**Learning Objective: Understand three valuation models: Free cash flow to the firm (FCFF), free cash flow to equity, and Adjusted Present Value (APV). Use an input sheet for assumptions such that any assumption changes “flow through” the spreadsheet. Use Excel formulas to create a model which can value “infinite” cash flows (such as the valuation of a firm) and finite cash flows (such as the valuation of a capital budgeting project).**

**When filling out the information sheet, PUT THE SUBMITTER’s GT Login\_ID (from the excel file where you show the group number) NOT THEIR GTID!!!**

**Instructions for completion:**

Please use the Excel File “Valuation\_Models\_Cap\_Budgeting\_Student\_Version (Template for Case 1).xlsm” **IN THE ASSIGNMENT tab** to complete the valuation models.

**Make sure the submission is the version of your analysis when Cell C2= 1 on the Val input sheet. That is, you are turning in the “solution” to the firm valuation project, rather than the capital budgeting project.**

**PLEASE ONLY USE THE FILE THAT IS LISTED IN THE CASE/ASSIGNMENT SECTION OF CANVAS. Do not use the file with the same/similar name in the Excel Files folder/videos!**

Three worksheets are in this file: The information sheet, an Input sheet (named “Val Input,” and a sheet named “Valuation FCFF and FCFE and APV.” You may change the numbers in the Input sheet as you test your model, but upon completion, please change back to the original inputs.

On the information sheet, for “GROUP\_Number” please put your group number (Group numbers are posted on Canvas). **Please use digits for the group number: Examples: 1, 9, 23, etc. For the GT Login, write the GT Login of the submitter. This IS not the GTID, but your login. Mine, for example, is jgarner47.**

**For cases, only one person per group will submit! Please name the file upon completion:**

**Case\_1\_Group\_number.xlsm (if you are group 3, you should name your file:**

**Case\_1\_Group\_3.xlsm**

Your task in this is to replicate the models shown in the Module with the name “Capital budgeting model and Valuation” videos**. You can also watch the Sensitivity Analysis videos, but you do not have to complete the sensitivity analysis for this case. It is especially important to follow the order shown in the videos.**

As with other assignments, anything in gray needs a formula. The gray cells are only in the sheet named “Valuation FCFF and FCFE and APV.” Important: This “model” will achieve a valuation of a firm (assuming infinite cash flows) as well as the valuation of a finite capital budgeting project. Many of your formulas must be “driven” off Cell C2 in the Val Input sheet.

**You may ignore the two (2) tables on the “Val Input” sheet (nothing required).** Those tables are in cells I12 – Q22 and cells A40 – G47.

Your formulas for depreciation expense (which is in the “Valuation FCFF and FCFE and APV” worksheet) should cover all lives in the depreciation table shown in the “Val Input” sheet, so up to 10-year property. All examples are not shown in the video, but your formulas should cover all scenarios! **You can use If statements, Index/Match, or any other formula you are comfortable with using.** In the videos I use “IF” statements as we have not covered (to this point in the class) other types of formulas, but you may use these if you know them. That is, if you want to use Index/Match, XLookup, etc., you may if it works! 😊

Four important items:

1. In the template file in the “Val Input” worksheet, there is “Sales Price of Project” in Row 26. We added this row AFTER the video was done (so it is not in the videos). Therefore, the MACRS table which is also in “Val Input” is shifted down an extra row. This matters when you write your formulas for Depreciation Expense (which you will complete in the “Valuation FCFF FCFE and APV” worksheet.
2. Please use a Tax rate of 25% (rather than 40%). The latest tax law changed the federal corporate tax rate to 21% so we use 25% to include other taxes (obviously that will change state by state, but it is just an approximation). You will change Cell C12 in the “Val Input” worksheet. When you turn your file in, you should have 25%.
3. You can make any input BLUE and any formula in BLACK FONT even if it is pulling from another sheet (that is, you can for this case avoid "Green" font).
4. The depreciation “formulas” should account for depreciation schedules up to 10-year property. However, this forecast ends in year 5. That means IF a property had a depreciation schedule which exceeds 5 years, the property would not be fully depreciated at the end of the forecast. Take-away: The forecast “life” and the “life” of the asset do not need to be the same.

I have posted “numbers only” solutions files which go along with the videos (using tax rate of 40%) and a “numbers only” solutions file using 25%. **You may want to get your file “working” first by using 40% because that corresponds with the videos. Then all you will have to do is change Cell C12 in the “Val Input” sheet.**

Some cells which need formulas should return a label such as Cell B14 in the Valuation FCFF and FCFE and APV worksheet. These labels will be “blank” under certain conditions and will populate under other conditions.

**REMINDERS:**

Remember to fill out the information worksheet!

Remember to name your file as indicated above!

**ONLY ONE PERSON FROM EACH GROUP NEEDS TO SUBMIT THE FILE. Once this learner submits the file, the other group members should be able to see the submission in their assignment as the Excel portion of the case is set up as a group assignment.**

**The conceptual questions (on the other hand) must be completed individually as Canvas does not allow a QUIZ to be set up as a group assignment.**

**Note: Each case will earn a “Group Grade.” Each learner will fill out a peer evaluation which can affect individual grades. Please see instructions about group and individual grades in the Module named “Groups for Cases and Peer Evaluation Explanation.” However, if any group member does almost no work (or zero work), this (these) learner(s) will not benefit from others in the group and could receive an extremely poor grade, possibly even a zero.**

In this course, you will be provided with template files to use for homework and case  
assignments. Unless you are specifically instructed to do so, do not make any  
adjustments to the formatting of these documents, such as inserting/deleting rows or  
tabs in the workbook. Should you make changes to the template, you will earn whatever  
grade the auto-grader assigns, because there is not a practical way for the TA team to  
grade your file manually. We will allow one re-submission if this situation occurs, with  
the template corrected, for a maximum of 85% of the credit.

This re-submission is for a specific situation; in general, re-submissions (for incorrect  
answers) are not allowed. Further, normal “re-grades” (as a result of a grading error) do  
not impose any penalty for the learner.

**If the original inputs are not in the submission file, we will impose a 25% grade  
penalty. Also, this assignment must have Cell C2= 1 on the Val input sheet. That is, you are turning in the “solution” to the firm valuation project, rather than the capital budgeting project.**

**END OF INSTRUCTIONS**