Financial Modeling in Excel
Module 2, 2021-2022

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Course description

The course is dedicated to practical experience for models' implementations in Excel.
Problems collected from real applications used in different industries.

Course requirements, grading, and attendance policies

You need to have a laptop to perform modeling exercise (better English Excel for Windows).
The course grade consists of:

1) 10% – commitment on project (topic selection) till November 13 (eod).
2) 50% – 5 homework assignments (10% each) after week 1 - week 5.
3) 40% – individual project on Excel modeling with presentation in class

Course contents

1
(Oct 27)
	Formulas in Excel
	   1. Shortcuts (excel without mouse), names
	   2. Specification and design of models, useful hints
	   3. Basic Excel functions (string, vlookup, offset, indirect) in Use
	   4. Array formulas (matrix formulas for regression)

2
(Nov 3)
	VBA
	   1. Syntaxes, main objects, user defined functions
	   2. Recorder, debugger
	   3. Events and objects
	   4. Popular macros (scenarios, calculation)
	   5. Macro to collect data from other files

3
(Nov 10)
	Data management in Excel
	   1. Data import (from web, file links)
	   2. Database management (plain lists, relations, storing, editing, navigation)
	   3. Pivots
	   4. Indirect file link. Model version control.

4
(Nov 17)
	Data analysis
	   1. Sensitivity analysis
	   2. Linear programming problem (solver)
	   3. Regressions and data analysis

5
(Nov 24)
	Data modeling
	   1. Random variables, stochastic methods
	   2. Monte-Carlo simulations
	   3. Bootstrap for amateurs

6 **(Dec 1)**	Applications 1. Financial models in Excel developing, application examples 2. DCF, WACC 3. Option valuation models, VaR, portfolio valuation 4. Operation management models
7 **(Dec 8)**	Student project presentation (5 minutes per student).

Description of course methodology

Main book – Simon Benninga. Financial modeling (free in internet).
Study material and problem sets will be published on Friday before the lecture.
In classes there will be discussing cases and Q&A session.
Homework should be done till Sunday after the lecture.

Personal projects

Till November 10 students should choose the project topic and comply with lecturer.
Project presentation will be on December 8.

Additional reading

cpearson.com/Excel/Topic.aspx – first blog I read, deep into problem
http://peltiertech.com/ – on design in Excel
contextures.com/tiptech.html
http://www.planetaexcel.ru/techniques/2/1790/
http://www.excel-vba.ru/chto-umeet-excel/arxivaciyaizvlechenie-iz-arxiva-cherez-vba/

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