**Learning Objective: Understand and develop a three-statement model for a publicly traded firm (Campbell Soup).**

**Instructions for completion:**

Please use the Excel File named: “Three\_Statement\_Model\_Valuation\_Template\_Case\_2\_3\_4\_Spring\_2021.xlsx”to complete your case (the one posted here in this assignment).

**Note: the file with the same/similar name that is listed to use while watching the videos (week 8 videos) should NOT be same file you use for completing this case**.

In the videos: I show you how to do a valuation model using a “time 0” as 2016 fiscal year end. Therefore, the first year of the forecast is 2017 in the videos.

Your case should be completed with 2020 fiscal year end as your “time 0”. Therefore, the first year of forecast is **2021. Note: you should assume that it is currently 2020 (today).**

Therefore, the “basics” of case #2 are similar to what is in the video, but you will need to complete this analysis for a different year!

**I provide “numbers only” files for what is shown in the videos and some check numbers for what you are to complete in this case! They are listed here in this assignment tab as:**

**A) “Three\_Statement\_Model\_Valuation\_Student\_Version\_Numbers\_Only.xlsx” (Matches what is in the videos). (week 8)**

**B) “Campbell\_2020\_Case\_2\_Numbers\_Only\_Updated\_March\_1\_2021.xlsm” (the 2020 in the file name refers to the “time 0” –that is you are obtaining the price of Campbell as of the date of their last 10K which was in 2020).**

Worksheets that you will need for this case:

In the Historicals section (a RED organization tab):

“Income Statement”

“Balance Sheet”

In the Forecast section (RED organization tab)

“IS Hist Forecast”

“BAL Hist Forecast”

“CF Statement Forecast”

In the Valuations section (RED organization tab)

“DCF analysis”

In the Support section (RED organization tab)

“Supporting Schedules”

“WACC\_Growth\_HARDCODE”

**Note: There are other worksheets in this file; you do not need them for this case, but will need for future assignments!**

**Overview of Worksheets and Work Required:**

**Historicals section (RED tab):**

“Income Statement”: 2018, 2019 and 2020 income statements have been added to this sheet; no work required from you in this sheet but you will “pull” data from here and use in another worksheet

Source: Securities and Exchange Commission, Campbell Soup 10-K

“Balance Sheet”: 2018, 2019, and 2020 Balance sheets have been added to this sheet; no work required from you in this sheet but you will “pull” data from here

Source: Securities and Exchange Commission, Campbell Soup 10-K

**Forecast section (RED tab)**

Work required for “IS Hist Forecast” sheet (overview):

“Pull” historical data from “Income Statement” worksheet in the Historicals section

Compute ratios in rows 24 to 34 which you will use to forecast your income statements

Forecast income statements for years 2021, 2022, and 2023.

Work required for “BAL Hist Forecast” sheet (overview):

“Pull” historical data from “Balance Sheet” worksheet in the Historicals section

Compute ratios in rows 40 to 61 which you will use to forecast your balance sheets

Forecast balance sheets for years 2021, 2022, and 2023.

Work required for “CF Statement Forecast” sheet (overview):

“Pull” data from the other two forecasts (“IS Hist Forecast” and “BAL Hist Forecast”)

**Work required for Supporting schedules**

**Pull data from “BAL Hist Forecast”**

**Work required for the DCF Valuations worksheet**

Pull data from forecasts to build a “Free cash flow to firm” model

**Details of work necessary**

**Any cell in grey needs a formula**

1. **Forecasts section**
2. “IS Hist Forecast” Worksheet

“Pull” 2018 – 2020 data from the Historical “Income Statement” worksheet into Columns

D-F of “IS Hist Forecast”

Example, in Row 4 of “IS Hist Forecast,” pull from row 5 in the “Income Statement” worksheet

Follow the same procedure for most items

Subtotals should be calculated in “IS Hist Forecast” rather than being pulled from any other sheet.

For “Other operating expenses” (Row 12 of “IS Hist Forecast”), add rows 11 and 12 from “Income Statement” worksheet.

For Net interest expense/income (Row 15 of “IS Hist Forecast”), net interest income against interest expense. You want this to be a net expense which you will subtract in order to get Earnings before taxes (EBT).

Other items should be self-explanatory.

In Rows 24-34 for Columns D-F, compute ratios you will need for your Income statement forecast that will begin in Column H.

For years 2018, 2019, and 2020, compute the payout ratio (in row 32)

For years 2019 and 2020, compute the other ratios. You can examine the numbers only files to check formulas.

In Rows 24-34 for Columns H-J, compute formulas for assumptions as necessary. For example, the assumption for cost of goods sold as a percent of revenues should be the average days in sales for the prior 2 years. Anything that is in blue (that is already hardcoded) should be left as is and used as an input when you build your model.

Once you have your assumptions, build your income statement forecast beginning in column H.

Follow the videos and/or examine the formulas in the numbers only file (which goes along with the videos, which of course will have different values than your case #s). The formulas will still work!

Hint: Interest expense (forecasted) should be a placeholder until your balance sheet forecast is completed. That is, you can put any number (maybe just use the last historical year’s interest expense). Once your balance sheet forecast is built, you can write a formula to compute interest expense. The interest rate is in your assumption section (Row 30) and you will compute simple interest. Interest rate x (Interest bearing debt). Interest bearing debt is short term and long-term debt (rows 19 and 25 of “Bal Hist Forecast”).

File name to see formulas: **Three\_Statement\_Model\_Valuation\_Student\_Version\_Numbers\_Only**

Hint: This applies to IS Hist Forecast sheet:  For forecasted dividends, In Row 33 you should hardcode (in blue) $426 as this is the most recent dividend (Columns H – J). Most companies do not forecast based on a payout ratio because that could substantially change the $ amount. However, we want that option.  So, in row 34, you should have either a 0 or a 1 (a switch if you will) to forecast dividends either based on a payout ratio or based on a dollar amount.

So in Row 22 starting in Column H you need an if statement that calculates dividends based on the switch in Row 34.  If H34 = 1, pull the $426, otherwise, calculated dividends based on net earnings x payout ratio.

Rationale: The rationale I used was the following: IF a company ACTUALLY used a payout ratio to pay their dividends, the most recent year is their "new" payout ratio. It's the same idea as why we use the most recent dollar amount. It's likely their policy. Therefore, we don't use an average here.

1. BAL Hist Forecast worksheet

“Pull” 2018 – 2020 data from the Historical “Balance Sheet “worksheet into Columns D – F of “BAL Hist Forecast” worksheet

Follow the video lessons and compute the ratios necessary (in rows 40 – 61). For example, the assumption for 2021 days sales in receivable should be the average days in sales for the prior 3 years. Anything that is in blue (that is already hardcoded) should be left as is and used as an input when you build your model. **Please note, there are a few more balance sheet accounts in recent years than prior years, so this “assumption section” is larger than the one in the videos.**

Hint: For 2019 and 2020, the change in net cap expenditure % of EBIT(1-T) should either be positive or 0. Take the change in NET PPE and compute as % of after-tax EBIT. Write an if statement that computes this. Compute Long term assets as a % of revenue for 2018 – 2020.

When you do the cash flow statement, the investing section should include changes in both NET PPE and Long-term assets! When you compute the capital expenditures in the supporting schedule, it should also include changes in both NET PPE and LT assets.

Once you have your assumptions, build your balance sheet forecast beginning in column H.

One item that is not “run off” of an assumption” in the videos is “Accumulated other loss”. Please forecast Accumulated other loss by taking the prior year balance and adding what is in the assumption section. Example: For year 2021, you will take the 2020 accumulated other loss balance and add to it what is in Cell H59. **This procedure will be the same for any and all line items where the inputs are shown as 0. This way, if you decide to change any assumption, it runs through your forecast. Example: Long term debt for 2021 should be 2020 LTD plus H55 Less H56.**

Be very careful forecasting cash and short-term debt. Make sure you watch the videos for this! You should examine the formulas provided in this file:

**Three\_Statement\_Model\_Valuation\_Student\_Version\_Numbers\_Only**

1. Cash flow statement forecast

Create a cash flow statement forecast by using information in the other two forecasts that you have just build.

For example, pull net earnings from the “IS Hist Forecast”

The rest of the CF statement should be built like any other CF statement (recall HW #1). That is, for most entries, you will take changes in balance sheet items and determine if that is an inflow or an outflow of cash to the firm.

Purchase/sale of plant assets should be the change in BOTH Net PPE and other long term assets (rows 12 and 13 in “BAL Hist Forecast”)

Dividends can be “pulled” from row 22 in the “HIST IS Forecast” (needed for retained earnings forecast).

In Row 33, write an if statement to check if your forecasted CF statement cash balance checks to the balance on “BAL Hist Forecast.” Populate with “YES” or “NO.” Use the ROUND function: If the rounded value (rounded to 0 decimals) of D31 is equal to the rounded value of H5 on the Balance sheet forecast, “YES” otherwise “NO”.

We are not going to include the following in the CF Statement: Any of the “discontinued operations” accounts. (Note: we added $0 to each of these in the balance sheet).

1. **Valuations and Support**
2. “DCF Analysis”

In this worksheet, you will build a free cash flow to the firm analysis using data from your three statements that you have forecasted. Most items should be self-explanatory, particularly if you follow the videos.

Note: When computing the terminal value and the value of the firm (Cells F15 and D19, respectively, you should use the growth rate and the discount rate that is in the worksheet named “WACC\_Growth\_Hardcode”). In another case, you will actually build the actual WACC.

**Update from the videos: when we subtract debt from enterprise value (also known as the market value of the firm),** we will proxy using the book value of debt.. But **we actually should subtract “net debt” ---debt net of any cash we have. So you should subtract the quantity: (Interest bearing short term debt + Long term debt LESS cash). Each of these items are as of Aug 2, 2020 (your “time 0”).**

The reason we subtract “net debt” is because when we forecast net working capital (NWC) we do not include cash in our forecast, so this is where we account for it.

1. “Supporting Schedules”

Part of the “DCF Analysis” requires subtracting changes in net working capital and net capital expenditures. This worksheet allows you to “build” those two items that will then “feed into” your “DCF analysis” worksheet.

Typically in a forecast, we only include “spontaneous working capital” which includes (at a minimum) receivables, inventory, and accruals/payables. Once you pull these items, compute your totals. NWC is current assets less current liabilities.

Change in NWC is current NWC less prior NWC. Capital expenditures is the difference in your ending balance for fixed assets for current year less the same for the prior year.

Please follow the videos for instruction and “pull” data from the “BAL Hist Forecast.”

Hints: For accruals, include both accounts payable and accruals (Rows 20 and 21 in the “BAL Hist Forecast.” For capital expenditures, include both Net PPE and Other Long term assets (Rows 12 and 13 in the “BAL Hist Forecast”).

Note: The rows in your CASE 2 are not exactly like the video.

**Submission information:**

On the input sheet, for “GROUP” please write out your group number (Groups are posted on Canvas). Do not write a digit, but rather a word. Example “One”, “Two”, etc. Do this in Cell B1. For the ID please use the GA TECH USERNAME. Example mine is JGARNER47 (note: this is not private, so it’s okay to share with others).

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

**Case\_2\_Group\_number.xlsx (if you are group 3, your file would be named**

**Case\_2\_Group\_3.xlsx.**

As with other assignments, anything in gray needs a formula. Given the new corporate tax rate, use 25% for the corporate tax rate (an estimate of federal plus state).

**REMINDERS:**

Remember to fill out the information worksheet!

Remember to name your file as indicated above!

**You do not have to save as macro enabled!**

**TIPS:**

1. If you see a cell with a green tag in the corner of the cell, you may have what Excel considers an "Inconsistent formula" ---it's not an error necessarily, just a flag wanting you to make sure the formula is what you want.  
   What to do?  Go to Formulas, and then over to the right find "error checking"

Once you select "error checking" it will find those "flagged" cells and if your formula is correct, just select "ignore error".  Once you do this the flags are gone:

1. Your spreadsheet needs to be set to manual calculation AND allow for iterative calculations. Otherwise, you will get the circular reference. There are many formulas that depend on others which depend on the original formula. This is very important to set formulas to MANUAL and allow for Iterative calc!
2. For some items that are iterative, you may want to try hard-coding the cells, then change them back to formulas.

**END OF INSTRUCTIONS**