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CHECKING AND REVIEWING A FINANCIAL MODEL



FMInstitute.com
July 10th, 2023



WELCOME

Today's Presenter

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Today's Presenter



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CFA Institute | 2015 to 2019

London / Hong Kong

FMI Learning Series

Topic 1: Financial Modeling Best Practices: Ten tips to build a world-class model.

Topic 2: Checking and Reviewing a Financial Model: What to do when something goes wrong.

Topic 3: Scenarios and Sensitivities: Managing uncertainty.

Topic 4: Model Circularity: Master the most feared topic in Financial Modeling.

Topic 5: Model Bloat: Top reasons why models become large and slow.

Financial Modeling Institute

4 public exams annually



Virtual



Excel-based



No multiple choice



4 hours



Proctored in a controlled environment

Rigorous financial modeling curriculum & exams



Three levels of accreditation; each recognized as its own designation



Virtual Exam Format

- Security and exam integrity through virtual proctoring platform
- Supervision of candidates throughout exam
- Onscreen activity recorded
- Unusual behavior automatically flagged (AI)
- AFM & CFM - 4 hours, closed book, no multiple choice

Candidates provide their own:

- MS Excel
- Computer
- Internet connectivity
- Webcam
- Quiet, distraction free space



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Checking and Reviewing a Model

Checking a Model: Why do it?

If someone else built it:

- To understand and become comfortable with the model
- To make sure it can be relied upon as a decision-making tool

If YOU built it:

- To make sure the model is free of errors – very important for the credibility of both you and the financial model!
- To check for completeness – are all assumptions and inputs included?
- To check for reasonableness – more on this in a moment
- To check for presentation – is it easy to understand? is it print formatted?

Checking a Model: Top Tips

1. Zoom down to 35% or 40%. This will provide a bird's eye view of the model and show where everything lives on the sheet
2. While the magnification is still set to 35% or 40%, check for hidden white cells by selecting the sheet and turning the background grey
3. Press **F5, Special, Constants** to check for dead inputs on the sheet
4. To check for hardcoded values,
 - a. press **Ctrl + ~** to see all formulas (Formulas, Show Formulas)
 - b. Another way to check for hardcoded values is to select an entire row and press **Ctrl + ** to highlight any differences within the row

Checking a Model: Top Tips (cont.)

5. When reviewing a link, press **Ctrl + [** to go to the precedent cell - then press **F5 Enter** to go back.
6. To jump to a cell reference that's part of a long formula, highlight the cell reference within the formula and then press **F5 Enter**
7. Add outputs on the Assums tab to easily see the impact of changes:
 - a. Watch Window
 - b. Camera Tool
8. Use **Alt V V** to allow for quick keyboard navigation in the file
9. Use Hyperlinks to allow for quick mouse navigation
10. Use the Formula Auditing tools

Optimal Model Build Order

The following are steps for the optimal order to **BUILD** a model:

1. Plan and design a model
2. Build the Assumptions page
3. Build a Scenarios page
4. Enter the historical financial statements
5. Build a schedule to forecast a line item into the future
6. Link this line item into the Income Stmt and CFLO Stmt
7. Repeat for most line items on the financial statements
8. Forecast the Balance Sheet
9. Calculate all output calculations
10. Create a Summary Page up front



Checking a Model: A Methodology

- There is not one definitive approach for reviewing/auditing a model
- However, it is often helpful to review a model in the **reverse order** from the steps used to build a model
- If the auditor follows a disciplined and systematic approach, it will increase the likelihood of finding errors
- Start with a review of the financial statements
- For each line that is correct, mark it “OK”
- If you find huge formulas, repeat and link to make them simpler

Checking a Model: Methodology (cont.)

Part 1: Financial Statements as Error Detection System

1. Start on the financial statements – check to ensure that all calculations on the statements are correct
2. Check the links from the financial statements to the supporting schedules – make sure each link is correct
3. Review the calculations used in the supporting schedules
4. Audit the links to the assumptions that are used in the supporting schedules
5. Confirm the reasonableness of the assumptions

Checking a Model: Methodology (cont.)

Part 2: Cash Flow Completeness

- Make sure that every line on the cash flow statement is reflected on the balance sheet, and that every change on the balance sheet is included on the cash flow statement

Checking a Model: Methodology (cont.)

Part 3: Reasonability Checks

- Ensure significant line items (i.e. revenues, costs) look reasonable
- Sales volume should never exceed capacity – may need to build in higher capex to support volume
- Look for margin trends that make sense (i.e. for a growing business, margins should expand as volume is spread out over the fixed cost base)
- Check for proper “signs” on the cash flow statement (i.e. capex and dividend payments should be negative values)
- Revolver and/or cash lines on the balance sheet should never be negative

Checking a Model: Methodology (cont.)

Part 3: Reasonability Checks (cont.)

- If the revolver has a zero balance, cash should be positive, and visa versa (exception is if the business requires a minimum cash balance)
- Look for “plugs” on the balance sheet and include a balance sheet check
- If the revolver is capped, a flag in the model should indicate if the cap has been exceeded
- The model should not have circular references other than those needed for debt/interest calculations
- Use Excel tools to check for consistency in formulas and ensure there are no hardcoded values in the forecast period



THANK YOU

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