3-Statement Model from a Blank Excel Sheet: 90-Minute Case Study

And why we rarely build any type of model from a completely blank sheet…

*"You always start with **templates** for models. What about examples where you have no templates, so you have to start from a blank sheet?"*

*"Everything looks **too easy** with a pre-existing template since all the data and formatting are in place."*

RESPONSE: There is value in learning how to start from scratch, but it also takes *much, much longer* to teach because of the **data entry and formatting** (boring).

Also, in real life, you'll get a mix of different case studies and tasks (blank sheets vs. templates vs. mixed).

WARNING About This Tutorial

For all the files and resources, go to:

https://mergersandinquisitions.com/3-statement-model/

What is a 3-Statement Modeling Test?

- **IDEA:** You **input** a company's historical Income Statement, Balance Sheet, and Cash Flow Statement and then **project them** over a ~5-year period

- **WHY:** Determine whether the projected growth/margins and Free Cash Flow are realistic

- **EX:** "We'll generate $5 billion of FCF and use it to repay $1 billion of Debt and return $4 billion to the shareholders"

- **You:** Is this realistic? Does the company *need* outside financing? What if **market conditions** change?

Types of 3-Statement Modeling Tests

- **Blank Sheet / Strict Time Limit:** More about *working quickly*, knowing Excel shortcuts quite well, simplifying, and making decisions under pressure

- **Template / Strict Time Limit:** More about *entering the correct formulas*, justifying your assumptions, and *answering questions* based on your model's output

- **No Strict Time Limit:** These case studies are more about **outside research** and using data to justify your assumptions for the revenue, expenses, cash flow, etc.
  - **And:** You often make some type of presentation at the end with financing/other recommendations

Outline for This Tutorial:

- **Part 1:** Inputting the Historical Financial Statements   **5:54**

- **Part 2:** Income Statement Projections   **35:11**
- **Part 3:** Balance Sheet Projections   **50:12**
- **Part 4:** Cash Flow Statement Projections   **57:51**

- **Part 5:** Linking the Statements   **1:07:12**

- **Part 6:** Debt and Stock Repurchases   **1:10:59**

- **Part 7:** Model Checks, Review, and Final Comments   **1:19:16**

Part 1: Financial Statement Input

- **Tip #1:** *Always* start with the company's financials in Excel or CSV format and swap the columns so they go from oldest to newest (if Excel financials are not available, copy/paste)

- **Tip #2:** Use positives for revenue and income on the IS and negatives for everything else → much easier to sum up sections and check your work

- **Tip #3:** Consolidate the smaller line items *as much as possible* or you will waste time on the projections later (EX: R&D and SG&A on the IS here)
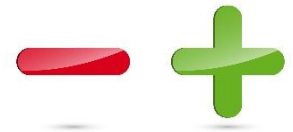
Part 1: Financial Statement Input

- **Tip #4:** On the Balance Sheet, aim for ~5 items on each side; can be slightly higher for some companies, but don't go above, say, 10, or the projections will not be fun

- **Tip #5:** On the CFS, consolidate pretty much everything within CFI except for CapEx; within CFF, show the Change in Debt as one line item, with separate lines for Dividends, Stock Issuances/Repurchases, and Misc./Other

- **KEY ISSUE:** We don't have unit-by-unit data for the "New Equipment" segment... so use Market Size and Share

- **PROBLEM:** This means the Service and Product Revenue won't be directly linked, but we don't have time to dig into the investor presentation and find a way to fix this

- **Other Items:** Make them simple average percentages of Revenue and extend them forward (no huge deviations in the trends, and no time to find employees, per-unit data, etc.)
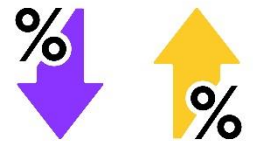
- **Working Capital Line Items:** What really matters is the *Change in Working Capital* and how that affects the company's cash flow…

- **So:** These items could be percentages of Revenue, COGS, OpEx, or Total Expenses in any reasonable range; just make sure the projected Change in WC is close to historical levels

Part 4: Cash Flow Statement Projections

- **Most Items:** Either simple percentage of Revenue or blank for now because we need more information (Debt and Stock Repurchases)

- **Pensions:** Would simplify these and consolidate Pension Contributions because we're not showing Pension Assets/Liabilities separately (and very complicated to model)

- **NCI:** No time to look into this in detail, so simplify and make these line items simple reversals and percentages of totals

Part 5: Linking the Statements

- **TIP:** If you're new to this process, check off items or highlight lines as you move along to avoid errors

- **Cash:** Flows in based on the Old Balance + Net Change on CFS

- **PP&E/Goodwill/Intangibles:** Old number and Subtract CapEx and D&A

- **Other Assets:** Old #, subtract Acquisitions and Pensions/Other

- **Total Debt:** Old Debt Balance + Change in Debt

- **Op. Lease Liabilities:** Old number plus the Change in Op. Lease Assets (yes, it's more complicated, but *simplify*)

- **NCI:** Old number + NCI Net Income + NCI Dividends

- **Shareholders' Equity:** Old number + Net Income + Dividends + Stock Repurchases + Other Items + FX Rate Effects

- **IDEA:** It's a "catch-all" for everything that does not link to any other specific line item on the Balance Sheet

- **Step 1:** Decide on the "constants" (Dividends) and the "variables" (Debt Repayment and Stock Repurchases)

- **Step 2:** Does the company have Excess Cash Flow in the period shown? If so, it can repurchase Stock and repay Debt

- **Step 3:** If not, it needs to *issue* additional Debt

- **Step 4:** Divide up the Stock Repurchases and Debt Repayments by % (can link to the investor presentation guidance)
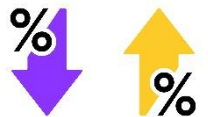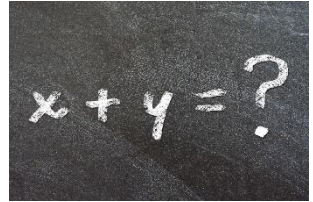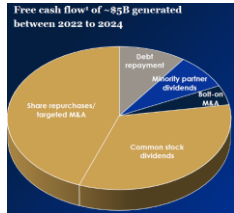
- **OVERALL:** Besides the bad formatting, the biggest problem here is that it's not a very "robust" model that will support different cases

- **WHY:** We should project down to Units Sold and link items such as CapEx to the productive capacity so that we can *separate* Units Sold from the Average Price per Unit

- **Also:** We could project the Service Revenue more effectively by assuming a renewal rate, additional units sold, and analyzing pricing trends (would need another 30-60 minutes)

- **GOALS:** $5B in cumulative FCF over 3 years, with the splits shown on pg. 41 of the presentation, seems reasonable

- **FCF Conversion:** FCF / Net Income is always > 100% here

- **Growth Rates:** Might be a bit on the high side (mid-single-digit percentage growth in both segments)...

- **BUT:** We haven't assumed margin improvements, like they have, and our growth rates are not necessarily "organic" (though no direct link to acquisitions)

Recap and Summary

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