UNIVERSITY INVESTMENT CLUB

4.0 DCF Guide

Unlevered Free Cash Flow, WACC & Terminal Value

Guide 4 of 6 | IB & PE Interview Prep Series

Compiled for internal club use. Questions are illustrative and drawn from commonly tested technical themes in IB and PE recruiting — not affiliated with, or sourced verbatim from, any bank or recruiting firm.

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The DCF is the most theoretically pure valuation method — and the most heavily probed in interviews, because it forces you to explain the mechanics behind every input, not just recite a formula.

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1. Core Mechanics

Q1.1 Walk me through how you'd build a DCF.

- Project Unlevered Free Cash Flow (UFCF) for an explicit forecast period, typically 5–10 years.
- Discount each year's UFCF back to the present using the Weighted Average Cost of Capital (WACC).
- Calculate a Terminal Value representing cash flows beyond the forecast period, and discount that back to the present as well.
- Sum the present values of the explicit-period cash flows and the discounted Terminal Value to arrive at Enterprise Value.
- Subtract Net Debt (and other adjustments) to arrive at Equity Value, then divide by diluted shares for an implied share price.

Q1.2 How do you calculate Unlevered Free Cash Flow?

UFCF = EBIT × (1 – Tax Rate) + D&A – Capital Expenditures – Increase in Net Working Capital.

It's called "unlevered" because it excludes interest expense/income — it represents cash flow available to *all* capital providers, consistent with discounting at WACC and arriving at Enterprise Value.

Q1.3 Why do we use Unlevered rather than Levered Free Cash Flow in a standard DCF?

Because Unlevered FCF and WACC are both capital-structure-neutral, giving you Enterprise Value — a value for the business independent of financing decisions. Levered FCF (after interest) paired with Cost of Equity would give you Equity Value directly, but is less common because it entangles the valuation with a specific, and often-changing, capital structure.

2. Discount Rate & WACC

Q2.1 How do you calculate WACC?

WACC = (E/V × Cost of Equity) + (D/V × Cost of Debt × (1 – Tax Rate)), where E and D are the market values of Equity and Debt, and V = E + D.

Q2.2 How do you calculate the Cost of Equity?

Typically via the Capital Asset Pricing Model (CAPM): Cost of Equity = Risk-Free Rate + Beta × Equity Risk Premium. Beta is usually a re-levered industry beta drawn from a set of comparable public companies, adjusted for the subject company's own capital structure.

Q2.3 Why do we multiply the after-tax cost of debt term by (1 – tax rate)?

Because interest expense is tax-deductible — the effective cost of debt to the company is lower than its stated cost, since a portion of each interest payment is offset by tax savings. This is the classic "tax shield" benefit of debt.

Q2.4 What happens to Enterprise Value if WACC increases?

Enterprise Value decreases — a higher discount rate reduces the present value of every future cash flow, including the (typically large) Terminal Value component.

3. Terminal Value

Q3.1 What are the two main ways to calculate Terminal Value?

- **Gordon Growth (Perpetuity Growth) Method:** TV = Final Year UFCF × (1 + g) / (WACC – g), assuming cash flows grow at a constant rate, g, forever.
- **Exit Multiple Method:** TV = Final Year EBITDA (or another metric) × an assumed exit multiple, based on current trading or transaction multiples.

Q3.2 What growth rate assumption is reasonable for the Gordon Growth Method, and why?

Typically something close to long-run GDP growth or inflation (often 1.5%–3%) — a company can't realistically outgrow the broader economy forever, or it would eventually become the entire economy. The growth rate must also be strictly less than WACC, or the formula breaks (produces a negative or undefined value).

Q3.3 Terminal Value often represents 60–80% of total Enterprise Value in a DCF. Is that a problem?

It's expected, not necessarily a flaw — most of a company's value legitimately comes from cash flows far in the future. But it does mean the DCF is extremely sensitive to Terminal Value assumptions, which is why sensitivity tables on WACC and the growth/exit multiple are standard practice, and why cross-checking the implied exit multiple (under Gordon Growth) or implied growth rate (under Exit Multiple) against reasonableness is important.

4. Sensitivities & Limitations

Q4.1 What are the key weaknesses of the DCF approach?

- Extremely sensitive to assumptions — small changes in WACC or terminal growth can swing value substantially.
- Requires long-dated forecasts that get less reliable the further out you project.
- Ignores current market sentiment entirely, which can be a strength (intrinsic value) or a weakness (out of step with reality) depending on your view.

Q4.2 How would you sanity-check a DCF's output?

Compare the implied EV/EBITDA and P/E multiples from the DCF against trading comps and precedent transactions — if the DCF is implying multiples wildly outside observed market ranges, revisit the growth, margin, or discount rate assumptions driving it.

Q4.3 How would you adjust a DCF for a company with significant Net Operating Losses (NOLs)?

Build a separate tax schedule that applies the NOL balance to shield taxable income each year until it's exhausted, so your UFCF projection reflects the lower cash taxes the company will actually pay while the NOLs are being used.