Financial Modelling in MS Excel



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Overview of Financial Modelling

- Financial modelling deals with creating a mathematical model of company's projected financials
- Usually the model includes projected financial statements (P&L, BS and CFS) for next 5-7 years
- Projections may be prepared for annual period or on monthly basis depending on client's requirements

Financial Model

- 1) Assumptions covering inputs driving business
- 2) Working Schedules covering schedules incorporating drivers of revenue, operating costs, capital expenditure and capital structure
- 3) Financial Statements including integrated Income Statement, Balance Sheet and Cash Flow
- **4) Dashboard** including an executive summary to reflect key performance indicators (KPIs)

Scenarios

- 1) Best case scenario to cover "optimistic" assumptions for various revenue and cost drivers
- 2) Base case scenario to cover "most likely" assumptions for various revenue and cost drivers
- 3) Worst case scenario to cover "pessimistic" assumptions for various revenue and cost drivers

Multiple scenarios in a model allow picking various set of inputs thereby ensuring comparability

Sensitivity Analysis – to reflect likely change in valuation through various set of base inputs



Indicative Model Map







A financial model needs to have appropriate checks at various places to ensure that there is a proper way to navigate the errors in a model. The checks in any financial model may be included at 4 levels: (1) Cell check, (2) Row check, (3) Sheet check, and (4) Global check.

For instance, a model would have check for balance sheet total (assets minus liabilities and equity) for each period (year or months). That's the first level of check. If the model has 5 forecast years, then 5 cell checks for balance sheet total for all years would be included, and thereafter a summary of all these checks could be created. For example, the sum of all cell checks needs to be zero. One may typically place this kind of row check in first column. We should avoid writing anything else in column A to reserve this column for row checks only.

Once all row checks have been placed (say in Column A), we can sum them up at the top of the sheet (say in cell B2) and would create similar sheet checks in all worksheets in same cell B2 in respective sheets.

And finally, a global check! A master check or a global check can prove to be a powerful tool to handle any potential error in a big



model. A consolidated control check is the first point of reference for a financial modeler. This is like a bird's eye view for the model control. The global check may be created by having a list of all worksheets and placing all sheet checks against them. Then all these sheet checks are summed up to get a global check. We may compute and place this global check in table of contents sheet which would have a list of all sheets along with their description, a hyperlink and respective sheet checks.

While conducting a model review, one would always start with global check. If global check is ok, then it indicates that double entry rule of accounting has been properly followed. In case of any error in the global check, one would move to look at sheet checks and identify the sheet containing error. Once that sheet is activated, the row check would highlight the rows which have contributed to errors. That's how, a robust control check mechanism within the model helps to retain control of the model and identify error areas.



Financial Modelling Best Practices



- Model should follow a linear structure. Either start with inputs, then workings and finally output (or) in reverse order
- Column consistency use same column no. in each sheet for years
- No hardcoding should be done in working or output section; use only inputs/assumptions sheet for hardcoded inputs
- Use consistent formulae across row for all years
- Freeze top row and left column so that these remain visible when sheet is navigated downwards / towards right
- To the extent possible, use simple and small formulae. In case of complex logics, break formulae into multiple steps
- Put appropriate checks in the model cell check, row check, sheet check and global check
- Use flags as appropriate

Financial Model Project Milestones





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- Preferred learning partner for many companies
- Regular sessions at various professional bodies viz. ICAI and ICSI
- Discussion on practical applicability and applied usage





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