Value a Business with DCF and Trading Comps

Investment Banking & M&A | Intermediate | 90 minutes (estimate) | Free cash flow, discounting and multiples

Learning outcomes

Compare two valuation lenses and expose sensitivity instead of hiding it. Calculate the result, reconcile it and communicate its limitations.

Method

Discount unlevered free cash flow at a consistent enterprise discount rate. With end-of-year cash flows and perpetual growth, terminal value at year N is FCF(N) × (1+g) / (r-g), requiring r > g. Discount terminal value back N years. Comparable multiples are a cross-check, not evidence that every business deserves the median.

Smaller worked example

A separate $100 cash flow received in one year has a $90.91 present value at 10%. A terminal value computed at the end of year 3 must be divided by (1+r)^3, not (1+r)^4.

Business context and rules

Fictional Brook Software, valuation date 30 September 2026. All money is USD thousands. The three forecast years have unlevered FCF 100 / 120 / 140 paid at each year end. Base discount rate 10%; perpetual growth 2%. Reference EBITDA 150. Synthetic peer EV / EBITDA values are 5x, 6x, 7x and are already sorted; assume the EBITDA definition is matched. No net debt bridge is required. Sensitivity grid: discount rates 8%, 10%, 12% and terminal growth 1%, 2%, 3%. These are teaching assumptions, not live market estimates.

Original synthetic inputs

Input	Value	Unit
Year 1 unlevered free cash flow	100	USD thousands
Year 2 unlevered free cash flow	120	USD thousands
Year 3 unlevered free cash flow	140	USD thousands
Base discount rate	0.1	fraction
Base terminal growth	0.02	fraction
Comparable reference EBITDA	150	USD thousands
Synthetic peer A EV / EBITDA	5	multiple
Synthetic peer B EV / EBITDA	6	multiple
Synthetic peer C EV / EBITDA	7	multiple

Required deliverables

Deliver a three-year DCF, a 3×3 sensitivity table, low / median / high comparable EV and a 200-word valuation note. Explain the divergence and name diligence questions on reinvestment, cash conversion and peer comparability. Do not average incompatible results without rationale.

Use formulas for derived amounts and preserve source data. Put narrative deliverables in the workbook response area; expand it as needed. Compare amounts within 0.01 of the stated unit and percentages within 0.1 percentage point. No unsupported balancing plugs.