**Nine major categories of the income statement**

1. Revenue (Sales) – important to know when and how revenue is recognized
2. Cost of goods sold (COGS)– direct costs related to the production of goods sold by a company
3. Operating expenses – incurred by performing normal business operations
   1. Selling, general, and administrative (SG&A)
   2. Advertising and marketing
   3. Research and development (R&D)
4. Other income – generated from non-core parts of the business
   1. since this income is taxable it has to be recorded
   2. income from non-controlling interests (a.k.a. income from unconsolidated affiliates)
   3. whether to include in EBITDA depends on several things such as: is it core enough to the operations, is it consistent and reoccurring, the purpose of the analysis, how other companies treat it for purposes of comparison, is the treatment defensible
5. Depreciation and amortization (D&A) – accounts for the aging and depletion of fixed assets over time; amortization accounts for the cost basis reduction of intangible assets such as intellectual property (patents, copyrights, trademarks, etc…)
6. Interest – net of interest received on cash and cash equivalents less interest paid of debt
7. Taxes – financial charges imposed by government on a company’s earnings before taxes
8. Non-recurring and extraordinary items (non-recurring items) – expenses or income that are either one-time or not pertaining to core operations. These items should be identified and moved below the EBITDA, EBIT, and NI line items in order to derive “clean” EBITDA, EBIT, and NI.
9. Distributions – broadly defined as payments to equity holders (usually in the form of dividends and / or non-controlling interest payments

These major categories are important to dissect because they are the drivers of profitability and also the basis for comparing profitability between different companies to derive relative valuation.

Moving non-recurring items to a separate section results in an adjusted net income that does not equal to net income (as reported). Therefore, a second net income line that reconciles the adjusted net income with adjustments to arrive at net income (as reported) should also be included in the analysis. Additionally, when net income is being compared between different companies, it’s important to ensure that net income is consistently defined across all companies in the comparison.

***Tip***: Hardcoded numbers in a model should be in blue font. All formulas should be in black font.

***Tip***: It is worth doing a quick word search on “expense” or “operating expense” in the 10K to see if there is a more detailed table listing individual expenses.

We’ll discuss later on how calculating an expense as a percentage of revenue may or may not be a good indicator of future performance.

**Digging up depreciation**

Not all companies list depreciation as a separate line item. In those situations, start by doing a word search on “depreciation” and also check the cash flow statement. Note that depreciation amounts can differ between the various financial statements.

When depreciation is not explicitly broken out in the income statement, it is usually buried in one of the expense items elsewhere in the income statement. Search on “depreciation” can help when trying to figure this out. Oftentimes depreciation is rolled up into COGS and/or SG&A. Regardless of how it is distributed, the EBITDA is unaffected.

**Income Statement – Making Projections**

One needs to spend much time understanding and researching the core business model, how the company generates revenue, its cost structure, and beyond in efforts to estimate next year’s performance as best as possible.

A good model is a functional and flexible one, and is one that is designed to easily be adjusted, to grow, and to evolve as we gain more knowledge and insight into the inner workings of the business as we hone in on a perfect valuation. It is important to remember not to depend on any one single source of information. It is not safe to make the general assumption that last year’s growth will equal this year’s or next year’s growth.

**Projecting Revenue**

Focus on understanding the company’s pricing and volume. Research includes:

* what initiatives is the company taking to increase its volume?
* is it increasing advertising?
* is it acquiring other businesses or customers?
* what outside forces could affect the company’s pricing model (Porter’s five forces)?
* is it increasing pricing?
* is it facing competition and how is this competition affecting its pricing and volume?

Valuable sources of additional research include:

* investor presentation – contain high-level projections
* earnings calls – management speaks about the company’s most recent financial performance and sometimes management gives guidance on the company’s future performance
* Wall Street research
* Data sources – find some that contain consensus estimates such as consensus revenue; it is important to note the range and mean of these consensus estimates

It is up to you to decide how detailed you would like your analysis to be. In many cases, revenue can be broken out by product, volume, and even geography. It is also not uncommon to have a completely separate revenue schedule and analysis that will feed into the income statement.

**Projecting COGS**

It is important to consider whether costs are fixed or variable. A fixed cost is relatively static and independent of revenue growth and may grow a certain percentage year over year. A variable cost will change in direct proportion to the growth of the business, most commonly determined by revenue growth. There are, however, exceptions. For example, a revenue increase could be due to an increase in pricing and not due to volume and hence this would not impact COGS. However, if product price increases are being driven by input price increases, then COGS would be increasing. This is why a deeper understanding of the company’s business model and cost structure comes in handy.

Historical trends can help us determine how best to make initial projections. For example, if historical COGS % of sales has remained consistent over time, this is a strong indicator that COGS is dominated by variable costs and growing at the same rate as revenue. Conversely, if COGS % of sales has not been consistent, further research would need to be done to better understand the reasons for this variability.

There are several methods for making an initial projection:

* take an average percentage of the last three years
* take the maximum percentage of the last three years (conservative)
* take the minimum percentage of the last three years (aggressive)
* take last year’s percentage (naïve)
* have the percentages steadily increase or decrease year over year.

**Projecting OpEx**

The same process and considerations that were applied to projecting COGS and be applied to projecting OpEx. Generally speaking, if you bake in aggressive assumptions, you should only do so if there is compelling evidence to support an aggressive view.

**Projecting D&A, Net Interest, Taxes**

When building a complete financial model it is recommended to leave projected depreciation empty for now since we will be building a depreciation schedule that will contain projected depreciation expense that will feed into the income statement projections. This also applied to the net interest section.

For tax projections, you can choose from one of the projection methods discussed previously. However it is a good idea to do a word search of “tax”, “taxes”, etc… to see if there is direct guidance on the future tax rate.

Note that quite often a company will state a reported tax rate that is different than what has been calculated. This difference could be due to adjustments made to pretax net income or other tax benefits realized. In such cases one can either take the historical percentage or the reported rate. One must also make the determination if those adjustments would continue to happen in the future or if the company would pay taxes based on the standard rate.

**Projecting Non-Recurring Events**

Typically we don’t project non-recurring items because typically they will not exist in the future or will not be core to our valuation. However, there may be some additional analyses where a deeper understanding of non-recurring events is necessary.

**Projecting Non-Controlling Interest**

Typically assessed as a percentage of net income. Since non-controlling interest is a payout based on total ownership, it would make more logical sense to use the last year’s approach as the best indicator for next year’s estimates, unless further research reveals reason for the level of ownership to change.

**Basic Shares Outstanding**

The most recent 10Q has the most up-to-date basic shares outstanding. This number can be used as the estimate for future basic shares outstanding.

**Diluted Shares Outstanding**

There are several resources for obtaining the total number of diluted shares. The best way is to calculate the number ourselves. The start point is the most recent annual report (note that the most recent 10Q usually does not contain the options and warrants detail). In the annual report, search on “options” to find disclosures related to options and warrants. Several variables have to be considered including: the total number of outstanding options and warrants, the stock price relative to the exercise price, whether there are restrictions, such as timing, that prevent exercise of the option.

Once you have honed in on the total exercisable options, multiply that number at the strike price. This product yields the total value of the exercise. Apply a common method called the treasury method, which states that the exercised options are bought back at the current stock price. Using the treasury method, the total value of exercise divided by the current stock price yields the number of shares bought back. The difference between the exercisable shares and the shares bought back results in the total increase in the shares outstanding. Adding this increase to the basic shares outstanding results in the diluted shares.

It is important to be thorough in making sure all stock options, employee stock options, and warrants are accounted for. These may be spread across several tables and any additional filings may contain announcements about issuance of options or warrants not captured in the annual and/or quarter filings.

**Chapter 1 Key Formulas**