

Value a Business with DCF and Trading Comps

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

Worked numerical schedule

Measure	Value	Unit
PV year 1 FCF	90.91	USD thousands
PV year 2 FCF	99.17	USD thousands
PV year 3 FCF	105.18	USD thousands
Terminal value at end year 3	1,785.00	USD thousands
PV terminal value	1,341.10	USD thousands
DCF enterprise value	1,636.36	USD thousands
Peer low EV	750.00	USD thousands
Peer median EV	900.00	USD thousands
Peer high EV	1,050.00	USD thousands
Terminal value share of DCF	0.82	fraction
DCF: 8% discount / 1% growth	1,910.15	USD thousands
DCF: 8% discount / 2% growth	2,195.93	USD thousands
DCF: 8% discount / 3% growth	2,596.02	USD thousands
DCF: 10% discount / 1% growth	1,475.67	USD thousands
DCF: 10% discount / 2% growth	1,636.36	USD thousands
DCF: 10% discount / 3% growth	1,842.98	USD thousands
DCF: 12% discount / 1% growth	1,199.56	USD thousands
DCF: 12% discount / 2% growth	1,301.02	USD thousands
DCF: 12% discount / 3% growth	1,425.03	USD thousands

Measure	Value	Unit
Base DCF versus sensitivity residual	0.00	USD thousands

Interpretation and recommended actions

Base terminal value is 1,785 (USD thousands). Base EV is about 1,636.36, compared with 750 / 900 / 1,050 from peers. Most DCF value is terminal, so the implied mature cash conversion and reinvestment deserve scrutiny. Present both ranges with assumptions; do not call the peer range observed market evidence because it is synthetic. A higher perpetual growth rate must be consistent with the reinvestment needed to support it.

Scoring rubric - 100 points

Dimension	Points	Awarding guidance
Calculation	40	Yearly DCF 12; terminal value 8; sensitivities 12; comparable values 8.
Interpretation	25	Correct application of the case rules 10; explain the business decision 10; identify evidence or limitations 5.
Controls / audit trail	20	Traceable formulas 8; independent reconciliation 8; explicit units and signs 4.
Communication	15	Decision and numerical headline 5; actions with owners and evidence 5; concise response covering all required deliverables 5.

Award method credit after an isolated arithmetic error rather than repeatedly deducting for it. Equivalent account labels and well-supported alternative recommendations are acceptable. Numerical tolerance is 0.01 in the stated units; no universal passing score is prescribed.

Common mistakes

Discounting terminal value one extra year; using a growth rate at or above the discount rate; treating synthetic peers as market evidence.

Staged hints

Calculate yearly PV first. Put terminal value at year 3. The 10% / 2% grid result must equal the base DCF.

Instructor notes

Prerequisites: Free cash flow, discounting and multiples. Suggested use of the estimated 90 minutes: spend roughly 15% on the lesson and smaller example, 55% on the independent task, 20% on comparing approaches and 10% on the decision discussion. Timing is untested. Ask learners to explain why the numerical check is necessary but not sufficient.

For a simpler class, provide the model structure and work through one driver. For an extension, change one operational assumption and require a new reconciliation and recommendation. Verify the new key before distributing any variant. Open files in the intended spreadsheet application before class. Solutions are learning resources, not secure hiring examinations. Expert review remains pending.