

# 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  $\rightarrow$  COGS  $\rightarrow$  Gross Profit  $\rightarrow$  SG&A  $\rightarrow$  Depreciation  $\rightarrow$  EBIT  $\rightarrow$  Taxes  $\rightarrow$  NOPAT
2. **Pro forma balance sheet**: NWC and PP&E as % of sales, capital expenditure derived from target PP&E
3. **Free cash flow**: NOPAT + Depreciation  $-$  CapEx  $-$   $\Delta$ NWC
4. **Terminal value**: growing perpetuity method ( $TV = FCF_{T+1}/(WACC - g)$ )
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)