Grace period => (optional) “waiting period” after the end of the drawdown period before repayment begins (interest calculated quarterly; not capitalized in the model)
- Interest rate
- Fees (upfront and commitment fee)

Debt		automatic		Annuity with quarterly interest and principal repayment	
<b>1. Debt 1</b>		Text		UL Bank	
Facility description		Selection		Yes Applied	
Include this automatic debt facility ?		EUR		80.000 80.000	
Maximum debt (limit)		Months after start date		12 Month(s)	
<b>Timing UL Bank</b>		Date		31 Mar 17	
Drawdown Period		Years		10 Year(s) 120 Month(s)	
End of drawdown period		Selection		6 Month(s)	
Tenor (after drawdown period)		Date		01 Oct 17	
Grace period		Date		31 Mar 27	
Start repayment		#		38	
Final maturity date		% p.a.		3,75% % per quarter 0,94%	
Total no of repayments (quarterly)		% of facility		1,50%	
<b>Interest and Financing Fees: UL Bank</b>		EUR		1.200	
Interest		% p.a.		2,00% % per month 0,17%	
Upfront Fee					
Upfront Fee					
Commitment Fee					

Click image to enlarge

Debt 2 to 4 are identical structured apart from their hierarchy in the funding cascade. On the “**Inputs**” sheet, you can assign a facility description for each loan and decide whether interest should be calculated automatically. In this case, enter an interest rate. If you prefer to enter interest payments manually, enter them directly on the “**Financing**” sheet. You must always enter loan disbursement and repayments for debts 2 to 4 on the “**Financing**” sheet.

### Overdraft Facility / Current Account

For the current account, you can set up a maximum overdraft (set to zero or leave blank if not used) and an interest rate. The overdraft facility comes at the end of the funding cascade. If liquidity is available, the model automatically uses it for highest possible reduction of this “expensive” credit facility.

## Other Assumptions

### Payment Targets Debtors/Creditors

Excel-Financial-Model allows for detailed customization with regard to the payment targets of debtors and creditors. For each product/service different payment profiles can be defined (debtors / receivables).

Other Assumptions		Percent Distribution				=> Total for each row must equal 100%
Payment Profile: Debtors		Same Month	1M later	2M later	3M later	
Product/Service						
Desktops		60,0%	30,0%	10,0%		Ok
Workstations		50,0%	50,0%	-	-	Ok
Notebooks		80,0%	20,0%	-	-	Ok
Software Products		70,0%	20,0%	10,0%	-	Ok
Net work infrastructure solutions		100,0%				Ok
Repair Services		100,0%		-	-	Ok
Integration Services		100,0%		-	-	Ok
Consulting Services		100,0%		-	-	Ok
Spare Parts		100,0%		-	-	Ok
License Fees		100,0%		-	-	Ok
	Check					Ok



#### Note

You can distribute payments over a period of up to 4 months. However, for any row the sum has to be 100%, otherwise an error message will be displayed (in column J). The same is true for creditors (payables).

Creditor payment profiles, set on the **"Inputs"** sheet, will only be used for cost of materials/packaging and for goods required.

For all other cost items (for example, other direct costs or overheads) you can directly enter individual credit periods (in months) in column F (on the **"Costs 02"** and **"Costs 03"** sheets) by entering integers from 1 to 4 (or 0 for immediate cash payment => same month).

## Taxes

### a.) Taxes on Profit

As tax regimes are country specific and extremely heterogeneous, Excel-Financial-Model has a straightforward implementation of tax calculation, which can be adapted

individually where necessary. On the **"Inputs"** sheet, a tax rate (in percent) and a tax loss carried forward can be entered. The tax rate is applied to net profits before tax of each fiscal year.

Advance tax payments can be entered for each planning year to straightening out cash flow effects of a single annual tax payment. Prepayment dates are quarterly, and you can set their exact timing (in months). In addition, you can define the date (month) for the tax payment in the following year.

It is recommended to enter tax prepayments at the end of the planning process, as the actual tax burden depends on numerous model assumptions and inputs. The row below the input line for advance tax payments helps you choose appropriate amounts for the prepayments, as it shows tax payable according to the model's calculations.

### b.) VAT/GST/Sales Tax

If no sales or input/output tax is applied, simply set rate 1 to rate 3 to 0%.

When using input/output taxes you can change the descriptive term according to the appropriate country specifics. It is possible to choose between "Sales Tax", "GST" for Goods & Services Tax or "VAT" for Value Added Tax.

Define up to three different local input/output tax rates (besides a predefined zero rate), e.g. a standard rate and one or two reduced rates.

2. VAT / Sales Tax	
Set descriptive term for sales or input/output tax	Selection <input type="text" value="GST"/> select "Sales Tax", "GST" for Goods & Services Tax or "VAT" for Value Added Tax
<u>GST - Rates</u>	set all rates (1-3) below to zero if VAT (or other similar taxes) are not applicable
Zero Rate	% <input type="text" value="-"/>
Rate 1	% <input type="text" value="20.0%"/>
Rate 2	% <input type="text" value="10.0%"/>
Rate 3	% <input type="text" value="8.0%"/>
<u>GST - Accounting Basis and Payment Dates</u>	
GST Accounting Basis (Invoice or Payments Basis)	Selection <input type="text" value="Invoice Basis"/> 1
Intervall when GST is paid to or refunded by state/tax authority	Selection <input type="text" value="Quarterly"/> 3
<u>Percentage subject to GST and rates applied</u>	
Output tax on Product/Service Sales => individual assumptions in row 28 onwards	Information <input type="text" value="Percentage"/> <input type="text" value="80%"/> rate applied <input type="text" value="Rate 1"/> <input type="text" value="20.0%"/>
Input tax on cost of materials/packaging & goods	% <input type="text" value="70%"/> rate applied <input type="text" value="Rate 1"/> <input type="text" value="20.0%"/>
Input tax on all other non-payroll expenses (other operat. exp., overheads etc.)	% <input type="text" value="70%"/> rate applied <input type="text" value="Rate 1"/> <input type="text" value="20.0%"/>
Input tax on capital expenditure => individual assumptions on sheet Capex	Information

You can set different options for claiming and paying VAT/GST etc. Select an accounting basis for claiming and returning your VAT/GST. The options are the invoice or payments basis.

#### Invoice basis (aka imputed taxation)

Using the invoice basis, you account for VAT/GST at the end of the taxable period when you issued an invoice to your customers or received an invoice from your supplier. You will pay the amount of VAT/GST shown on the invoices you've given to your customers (whether you've received a payment or not), and claim a credit for the

amount of VAT/GST shown on tax invoices you've received from your suppliers (regardless of whether you've paid your supplier or not).

### Payments basis (aka actual taxation)

Under the payments basis you account for VAT/GST at the end of the taxable period when you make or receive the payment. This helps you manage your cash flow because you only pay VAT/GST after you've received the payment from your customers, and you only claim VAT/GST for the purchases and expenses you've paid for.

### Filing frequency / intervals

You can set the payment day interval when VAT/GST is paid to or refunded by state/tax authority (filing frequency). Select one of the five options: 1. Monthly, 2. Bi-Monthly, 3. Quarterly, 4. Semiannual or 5. Annual.

Finally, choose the rates applied for a.) cost of materials/packaging and goods and b.) all other non-payroll expenses (other operating expenses, overheads etc.). If there are items within these groups with mixed rates or if not for all positions input/output tax is applicable enter a percentage of the amounts which are subject to VAT, GST, Sales Tax etc.

Output tax rates for products/services have to be entered in the [products and services assumptions section](#) <sup>32</sup>.

Enter input tax rates for capital expenditures on the "**Capex**" sheet. Percentage and tax rate can be set individually for each item.

## Miscellaneous

In this section the interest rate for bank deposits (cash) can be set.

In addition you will find an option to switch on/off [inventory planning](#) <sup>44</sup> globally.

Finally it is possible to plan further P&L and Balance Sheet items (for example extraordinary expenses, accruals, changes in advances received, advance payments, etc.) Detailed input options can be found at the bottom of the "**Inputs**" sheet. The table within the section "Miscellaneous" simply gives an overview of the figures on an annual basis. It is formatted and integrated for (the optional) printing of the "**Inputs**" sheet.



## Opening Balance

For existing companies with a financial history, enter all the necessary initial values. Check the control cell “balance check” just below the opening balance input cells, to make sure the opening balance is balanced. If the control cell does not show “OK”, the delta is indicated to help you review the values entered.

**Opening Balance (optional)**

at model start => 31 Mar 16

<b>Fixed Assets (NBV)</b>		257.000	<b>Notes:</b>
Intangible Assets	EUR	2.000	=> Amortisation can be defined on sheet Capex (row 19)
Tangible Assets		255.000	=> Variable descriptions for tangible asset class can be changed on sheet Capex
- Land and Buildings	EUR	100.000	=> Depreciation can be defined on sheet Capex (row 52)
- Plant & Machinery	EUR	130.000	=> Depreciation can be defined on sheet Capex (row 78)
- Vehicles	EUR	25.000	=> Depreciation can be defined on sheet Capex (row 104)
Financial Assets	EUR	-	=> Depreciation can be defined on sheet Capex (row 136)
<b>Current Assets</b>		29.500	
Stocks	EUR	12.000	=> detailed input by product/service on the right =>
Trade Debtors	EUR	12.500	=> equally phased out over a period of x months => <input type="text" value="4 month(s)"/>
Cash at bank	EUR	5.000	
<b>Current Liabilities</b>		28.000	
Overdraft facility	EUR	3.500	
Trade Creditors	EUR	10.000	=> equally phased out over a period of x months => <input type="text" value="2 month(s)"/>
Accruals	EUR	10.000	=> detailed input on this sheet (row 307 ff.)
PAYE owed	EUR	4.500	=> detailed input on this sheet (row 327)
<b>Long-term Liabilities</b>			
Debt Facilities (at model start)	EUR	222.000	=> detailed input of principal repayments and interest on sheet Financing (rows 144 ff.)
<b>Net Assets</b>	EUR	36.500	
<b>Shareholders Equity</b>			
Share Capital	EUR	70.000	
Retained Earnings / (loss carried forward)	EUR	(33.500)	=> negative inputs for any loss carried forward !
<b>Shareholders Equity</b>	EUR	36.500	
Balance Check		Ok	- Delta

<b>Stocks: Opening values by product/service</b>	
Desktops	6.000
Workstations	750
Notebooks	4.500
Software Products	750
Net work infrastructure solutions	
Repair Services	
Integration Services	
Consulting Services	
Spare Parts	
License Fees	
<b>Total:</b>	<b>12.000</b>

Click image to enlarge

For new projects or start-up companies with no initial values leave input fields blank or set to zero.

## 6.2 Sheet Sales

### Sales Forecast

For each product/service two different options for sales planning are included in the model. You can choose either one of them or even combine both methods to achieve an appropriate forecast.

#### 1. Direct Input:

Fill in estimated revenues for each month. It is also possible to use/insert formulas to implement escalations or you are free to link in cells/rows from a more detailed,



### 6.3 Sheet Human Resources

#### Staff Planning

This sheet provides detailed staff planning (monthly deployment schedule). The descriptions for employees/positions are derived from the **"Inputs"** sheet and can be changed there.

You just have to decide whether social security charges (= SSC) shall be applied (YES or NO => see red marking in below screenshot) and fill in the number of employees at the desired period (months). This also allows for easy planning for instance in the case of a reduction in staffing due to seasonal work or similar.

	A	B	C	D	E	F	G	H	I	J	K	L	M				
1	<b>Human Resources</b>																
2	Model: 5 Year Forecast			<a href="#">Go to table of contents</a>													
3	Model Integrity:			<a href="#">Go to error checks</a>													
4	Period Start																
5	Period End			Start		End		31 Mar 16		01 Apr 16		01 May 16		01 Jun 16		01 Jul 16	
6	Model Life			01 Apr 16		31 Dec 20		57									
7	<b>Flags &amp; Counters</b>																
8	Calendar Year			year		2016		2016		2016		2016					
9																	
10	<b>Headcount</b>																
11	The variable descriptions can be changed on sheet Inputs																
12	<b>1. Direct Labour Staff</b>																
13	to be planned on sheet Costs 02																
14	Subtotal all products & services			via link													
15				2		2		2		2		2					
16	<b>2. Management &amp; Administration Staff</b>																
17	Fill in name or position here			#		SSC		Yes		1		1		1		1	
18	Fill in name or position here			#		1		No									
19	Fill in name or position here			#		0		Yes									
20	Fill in name or position here			#													
21	Subtotal					1		1		1		1					

Click image to enlarge

All further calculations (wages & salaries, social security contributions & taxes, and other staff costs) are performed automatically with no additional inputs required.



**Note**

Direct labor staff will be planned separately on the **"Costs 02"** sheet, as it will be assigned to the respective product/service (direct costs).

### 6.4 Sheet Costs 01

Sheet **"Costs 01"** is dedicated to making inputs and providing calculations regarding:

1. Cost of materials/packaging and goods required as well as
2. Inputs and calculations regarding the target inventory (stocks).

## Cost of materials/packaging and goods required

---

The section cost of materials/packaging or goods required offers three different planning methods for each product, which can be used either individually or in combination.

1. Direct Input: For each product, enter costs manually for each period (month)
2. Costs x Quantity: Quantities are linked from the **"Sales"** sheet. In addition, you need to define the cost of materials/goods per unit for each period.
3. Percentage of Sales: Using this method you define a percentage of the sales of the corresponding product. The "cost-of-sales ratio" (in percent) can be set individually for each year to take into account cost reductions due to increased production volumes, price advantages due to rising purchasing volumes, or other factors.



### Note

All assumption values should be entered net of input/output taxes (like VAT, GST or Sales Taxes)

## Inventory Planning

---

To activate the automatic inventory planning you must globally switch on this functionality on the **"Inputs"** sheet. One can then enter an inventory target for each product. Target input is in % of net sales of the given product.

The resulting changes in inventory are calculated automatically for each product. The actual changes may differ from the target value aimed for, if, for example, no sales are planned for a month, the corresponding inventory cannot be reduced.



### Example

If you would like to have inventory for a special product for a quarter and your "cost-of-sales ratio" is 30%, you have to enter 90% (3 months x 30%) as inventory target.

The corresponding balance sheet account (Inventory/Stock (manufacturing & merchandise)) for each product is on the **"Costs 01"** sheet. The initial values are the input values defined in the "Opening Balance" section on the **"Inputs"** sheet..



**Tip**

To be even more flexible in inventory planning you are free to overwrite the formulas in the row “Inventory target” of each product (columns J to BU). You can either manually enter the required values or use a formula to calculate for instance inventory for the next x months based on your sales planning (see example and screenshot below).

Assuming you receive (and pay for) materials only once per quarter, put in the figures in the month of purchase and set the inventory target for the following two months to zero. In this case, the model reduces the inventory in month 2 and 3 accordingly, and won't effect liquidity further during this period. You can implement numerous other possible combinations and applications. We recommend experimenting with this feature, using a new, almost empty planning file to get a better feeling for the impact on inventory and liquidity (=> keeping in mind creditor payment targets on the “**Inputs**” sheet).

The following screenshot shows a simple example. Assumptions: Sales quantity: 50 desktop computers per month; Sales price: EUR 1,000 each (set on the “**Sales**” sheet). The assumed ratio of cost of materials to sales is 60%, i.e. EUR 30,000 per month. We have replaced the formulas in row 128 (inventory target => columns J to BU) by input cells (see applied cell style) and have set cell F128 to zero (cell style: empty cell).

Now we can fine-tune inventory planning, for example purchase of material/goods only once a quarter. In month 2 and 3 and 5 to 7 inventory is reduced accordingly (see balance sheet account at the bottom of the screenshot).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q		
1	<b>Cost of Materials/Packaging or Goods required and Inventory</b>																		
2	Model: 5 Year Forecast										Go to table of contents								
3	Model Integrity:										Go to error checks								
4	Period Start										01 Apr 16	01 May 16	01 Jun 16	01 Jul 16	01 Aug 16	01 Sep 16	01 Oct 16	01 Nov 16	
5	Period End										30 Apr 16	31 May 16	30 Jun 16	31 Jul 16	31 Aug 16	30 Sep 16	31 Oct 16	30 Nov 16	
6	Model Life										01 Apr 16	31 Dec 20	57						
124	<b>Target Stock / Change in Inventory</b>																		
125	Inventory planning can be easily switched on/off on sheet inputs in row 199										Active ? => Yes								
126	<b>Desktops</b>																		
127	Reference: Net Sales Desktops										EUR	450.000							
128	Inventory target										EUR	90.000	-	-	90.000	-	-	-	-
129	Resulting changes in inventory										EUR	90.000	(30.000)	(30.000)	60.000	(30.000)	(30.000)	(30.000)	-
130	BS Account: Inventory / Stock (manufacturing & merchandise)																		
131	Balance Bf										EUR	-	90.000	60.000	30.000	90.000	60.000	30.000	-
132	Increase / (Decrease)										EUR	90.000	(30.000)	(30.000)	60.000	(30.000)	(30.000)	(30.000)	-
133	Balance Cf										EUR	-	90.000	60.000	30.000	90.000	60.000	30.000	-

Click image to enlarge

The situation is also correctly reflected in the corresponding P&L and Cash Flow Statement (not shown here).

## 6.5 Sheet Costs 02

Sheet **"Costs 02"** is dedicated to making inputs and providing calculations regarding:

1. Direct labor and
2. Other direct costs.

### Direct Labor

---

This section is similar in its structure and design to the **"Human Resources"** sheet. Define how many employees are allocated as direct labor to each product. Assumptions for the various positions (description, base salary, etc.) are derived from the Human Resources section of the **"Inputs"** sheet.

Again, social security charges (SSC) can be switched on or off (YES or NO) for each employee/position. Corresponding wages & salaries and also social security contributions & taxes are calculated automatically with no additional inputs required.

Plan other staff costs for each product/service either as a percentage of the product group's base salary or by direct manual input (rows 233 onwards).

### Other Direct Costs

---

Other direct costs include the different sub-groups:

1. Energy costs (of production & manufacturing),
2. Third-party services, and
3. Various other direct costs.

There are multiple input rows available. Variable descriptions can be changed (input cells). Input values in column "F" allow for setting of individual credit periods (number of months). Allowed input values are integers from 1 to 4 (or 0 for immediate cash payment => same month).



#### Note

If you need more rows within these groups, simply insert additional lines. However, don't forget to add/link the newly inserted lines on the **"Debtors+Creditors"** sheet as this defines the cash impact.

### Allocation of other direct costs to products/services

The calculations that allocate "other direct costs" to the given products/services, allowing for product/service specific cost and profit analyses, are further down the **"Costs 02"** sheet.

You have to enter percentage values here only if you [choose option 3](#)<sup>32</sup> (allocation based on a manually set percentage distribution) on the **"Inputs"** sheet.

Allocation of other direct costs to products/services									
339	Selected allocation basis: Percentage		=> Selection can be changed on sheet Inputs (row 40)						
341	Desktops	EUR	15%	86.191	657	715	724	732	
342	Workstations	EUR	15%	86.191	657	715	724	732	
343	Notebooks	EUR	12%	68.953	526	572	579	586	
344	Software Products	EUR	12%	68.953	526	572	579	586	
345	Net work infrastructure solutions	EUR	10%	57.460	438	477	482	488	
346	Repair Services	EUR	10%	57.460	438	477	482	488	
347	Integration Services	EUR	8%	45.968	350	382	386	390	
348	Consulting Services	EUR	8%	45.968	350	382	386	390	
349	Spare Parts	EUR	10%	57.460	438	477	482	488	
350	License Fees	EUR	-	-	-	-	-	-	
351	<b>Total Other Direct Costs</b>	EUR	Check	Ok	574.605	4.381	4.770	4.824	4.881
352	Allocation control			Ok					



**Note**

An error message shows, if the sum of all products/services is not 100% (see screenshot => column F).

## 6.6 Sheet Costs 03

### Overheads (indirect costs)

All operating expenses (overheads, indirect costs) of the company's different divisions are on this sheet.

Payroll costs are already linked in from sheet **"Human Resources"** (apart from block 5 "General Costs & Miscellaneous"). Multiple input rows are available for each section. Variable descriptions can be changed (input cells). Input values in column "F" allow for setting of individual credit periods (number of months => see below screenshot). Allowed input values are integers from 1 to 4 (or 0 for immediate cash payment => same month).

Credit Periods		www.excel-financial-model.com: 0 for immediate cash payment or Integers from 1 to 4 (credit periods) => Maximum 4 months !	
1		4.170	50
-			
2		42.010	650
		-	
		-	
		-	
		-	
		692.830	12.083

## 6.7 Sheet Capex

All fixed asset assumptions and calculations are on the **"Capex"** (capital expenditure) sheet. The sheet handles three different categories of fixed assets:

1. Intangible assets,
2. Tangible assets,
3. Financial assets.

Within the tangible assets, there are three separate asset classes. You can change the initial asset class descriptions (Land & Buildings, Plant & Machinery and Vehicles) as needed. There is a summary of the three fixed assets categories at the bottom of the **"Capex"** sheet.

The structure for each section (including six subsections A to F) is always the same:

### A - Purchases

Percentage and rate for input tax (VAT/GST etc.) are defined (if input/output tax is applicable) in this section. In addition, amounts and disbursement scheme for new investments items can be entered (excluding lease).



#### Note

Combine only similar assets in each subsection (i.e. with the same useful life). They are summed up, and depreciation is only calculated only for the total amount.



## B - Amortisation/Depreciation

Enter the useful life (in months) and select whether straight-line depreciation should be applied to the original cost (select "1") or the double-declining-balance method for accelerated depreciation (select "2"). Be sure that the method you select and apply is legal in your country.

## C - Company produced additions

This input row is for company produced assets which should be capitalized. Any amounts entered in this row influence depreciation and the given balance sheet account, but have no impact on liquidity. Be sure that any expenses (capitalized here) are included/planned in other sections (like direct or indirect costs) where they affect cash outflows.

## D - Finance Lease

This subsection includes input cells for purchases financed by leasing, lease charges (interest) and lease payments. These entries should refer to new finance and capital leases only.

## E - Sale of Assets

Use these rows for disposals of fixed assets. Enter details of the proceeds, costs and related accumulated depreciation. Profits/losses derived from the sale of fixed assets are included in the income statements (P&L). Fixed asset and depreciation balances are automatically reduced to take account of fixed asset sales.

## F - Input tax on fixed asset purchases and leased assets

Input tax is calculated automatically according to your assumptions in subsection A. No further inputs are required here.

The corresponding balance sheet account is at the end of each category. At the bottom of the "**Capex**" sheet, there is a summary for all assets/asset classes.

## 6.8 Sheet Financing

### Funding Waterfall

The **“Financing”** sheet is for funding input and calculations. The main section of the sheet is related to the funding waterfall, an ordered cascade of equity and debt draws with alternative funding priority.

In the top section (“cash before funding”) the monthly cash flow is calculated. Only in case of a deficit, additional cash (= funding) is required (amount to be funded = uses).

Financing										
Model: 5 Year Forecast <a href="#">Go to table of contents</a>										
Model Integrity: <input type="button" value="Ok"/> <a href="#">Go to error checks</a>										
Period Start						01 Apr 16	01 May 16	01 Jun 16	01 Jul 16	01 Aug 16
Period End						30 Apr 16	31 May 16	30 Jun 16	31 Jul 16	31 Aug 16
Model Life						57				
Financial Month							4	5	6	7
Financing (all figures in EUR)										
1. Cash before Funding (cash outflows = negative numbers)										
						Apr 16	May 16	Jun 16	Jul 16	Aug 16
Cash collected from sales (incl. VAT)					13.440.573	135.222	168.871	177.966	178.490	175.596
Changes in advances received					6.500	-	5.000	-	-	-
Other operating & extraordinary income					178.120	-	-	-	4.500	-
Fixed asset disposals (intangible & tangible assets)					20.000	-	-	-	-	-
Interest received on cash deposits					10.163	6	-	-	20	86
Revenue share (cash out)					(133.363)	(1.038)	(1.799)	(2.002)	(2.005)	(2.005)
Cost of Materials/Goods (incl. VAT)					(5.622.446)	(43.847)	(87.181)	(83.705)	(83.379)	(83.508)
Other Direct Costs (incl. VAT)					(501.520)	(3.005)	(3.152)	(3.214)	(3.279)	(3.347)
Overheads (incl. VAT)					(3.552.906)	(27.832)	(25.580)	(26.716)	(27.178)	(26.889)
Direct labour costs (w/o social insurance + income tax)					(517.765)	(3.417)	(3.417)	(3.417)	(3.417)	(3.417)
Social insurance & income tax (PAYE/Payroll withholdings)					(624.329)	-	(3.438)	(5.938)	(3.438)	(3.438)
Extraordinary expenses					(4.250)	-	-	-	-	-
Capital Expenditure (incl. VAT)					(937.450)	(134.000)	(255.200)	-	(6.400)	(55.000)
Finance lease charges paid					(6.625)	-	-	-	-	(125)
Finance lease capital payments					(2.750)	-	-	-	-	-
Changes in advance payments					-	-	-	-	-	-
Changes in accruals					(7.500)	-	-	-	-	-
Interest paid (Debt 1-4)					(21.962)	(35)	(35)	(627)	(373)	(373)
Financing fees (Debt 1-4)					(3.916)	(1.333)	(2.583)	-	-	-
Repayment debt 1 (UL Bank)					(24.243)	-	-	-	-	-
Interest paid (debt facilities existent at model start)					(37.834)	(833)	(833)	(833)	(814)	(814)
Repayment debt facilities (existent at model start)					(95.000)	-	-	(5.000)	-	-
VAT paid/recovered to/from tax authority					(609.786)	-	-	21.327	-	-
Taxes on profit paid					(488.035)	-	-	(26.667)	-	-
Cash C/f						5.000	-	-	15.719	68.447
<b>Cash before funding</b>						<b>(75.111)</b>	<b>(209.345)</b>	<b>41.175</b>	<b>68.447</b>	<b>65.214</b>

[Click image to enlarge](#)

The second section (“financing”) consists of the actual funding waterfall. The various capital funding elements (= sources) are used in the following order: Equity first, followed by debt 1 to 4 and in a final step the overdraft facility.

An error message indicating insufficient funding will show, if cash after funding (and optional dividend payout) is negative.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	<b>Financing</b>													
2	Model: 5 Year Forecast <a href="#">Go to table of contents</a>													
3	Model Integrity: <input type="button" value="Ok"/> <a href="#">Go to error checks</a>													
4	Period Start													
5	Period End													
6	Model Life													
				Start	End				31 Mar 16	01 Apr 16	01 May 16	01 Jun 16	01 Jul 16	01 Aug 16
				01 Apr 16	31 Dec 20				57	30 Apr 16	31 May 16	30 Jun 16	31 Jul 16	31 Aug 16
38	<b>2. Financing</b>													
39	To be funded													
40	<b>Funding Waterfall</b>													
41	1st tranche completely in first month? Additional Tranche													
42	1. Share Capital													
43	Subtotal													
44	2. Debt 1 (automatic): UL Bank													
45	Subtotal													
46	3. Debt 2: HSBC Bank													
47	Drawdowns													
48	Repayment													
49	Subtotal													
50	4. Debt 3: UBS													
51	Drawdowns													
52	Repayment													
53	Subtotal													
54	5. Debt 4: Shareholder Loan													
55	Drawdowns													
56	Repayment													
57	Subtotal													
58	Cash before current account													
59	6. Overdraft Facility (automatic)													
60	Balance B/f													
61	Increase													
62	Reduction													
63	Balance C/f													
64	Amount still available													
65	Interest on overdraft													
66	<b>3. Cash after Funding</b>													
67	Cash after funding													
68	Dividend payout													
69	Cash after dividend payout													
70	Check: Sufficient funding?													
71	Information line: Repayments and overdraft													

*Click image to enlarge*

Before you plan or optimize your funding structure you should finalize all other inputs (sales, human resources, costs, and capex) and also fill in principal repayments and interest payments for the debt facilities at model start (entered in the opening balance on the **"Inputs"** sheet). Principal and interest payments for these liabilities can be planned on the **"Financing"** sheet in rows 144 onwards. This is important as these payments may influence your pre-funding cash.



**Example**

Let's exemplify some options you have to optimize your financing structure:

At the first stage of the funding cascade, you have several options. The full amount entered on the **"Inputs"** sheet may come in in the first month (if the corresponding option is selected), or on a cash-needed basis until the maximum is reached.

If additional funds are required (subtotal < 0) the automatic debt 1 may kick-in (if activated on the **"Inputs"** sheet). Be aware that two conditions must be met for successful drawdowns. 1. There must be still capital available for funding deficit cash flow (depends on your inputs regarding maximum facility limit); 2. The deficit must fall within the drawdown period

(depends on your inputs regarding drawdown period, both on the **"Inputs"** sheet).

If additional funds are required (subtotal < 0) debt 2 can be utilized. Any drawdowns can be entered manually in the corresponding input line. Enter any repayments in the line below (as negative values). In case you have selected automatic interest calculation no further inputs are required, if not, manually enter interest payments (and financing fees, if applicable) below the corresponding balance sheet account (row 114 onwards).

Debt 3 and 4 can be used in the same way. Last but not least the overdraft facility will automatically try to fund any deficit cash flow left, provided you have entered a maximum amount on the **"Inputs"** sheet and there is still overdraft capital available.

Enter any dividend in line 75. An error message will show, if dividends exceed cash available.

In case any debt repayments are financed partly or wholly by using the overdraft facility a warning message will appear in the respective period (line 78). This is not an error in the narrow sense, but in some cases, it is possible to shift repayments and therefore avoid (further) drawdowns of the most expensive overdraft facility.

# Part

# VII

## 7 Error Messages

The integrity of your model is vital in business. Users need to be confident in the figures that are produced and do not want to spend time going through each of their formulas to check for accuracy. The way Excel-Financial-Model overcomes this is an extensive integration of checksums and sanity checks.

All model specific checksums (more than 30 different control cells => see below screenshot) are consolidated in the integrity and error checks section at the bottom of the "Inputs" sheet. This section is where you will be alerted of any errors anywhere in your model workbook. An error produces a flag and the message "FAIL" in red in column "H" (see screenshot).

Integrity and Error Checks				
Error Check	Link to Error Check	Result	Tolerance	Pass / Fail
Balance Sheet (monthly on IFS)	<a href="#">To Control Cell</a>	-	0,001	Ok
Balance Sheet (Summary 04)	<a href="#">To Control Cell</a>	-	0,001	Ok
Balance Sheet (Summary 01)	<a href="#">To Control Cell</a>	-	0,001	Ok
Balance Sheet (Opening Balance)	<a href="#">To Control Cell</a>	-	0,001	Ok
Sources = Uses	<a href="#">To Control Cell</a>	-	0,001	Ok
Sufficient Funding (incl. Overdraft Facility)	<a href="#">To Control Cell</a>	5	0,001	Fail
Cash always $\geq$ 0	<a href="#">To Control Cell</a>	-	0,001	Ok
Aggregation P&L (Summary 02)	<a href="#">To Control Cell</a>	-	0,001	Ok
Aggregation Cashflow (Summary 03)	<a href="#">To Control Cell</a>	-	0,001	Ok
Aggregation Balance Sheet (Summary 04)	<a href="#">To Control Cell</a>	-	0,001	Ok
Aggregation P&L (Summary 01)	<a href="#">To Control Cell</a>	-	0,001	Ok
Aggregation Cashflow (Summary 01)	<a href="#">To Control Cell</a>	-	0,001	Ok
Check: VAT	<a href="#">To Control Cell</a>	-	0,001	Ok
Payment Profile Debtors/Receivables	<a href="#">To Control Cell</a>	-	0,001	Ok
Payment Profile Creditors/Payables	<a href="#">To Control Cell</a>	-	0,001	Ok
Debt Facilities (at model start) - Principal payments $\leq$ Debt facility?	<a href="#">To Control Cell</a>	-	0,001	Ok
Debt 1: UL Bank - Repayment $\leq$ Debt ?	<a href="#">To Control Cell</a>	-	0,001	Ok
Debt 2: HSBC Bank - Repayment $\leq$ Debt ?	<a href="#">To Control Cell</a>	-	0,001	Ok
Debt 3: UBS - Repayment $\leq$ Debt ?	<a href="#">To Control Cell</a>	-	0,001	Ok
Debt 4: Shareholder Loan - Repayment $\leq$ Debt ?	<a href="#">To Control Cell</a>	-	0,001	Ok
Overdraft limit $\geq$ Opening balance value?	<a href="#">To Control Cell</a>	-	0,001	Ok
Check accruals: Decrease $\leq$ Existing Accruals?	<a href="#">To Control Cell</a>	-	0,001	Ok
Check advances received: Decrease $\leq$ Existing advances received?	<a href="#">To Control Cell</a>	-	0,001	Ok
Check advance payments: Decrease $\leq$ Existing advance payments?	<a href="#">To Control Cell</a>	-	0,001	Ok
Check phasing out PAYE/Payroll withholdings owed OK?	<a href="#">To Control Cell</a>	-	0,001	Ok
Master Check: Inputs for sale of assets OK ?	<a href="#">To Control Cell</a>	-	0,001	Ok
Manual allocation: percentage distribution OK?	<a href="#">To Control Cell</a>	-	0,001	Ok
Allocation of other direct costs OK?	<a href="#">To Control Cell</a>	-	0,001	Ok
Total costs of sales: allocated sum and P&L identical?	<a href="#">To Control Cell</a>	-	0,001	Ok
N.N.			0,001	Ok
N.N.			0,001	Ok

Integrity (Master ) Fail

*Click image to enlarge*

## How to solve problems with model integrity

The master integrity flag is linked to the header of every sheet. It indicates if any error is preventing your model from calculating correctly. This helps ensure the maximum integrity of your model. The screenshot below ("**Sales**" sheet), shows the master model integrity indicating an error ("Fail").

	A	B	C	D	E	F	G	H	I
1	<b>Sales</b>								
2		Model: 5 Year Forecast				<a href="#">Go to table of contents</a>			
3		Model Integrity:		Fail		<a href="#">Go to error checks</a>			
4		Period Start							
5		Period End		Start	End				31 Mar 16
6		Model Life		01 Apr 16	31 Dec 20				
7									
8		Sales Assumptions							

The following general procedure should help locate and eliminate errors:

- 1. Click on the link "Go to error checks"**

This takes you to the integrity and error checks section on the "**Inputs**" sheet.

- 2. Pinpoint the location and description of the error in the table.**

If there is more than one error message, solve one problem at a time.

- 3. Click on the appropriate link "To control cell".**

This takes you to the calculation, causing the error

- 4. Locate and eliminate the cause by changing inputs or assumptions.**

Changing Excel-Financial-Model

**Part**





## 8 Changing Excel-Financial-Model

One of Excel-Financial-Model's main USPs is its flexibility and expandability. While many users use EFM exactly as supplied, others may wish to take advantage of their Excel expertise to tailor or extend it to meet specific requirements. This section gives some general advice on changing the model.

**Note:** If you have only minimal expertise with Excel or you need complex changes, we provide individual customization services to deliver the exact solution you need. Contact us using the form at the following URL:

 <http://excel-financial-model.com/contact/>

for any enquiries.

### Some general advice

Some precautions and principles to keep in mind when changing Excel-Financial-Model:

- When starting to change Excel-Financial-Model, always work from a copy of an error-free version.
- Before editing any sheet, unprotect the worksheet (Password: "0000")
- Never delete or alter the supplied range or worksheet names or interfere with the macros supplied with Excel-Financial-Model.
- Whenever a model has been changed or extended, always fully test it (by using positive and negative inputs, zero values or empty cells) to ensure that the changes work as intended and have no undesirable or unexpected consequences.
- Having removed protection to make changes within a workbook, always restore protection as soon as practicable to prevent a user from accidentally or deliberately moving or deleting important data and formulas.

### Inserting new worksheets

Adding new worksheets is a powerful way of expanding a model. It is both, user-friendly and relatively unsusceptible to errors. This approach can be used for additional output sheets as well as for more detailed input calculations, which are then plugged (= linked) into the existing sheets.

Extensions of simple formulas to plug into existing variables within Excel-Financial-Model include the following:

- Inserting new worksheets to incorporate very detailed projections (see examples below). These calculations can be summarized and plugged into the existing sheets.
- Using Copy & Paste Special | Link to pull aggregated data from another Excel file into Excel-Financial-Model.
- Copying & pasting values into existing assumption blocks or specifically designated blocks below assumption reports.

The potential to expand Excel-Financial-Model in this way is effectively unlimited. For example, detailed calculations of sales funnels for individual products, customer acquisition, lists of materials, detailed cost analyses, capital expenditure schedules, and much more.

In addition very detailed or specialized reports (e.g. for presentation purposes) could be created with new diagrams, additional subtotals or with different levels of aggregation and details. Another example of applying this technique could be the construction of additional reports in foreign languages or currencies, which utilize the same data as the underlying model.

By inserting additional worksheets containing these new reports laid out exactly as desired and incorporating simple cell reference formulas to link back into cells within existing Excel-Financial-Model calculations or reports. This approach is simple, less error prone, and completely avoids the need to make any structural changes.

### Avoiding calculation errors when making complex changes

When customizing and extending Excel-Financial-Model, it is important to ensure that no calculation errors arise; that all checksums are correct, and that no imbalances occur in the opening or projected balance sheets.

Because Excel-Financial-Model does not use floating values to balance its balance sheets, it is very sensitive to formula errors. Consequently, all structural changes to the model must be applied correctly. For example, if an additional cash flow related item is introduced into the model as an assumption row, changes may be needed in the income statement (P&L), cash flow and balance sheet output reports as well as in their corresponding output reports on the "**Summary 01**" sheet (within the sources & uses overview). In addition, corresponding changes may also be required in all the quarterly and annual output reports (sheets "**Summary 02**" to "**Summary 04**").

For all changes and enhancements of the model we recommend the usage of the [predefined custom cell styles](#)<sup>19</sup> to maintain consistency and transparency.

**Note**

Only very experienced users, familiar with both EFM and Excel, should make these kind of extensions and structural changes. Make a backup version of your file before beginning with complex changes.

# Part

IX

## 9 Version History

This document provides a quick historical reference to Excel-Financial-Model versions, release dates, features, and improvements.

### **Version 2.03 (Release date: 19 March, 2018)**

- Fixed: File saving problems when using EFM with macOS High Sierra 10.13.2 and Excel for Mac 2016 version 16.9 (180116). The problem only occasionally occurred for Mac users after an update from Microsoft in January 2018.

### **Version 2.02 (Release date: 30 March, 2017)**

- New assumption to select VAT accounting basis was added on the **"Inputs"** sheet. You can now choose between invoice basis (aka imputed taxation) and payments basis (aka actual taxation).
- New bi-monthly interval added for filing VAT returns and associated payments to/from the tax authorities.
- Improvement of selected formulas and formats.

### **Version 2.01 (Release date: 12 April, 2016)**

- Initial version