FIN 470: Financial Analysis in Excel

Individual Project Description

Instructions:

- The project is worth 20% of the course grade.

- It must be the individual work of one student. It must be a model that you designed and created. (You may, however, discuss the project with other students as well as get their advice.)

- You may only submitted <u>one Excel spreadsheet</u> to D2L (see instructions below) by the due date listed on the <u>Schedule</u>.

- It must conform to the <u>Excel Guidelines</u>.

- The topic must be approved by the instructor.

The goal of the project is twofold: first, to demonstrate your knowledge and ability to apply financial analysis to a complex problem, and second, to demonstrate your ability to use Excel in a sophisticated and competent manner. Each project will build a financial or economic model using an Excel spreadsheet. The specific topic is very open. It can be any issue broadly within economics or finance, and it need <u>not</u> be a topic discussed in the course itself. Also, students are not limited to the Excel features and functions presented in the course. Students are encouraged to develop a model in the area of finance that interests them and might be of use in their later studies or employment. Each topic <u>must</u> be approved by the instructor.

The grading will be equally weighted toward how the project shows knowledge of finance and how the project demonstrates a command of Excel (rubric below).

Consideration will be given to both the complexity of the analysis/modeling and the correct execution.

Proposal

Shortly after midterms, students are expected to submit a project proposal. This proposal will briefly describe the project, the data sources, the Excel features and functions to be used, and any other pertinent details. The instructor will provide feedback on the proposal, and it will be indicated in that feedback if for any reason the proposed project is not acceptable. The due date for the proposal is listed on the [Schedule](#).

Final Submission

The final submission should include one Excel spreadsheet with the title formatted as: "FIN 470 (Your Last Name) Individual Project". The first worksheet must contain 1) a summary of what you did in the project, 2) any special features of your model that you would like to highlight or explain (optional), and 3) the analysis, results or conclusions of your model (if any; some projects may not have specific results, so this section is optional). (Typing substantial text in Excel can be very tedious, so I recommend that you create your text in Word and then copy and paste it in the first worksheet as a picture.) The due date for the final submission is listed on the [Schedule](#).

Grading Rubric:

Financial Analysis   50%
      Complexity and Appropriateness of the Financial Analysis; Correct Application of the Financial Analysis
Excel Skills   50%
      Complexity and Appropriateness of the Excel Tools; Correct Application of the Excel Tools

Suggestions:

The above description of the project is intentionally vague, since I want you to do something that interests you and that will allow you to develop Excel skills that will benefit you in the future.

Project Ideas

Let me give you a sample of project ideas:

- You could use one of the course assignments as the basis for the project but greatly extend the analysis.
- If you're interested in derivatives, you could build an Excel model that prices options using Black-Scholes or binomial models or you could build a real options model for project valuation.
- If you're interested in real estate, you could build a real estate valuation or cash flow model. Or you could develop a model concerning mortgages.
- If you're interested in international finance, you could build an Excel model to value a foreign project that incorporates exchange rates, or you could build a spreadsheet that looks for arbitrage opportunities in foreign exchange.
- You could develop model that implements Monte Carlo simulation in Excel.
- If you are interested in banking, you could build an asset/liability management model.
- In fixed-income securities (bonds), you could model the movement and evolution of interest rates.

While these are examples in finance, you could also do something in economics, for example, a model to value a resource in natural resource economics. If you are not a finance major, you could build an Excel model in your field, but please get my permission before you start a project outside finance or economics.

Advanced Excel Functions

Here are a list of advanced Excel features you might find useful. We have looked at some of these in the course, but not all. The links are primarily to web pages, but many instructional YouTube videos are available.

- 3D Models
- Add-Ins (Install them or create your own):
    - 75+ of the best add-ins, plugins and apps for Microsoft 365 Excel
    - The 7 Best Excel Add-Ins in 2023: Full Excel Plugin Guide
    - FRED Add-In for Microsoft® Excel
    - Many add-ins are available for Monte Carlo simulations (or build it yourself)
- Advanced Visualization
    - Heat Maps
    - Harvey Balls
- Analysis ToolPak: We've used some of these in class, but there are a whole lot more. (Install Analysis ToolPak - VBA to access these tools in VBA.)
- Conditional Formatting
- Custom Functions (Use the VBA Editor or the LAMBDA Function)
- Dashboards
- Data Models
- Data Simulation/Monte Carlo Simulation
- Dynamic Arrays
- Logical Functions
- Macros
- Multiple Regression/Time Series Regression
- Naming
- Pivot Tables and Pivot Charts
- Power Pivot
- Power Query
- Solver
- Sparklines

- [VBA](#)
  - Install [Analysis ToolPak - VBA](#) to access these tools in VBA.

If you have any questions, comments, suggestions, or additions, please send me an email.

Office Shortcuts

Though not directly related to the project, here ere are lists of Office shortcuts. The ones from Microsoft are extensive and pretty much complete; the other lists pick out the most important or useful shortcuts.

- Excel
  - [Keyboard Shortcuts in Excel](#) (Microsoft)
  - [50 Excel Shortcuts that You Should Know in 2023](#)
  - [43 Handy Excel Shortcuts You Can't Live Without](#)
  - [Excel Shortcuts "Cheat Sheet"](#)
- Word
  - [Keyboard Shortcuts in Word](#) (Microsoft)
  - [Handy Word keyboard Shortcuts for Windows and Mac](#)
  - [15 Powerful Microsoft Word Shortcuts You Need to Know](#)
- PowerPoint
  - [Use Keyboard Shortcuts to Create Powerpoint Presentations](#) (Microsoft)
  - [Top PowerPoint Shortcuts for Efficient Work](#)
  - [Handy PowerPoint Keyboard Shortcuts for Windows and Mac](#)
- Outlook
  - [Keyboard Shortcuts for Outlook](#) (Microsoft)
  - [39 Keyboard Shortcuts to Save You 15 Minutes a Day](#)
- OneNote
  - [Keyboard Shortcuts in OneNote](#) (Microsoft)
  - [The Best OneNote Keyboard Shortcuts](#)