



Excel Financial Modeling: Getting Started

Course #4131A

Business

2 Credit Hours

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EXCEL FINANCIAL MODELING: GETTING STARTED

This course offers a guide to help you create informative and enlightening financial models. All you need is a basic understanding of Excel to start building models with practical hands-on exercises. This course will focus on: the practical uses and examples of financial modeling, the issues and risks for using excel for financial modeling purposes, designing the layout of your model and guidelines to follow when building your model.

LEARNING ASSIGNMENTS AND OBJECTIVES

As a result of studying each assignment, you should be able to meet the objectives listed below each individual assignment.

SUBJECTS

Introducing Financial Modeling
Getting Acquainted with Excel
Planning and Designing Your Financial Model
Building a Financial Model by the Rulebook

Study the course materials from pages 1 to 64

Complete the review questions at the end of each chapter

Answer the exam questions 1 to 10

Objectives:

- Recognize the difference between a spreadsheet and a financial model.
- Recognize the differences between the various Excel versions.
- Identify the key components of a financial model.
- Identify how functions work within a financial model.

NOTICE

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EXAM OUTLINE

- **TEST FORMAT:** The final exam for this course consists of 10 multiple-choice questions and is based specifically on the information covered in the course materials.
- **ACCESS FINAL EXAM:** Log in to your account and click Take Exam. A copy of the final exam is provided at the end of these course materials for your convenience, however you must submit your answers online to receive credit for the course.
- **LICENSE RENEWAL INFORMATION:** This course qualifies for **2** CPE hours.
- **PROCESSING:** You will receive the score for your final exam immediately after it is submitted. A score of 70% or better is required to pass.
- **CERTIFICATE OF COMPLETION:** Will be available in your account to view online or print. If you do not pass an exam, it can be retaken free of charge.

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CHAPTER 1: INTRODUCING FINANCIAL MODELING

Objective

After completing this chapter, you should be able to:

- Recognize the difference between a spreadsheet and a financial model.

IN THIS CHAPTER

- Exploring the who, what, and why of financial modeling
- Investigating different types of models

The demand for financial modeling skills has increased exponentially in recent years and many job listings for finance positions now include “financial modeling” as a core skill. If you’re reading this book, you’ve probably already discovered how important this skill is, and you know that learning financial modeling will increase your employability in finance or financially focused fields.

In this chapter, I define financial modeling — what it is, who uses it, and why it matters. I also show you some examples of financial models. If you’re brand-new to financial modeling, this chapter is a very good place to start.

DEFINING FINANCIAL MODELING

Before you dive into how to use Microsoft Excel to create financial models, you need to know what financial modeling is, who uses financial models, and why financial modeling matters. In this section, I fill you in.

What it is

When I teach a course on basic financial modeling, I always ask my students for their definitions of the term *financial model*. Most of them come up with long-winded descriptions using terms like *forecast* and *cash flow* and *hypothetical outcomes*. But I don’t think the definition needs to be that complicated. A *financial model* is a tool (typically built in Excel) that displays possible solutions to a real-world financial problem. And *financial modeling* is the task of creating a financial model.

You may have thought that a financial model was basically just an Excel spreadsheet, but as you know, not every spreadsheet is a financial model. People can and do use Excel for all kinds of purposes. So, what makes a financial model distinct from a garden-variety spreadsheet? In contrast to a basic spreadsheet, a financial model

- **Is more structured.** A financial model contains a set of variable assumptions — inputs, outputs, calculations, and scenarios. It often includes a set of standard financial forecasts — such as a profit-and-loss statement, a balance sheet, and a cash flow statement — which are based on those assumptions.
- **Is dynamic.** A financial model contains inputs that, when changed, impact the calculations and, therefore, the results. A financial model always has built-in flexibility to display different outcomes or final calculations based on changing a few key inputs.
- **Uses relationships between several variables.** When the user changes any of the input assumptions, a chain reaction often occurs. For example, changing the growth rate will change the sales volume; when the sales volume changes, the revenue, sales commissions, and other variable expenses will change.
- **Shows forecasts.** Financial models are almost always looking into the future. Financial modelers often want to know what their financial projections will look like down the road. For example, if you continue growing at the same rate, what will your cash flow be in five years?
- **Contains scenarios (hypothetical outcomes).** Because a model is looking forward instead of backward, a well-built financial model can be easily used to perform scenario and sensitivity analysis. What would happen if interest rates went up? How much can we discount before we start making a loss?

More broadly, a financial model is a structure (usually in Excel) that contains inputs and outputs, and is flexible and dynamic.

Who uses it

Many types of people build and use financial models for different purposes and goals. Financial models are usually built to solve real-world problems, and there are as many different financial models as there are real-world problems to solve. Generally, anyone who uses Excel for the purpose of finance will at some point in his career build a financial model for himself or others to use; at the very least, he'll use a model someone else created.

Bankers, particularly investment bankers, are heavy users of financial models. Due to the very nature of financial institutions, modeling is part of the culture of the company — the business's core is built on financial models. Banks and financial institutions must comply with current regulatory restrictions, and the tools and controls in place are forever changing and adapting. Because of the risk associated with lending and other financial activities, these institutions have very complex financial modeling systems in place to ensure that the risk is managed effectively. Anyone working in the banking industry should have at least a working knowledge of spreadsheets and financial models.

Outside the banking industry, accountants are big users of financial models. Bankers are often evaluating other companies for credit risk and other measures. An accountant's models, however, are often more inward looking, focusing on internal operations reporting and analysis, project evaluation, pricing, and profitability.

Why it matters

A financial model is designed to depict a real-life situation in numbers in order to help people make better financial decisions.

Wherever there are financial problems or situations in the real world that need solving, analyzing, or translating into a numerical format, financial models help. Sometimes it's just an idea or a concept that needs to be converted into a business case or feasibility proposal. A skilled financial modeler can put substance to the idea by augmenting the details enough to get a working model upon which decisions can be made, investor funds can be gained, or staff can be hired.

For example, financial models can help investors decide which project to put their money into, an executive track which marketing campaigns have the highest return on investment, or a factory production manager decide whether to purchase a new piece of machinery.

What It Takes to Be a Financial Modeler

Someone working with financial models typically has an undergraduate degree in business, finance, or commerce. Additionally, she likely has at least one of the following postgraduate qualifications:

- An accountancy qualification, such as CA (Certified Accountant), CPA (Certified Public Accountant), CIMA (Chartered Institute of Management Accountants), ACCA (Association of Chartered Certified Accountants), CMA (Certified Management Accountant), or CIA (Certified Internal Auditor)
- A Master of Business Administration (MBA) degree
- A Chartered Financial Analyst (CFA) designation
- A Financial Risk Manager (FRM) designation

Of course, you don't need all those letters after your name to build and work with financial models. I know many skilled modelers who come from backgrounds in IT or engineering, or who don't have any formal qualifications at all. Currently, there is no specific certification qualification for financial modeling professionals — at least nothing that is publically recognized — but I expect this might change in the near future. You can find courses in financial modeling, however. For example, I run a five-day Certificate in Financial Modeling Using Excel course through George Washington University several times a year in Dubai. And I have colleagues who run similar programs. I would classify these kinds of program as short-course vocational training rather than full certification.

If you simply want to list financial modeling as a skill on your résumé, a short course is sufficient (backed up by at least a couple of models you've built in the real world). If you're aiming toward a financial modeling career, you'll need formal finance qualifications such as those listed here, as well as intense, practical, hands-on work experience.