A Look at Financial Modeling

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Financial modeling can be a major part of the job of a management accountant. As a financial analyst and section head of one of the largest organizations in Egypt, I use financial modeling-particularly ratios, feasibility studies, and budgets--all the time. The workbook included here contains models I have developed in my more than 14 years of experience in costing, cost control, financial analysis, budgeting, and financial management. As a CMA, I find them particularly helpful.

These models can be used in midsize and large multinational companies, and they allow the board of directors, investors, and decision makers to see and understand information about the organization's results, the organization's strengths and weaknesses, the expected return from any new investment, return from other opportunities, information about competitors, and the market average performance.

I developed these models using ideas of scenarios (what-if analysis) and the number of days' used (timing distribution) as the basic principle for the process and the presentation stages--which aid in understanding and explaining the outputs as well as providing a high quality of results. These models consider inexpensive tools that companies can use in all parts of their operations from one department to the entire company. They also provide the end user with a good style of presentation. Using scenarios and what-if analysis gives the analyst flexibility, and the processing stage provides the user and the analyst more details with simple steps.

The inputs can be done manually; electronically, which could be imported by any kind of accounting system; or a mix of both types.

There are two Excel models in one Excel sheet, which are described below.

1- Ratios

- The analyst can present the data and then get feedback from the board of directors (BOD), investors, creditors, and the banks.
- This year's results can be compared to results from previous years, the budgets, the competitors, and the industry average, all in one field.
- The deviations from this year by all these data are presented in one field.
- The cash flow of this year can be compared by the same in one field as well as its deviation, which is presented in one field.

2- Budget Model

- This model offers innovative features and a modern style of presentation as well as attention to details.
- This model permits the addition of many scenarios that depend on the possibility as well as the probability of occurrence. These help the analyst and decision maker in the selection of the best appropriate scenario for the circumstances of the facility.
- The various scenarios that are presented to the decision maker provide the way for development of future plans to address any scenario.
- The budget model provides full details of all products/projects regarding the revenue, cost, and cash flow and gathers them together to provide an overall picture for the decision makers.
- The actual data and the variance from the budget are presented in the same style as the budget presentation.

Next you will find a guide on how to use the spreadsheets I created. Please use this guide as you look at the Excel workbook that is in a separate file.

For Ratios:

- There are two Excel sheets that represent ratios: Presentation and Ratios Analysis.
- Both sheets start with presenting the Balance Sheet of the current year from cell B8 to cell J18 and Cash Flow from cell M8 to cell U18.
- In the Presentation sheet, row 24, on cells B24, G24, M24, and R24 you will see an option to choose numbers from 1 to 6 (1 is year 2011, 2 is year 2010, 3 is year 2009, 4 is year 2008, 5 is year 2007, and 6 is the budget).
- Only the Deviation from this year makes up the options from 2 to 6.
- Choose the number that is the year/budget you want to present, and you will see the result will change regarding the year from row B30 to row E35.
- In row 26, cells C26, E26, H26, and J26, you will see options to choose some kinds of ratios and their deviation from this year.
- Choose the option you want to present, and you will see the result will change from cell B30 to cell J35 regarding the kind of ratio/deviation chosen and the year chosen under these columns.
- In row 26, cells N26, P26, S26, and U26, you will see options to choose the Cash Flow and its deviation from this year.
- Choose the option you want to present, and you will see the result will change from cell M30 to cell U34 regarding the kind of ratio chosen and the year chosen under these columns.
- From row 40 to row 73 there is an explanation of the ratios and the deviation that is linked to the year you chose in B24 and G24 (Ratios & Deviation).

Ratios Analysis Sheet:

- This sheet reflects only tables of all ratios chosen and the Cash Flow. The sheet is linked to the Presentation sheet.
- Note that any change in the cells chosen in the Presentation sheet (cell B24 and/or G24) will affect the arrow in Ratios Analysis from cell F27 to cell W27, which reflect the Year/Budget chosen.

For Budgets:

- There are three sheets that represent Budgets: Budget, Budget Presentation, and Actual vs. Budget.
- Go to sheet titled Inputs. In cell F100, you will see the option to choose numbers from 1 to 5, which represent five scenarios that can be entered.
- Note that the selection of the scenario in cell F100 will affect the arrow and will affect all sheets (Budget, Budget Presentation, and Actual vs. Budget). They will reflect the scenario you select. First choose 1 in cell F100.
- You have to open the Macro to use the Sensitivity option "File-Options-trust center-Macro Setting- Enable all Macros".
- In Inputs sheet, go to cell C178, and then delete all data from cell C178 to cell N184.
- Now go to cell F100 and select the scenario you want. Then go to the icon update in cell B175 and press the icon. You will see the result of the scenario appear in line 178.
- Repeat the previous step, but choose another scenario.
- If you change any number in any scenario and you press the icon update, the previous scenario will still appear unless you delete the cell. The new result also will appear.
- You can do more than 100 scenarios and keep all results available to the users.
- The deviation starting from cell C193 will appear automatically but only for the first five scenarios.
- Now select the scenario you want to present in cell F100.
- Open the Budget sheet. Note that all items in the income statement will be allocated to the months based on the number of days in the month (for example, the revenue of 76,732,510 will be allocated to Jan, Mar, May, Jul, Aug, Oct, and Dec based on 31 days; to Apr, Jun, Sep, and Nov based on 30 days; and to Feb based on 28 days-29 days).
- The Budget Presentation sheet is the final scenario you will select and from row B40 will present five scenarios and their deviations.
- The sheet Actual vs. Budget is the last sheet you should select. It contains the actual results, the Budget "Final Scenario," and the variance and the variances between the actual and the first five scenarios chosen.

I hope you enjoy testing these models. If you have any questions as you go through them, please get in touch with me at tam1976_11@hotmail.com.