

Project 1: Obtaining Information

Due: 06/04/2023 at 11:59pm

Use this document to help you find the numbers needed for your calculations: See Excel Sheet "Inputs"

In a real job, there are other sources available for you to find what you need. E.g. Bloomberg has a lot of useful information. This is just a starting point to "get your feet wet"

There are a total of 200 points available. For every day late, you incur a penalty of 40 points.

Use the Walmart 10k to gather this information:

https://s201.q4cdn.com/262069030/files/doc_financials/2023/ar/Walmart-10K-Reports-Optimized.pdf

I downloaded the 10k for you as an Excel Sheet and posted it so that you can easily refer to it. Some numbers are highlighted for you already.

Start with the "Ratios" tab.

Next, continue with the "Inputs" Tab. Below are descriptions of how to fill in the cells.

First, calculate the year-to-year changes of revenues and expenses (using data from Income Statement). Then, think about the growth prospects of Walmart and its industry. Sources for this information can be Management Discussions, Notes to Financial Statements, Analyst Reports, etc. You can also be creative and come up with your own growth opportunities for Walmart – just discuss potential risks, competitors, etc.

I do not expect an in-depth multiple-page paper, but I want to see you put some effort into this, at least ½ page of good arguments.

Use a revenue growth rate of 2% and a cost growth rate of 1.65%. Keep tax expense constant at 21% of EBIT.

To calculate the terminal value, use $g = 1\%$.

Next: Calculate

- Depreciation and Amortization (from Cash Flow Statement, highlighted blue) as a % of revenue in 2021 through 2023
- CAPEX ("Payments for property and equipment" from the Cash Flow Statement) as % of revenue in 2021 through 2023
- Interest ("Interest, net" from Income Statement) as % of revenue in 2021 through 2023

You will use the percentage you calculated for 2023 in your projections later.

For example, if your revenues are projected to be \$100 in 2024 and the depreciation / revenue ratio is 2%, you want your depreciation in 2022 to be \$2. In 2025, if your revenues are now \$110, you want your depreciation to be $0.02 * 110 = \$2.2$.

Next: Calculate

- Net Working Capital (NWC): Current Assets – Current Liabilities
- Change in NWC: Calculate the change from 2022 to 2023. Be careful: Has NWC Increased or decreased?
- When you need to subtract NWC in the FCF projection, use that change in NWC you just calculated. Keep it constant.
 - If NWC decreased, the change in NWC is < 0 . Since you need to subtract the change in NWC, that means you need to take $-(-NWC)$, which means you need to effectively add the number.

The following is used for wacc calculation:

- Calculate the cost of debt: Use interest expense on debt (*interest, net* on Income Statement) divided by Long-term debt (from the Balance Sheet). This is to simplify your work. In real life, you could instead look up different interest rates paid in the 10k disclosures (e.g. Tables 43 and 45).
- **Use 21% for the tax rate.**
- Calculate the cost of equity. You will need three inputs to calculate it with the CAPM:
 1. Beta: Use http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/Betas.html
Use the beta for retailers (Groceries and Food). It can be argued that Walmart also fits into other categories, but for now, this will suffice. You should notice that there are many other useful numbers included here, but we will not use them.
 2. Risk-free rate: Use the 10-year Treasury rate from <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/pages/textview.aspx?data=yield> (The FED St. Louis would be another useful resource; <https://fred.stlouisfed.org/series/DGS10>)
 3. Expected return on the market: You **could** download daily S&P500 data and calculate average returns over the last 20, 30, or even 50 years. Alternatively, you could take a look at http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html
To save yourself some time, use 8% as a rough approximation.

- Weight of equity: Go to the balance sheet. Take stockholders' equity divided by liabilities + equity.
- Weight of debt = 1-weight of equity.

For Step 6 Intrinsic Value:

Use 2023 Cash and 2023 Current Liabilities from the Balance Sheet.

For Step 9:

For EV/EBIT multiples, see:

http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/vebitda.html

If you are confused on how to obtain terminal value from this multiple, see:

<https://corporatefinanceinstitute.com/resources/knowledge/modeling/dcf-terminal-value-formula/>