Exercise 2C: Monte Carlo Valuation

MGMT 675: Generative AI for Finance

Take the DCF model from Exercise 2B. Instead of using fixed assumptions, assign probability distributions to four key inputs. For example:

- Sales growth rate: Normal(8%, 3%)
- COGS as % of sales: Normal(60%, 2%)
- Terminal growth rate: Uniform(1.5%, 3.5%)
- WACC: Normal(10%, 1.5%)

Ask Claude to run 10,000 simulations and produce:

1. A **histogram** of enterprise values
2. **Summary statistics**: mean, median, 10th percentile, 90th percentile
3. A **tornado chart** showing which assumption drives the most variation in valuation

Write a brief paragraph identifying the key driver of valuation uncertainty and explaining why.

Deliverables.

- Histogram and tornado chart (`2C-Histogram.png`, `2C-Tornado.png`)
- Summary statistics and key-driver paragraph (`2C-Summary.pdf`, half page)