

# Exercise 2B: Two-Stage DCF Model

## MGMT 675: Generative AI for Finance

Build a two-stage discounted cash flow model for a hypothetical or real company. Start by providing Claude with a small set of assumptions:

- Sales growth rate, COGS as % of sales, SG&A, depreciation, tax rate
- NWC as % of sales, PP&E as % of sales
- WACC, terminal growth rate

The model should include:

1. **Pro forma income statement** (5-year forecast): Sales → COGS → Gross Profit → SG&A → Depreciation → EBIT → Taxes → NOPAT
2. **Pro forma balance sheet**: NWC and PP&E as % of sales, capital expenditure derived from target PP&E
3. **Free cash flow**:  $\text{NOPAT} + \text{Depreciation} - \text{CapEx} - \Delta\text{NWC}$
4. **Terminal value**: growing perpetuity method ( $\text{TV} = \text{FCF}_{T+1}/(\text{WACC} - g)$ )
5. **Enterprise value** and **per-share equity value**
6. **Two-way sensitivity table**: WACC (rows) vs. terminal growth rate (columns)

Produce the output as an Excel workbook with clearly labeled sheets.

### Deliverables.

- Excel workbook with DCF model (2B-DCF.xlsx)
- Screenshot of the Claude conversation (2B-Screenshot.png)