



Excel Financial Modeling: Excel Tools and Using Existing Models

Course #4132A

Business

2 Credit Hours

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EXCEL FINANCIAL MODELING: EXCEL TOOLS AND USING EXISTING MODELS

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: checking the output and accuracy of inherited models, Excel's most relevant modeling tools and techniques, and the many functions and formulas used in financial modeling.

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

Using Someone Else's Financial Model
Excel Tools and Techniques for Financial Modeling
Using Functions in Excel

Study the course materials from pages 1 to 102

Complete the review questions at the end of each chapter

Answer the exam questions 1 to 10

Objectives:

- Recognize the intricacies of working with inherited models.
- Identify helpful keyboard shortcuts.
- Identify functions that are helpful in financial modeling.

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: USING SOMEONE ELSE'S FINANCIAL MODEL

Chapter Objective

After completing this chapter, you should be able to:

- Recognize the intricacies of working with inherited models.

IN THIS CHAPTER

- Building your own model versus using a template
- Working with inherited models
- Using Excel's audit tools
- Checking your model's accuracy

As a consultant, my favorite scenario is when a client comes to me and asks me to build a new model *from scratch*. This situation does happen every now and then, but it's very rare. Normally, clients have a financial model that isn't working properly, or they need to update their model from last year, or they need to change the layout or design of their model. Being able to create my own models from scratch every time would be nice, but it's rarely practical. Instead, most of the time, like most modelers, I'm working with inherited models — models I've had to take over from someone else.

When you inherit a model, not only do you inherit the inputs, assumptions, and calculations the original modeler has entered, but you also inherit their mistakes. Using someone else's model involves taking responsibility for someone else's work, sometimes from people you've never even met! If you're going to be taking responsibility for someone else's model, you need to take it over and make it your own. You need to take responsibility for the workings of this model, and you have to be confident that the model is working correctly.

In this chapter, you explore some ways of checking, auditing, validating, and, if necessary, correcting other people's models so that you can be confident in the models' results.

CONSIDERING TEMPLATES FOR BUILDING A FINANCIAL MODEL

Models are often inherited in the form of templates. Dealing with a model built from a template is quite a different prospect than using a model that has been purpose-built for the job. In this section, I start by taking a look at why a modeler would use templates in the first place. Then I steer you in another direction and tell you why.

Why templates can be appealing

If you describe yourself as a “casual” financial modeler, your usual job might be something else entirely, but part of your professional and personal life means that you need to create a budget or financial statements, or maybe just do some pricing calculations. If this is you, you’re probably looking for an easy way to create a quick financial model that gives you the results you need. Starting to build a full financial model entirely from the ground up, especially when you have no idea where to begin, can be rather daunting. Using a template is a very appealing option because it requires a much lower initial investment of time and money than building a model yourself.

Warning



If the business or situation you’re trying to model is *extremely* simple and/or your business is *exactly* the same as every other business, you’ll be fine with a template. However, most templates are really just a nicely formatted spreadsheet. There is a bit more to building a robust, responsive, and accurate financial model than plugging a few numbers into a spreadsheet.

If you’re looking for a shortcut to building a financial model, keep in mind what a fully functional, dynamic model does that a basic spreadsheet does not. For more information about differentiating a model from a spreadsheet, see the section in chapter 1 on “Defining Financial Modeling”.

What’s wrong with using templates

When you’re first starting out, a template may be a good way to get going. But think of a template as a car with no engine — it looks great on the surface, but there’s no performance! Here are a few important features you *won’t* have when you use a template:

- **Financial models need drivers:** What makes a really good financial model is its ability to take the business model and represent it financially. Revenues and expenses don’t just happen — something occurs that makes that revenue or expense become a reality. Drivers are absolutely critical in creating a financial model that is flexible and scalable. For example, if you were to achieve 10 percent market penetration, and your product was priced at \$5, your revenue would be, say, \$100,000 per month. Many templates simply show a hard-coded value of \$100,000 for revenue, but in your model, you need to know exactly what had to happen in order for revenue to be calculated at \$100,000.

Of course, the beauty of this method not only means that investors or other users can trace back to see how the revenue is calculated, but you can also run scenarios and sensitivity analyses on these inputs. What if penetration were 12 percent? What if you decreased the pricing by 10 percent? This sort of analysis is virtually impossible with a simple input of \$100,000 for revenue.

- **Customized inputs:** A fill-in-the-blanks template has to suit everyone, so in order to meet the requirements of virtually any business model, the inputs must be kept generic (Revenue Item 1, Revenue Item 2, and so on). Of course, you can change the titles of these line items, but what if you have different lines of businesses that need to be separated?

Here's another example: "Office Rent" — a line item often found in a template — may not apply to your company. Maybe you bought your building, have a mortgage (a liability, not an expense), and need a way to factor in the mortgage pay down and interest portion of each payment. An experienced financial modeler would have no problem working this into a customized forecast. If you're using a template, you'll have a hard time getting the template to meet your needs. Plus, you'll probably spend more time manipulating the template to meet your needs than you would've spent just building it from scratch.

- **Scalability:** Just like that cheap one-size-fits-all shirt you bought from the market, your model will probably never fit properly. It's pretty much guaranteed that whatever number of inputs the template designer has chosen won't be exactly what you need. Inserting or deleting rows may seem simple, but any Excel modeler knows how deadly that can be. Before you know it, you've ended up with a model full of dreaded #REF! errors. To avoid this, the template designer likely crated a large number of unnecessary rows and columns just in case you need them. Most templates contain a huge amount of redundant information and unnecessary complexity, which is confusing, takes up memory, and is simply poor modeling practice.
- **Specialized functionality:** The standard financial reports have always been the balance sheet, cash flow statement, and profit and loss, but there are many additional reports that might be useful to your business but not necessarily to others. Unfortunately, you won't find anything beyond standard, minimum functionality in a template.

You're not very likely to have much more than very basic scenario analysis functionality built into a template. For example, it would be nice to be able to change a few inputs and do a scenario analysis to find out how increasing marketing by 10 percent affects the bottom line. A good scenario analysis tool built into a financial model is really what makes a model useful, because you can easily see what changing not just one variable but multiple variables does to the company.

Templates are great for very surface-level projecting, or "back of the envelope" calculations where a high level of precision is not required. But if you're serious about your modeling, you'll want it done correctly and as accurately as possible. Finding a template that will meet your specific needs is nearly impossible. Between the work you'll do adjusting it and the frustration you'll experience using it, you'll wish you'd just built the model from scratch!