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BUILDING WEALTH, CAREERS AND COMPANIES

INTERVIEW GUIDE 02

Valuation and Corporate Finance

Enterprise value, the valuation methods and their mechanics, the DCF in depth, corporate finance and capital structure theory.

How to use this guide

Valuation is where interviewers test judgement as well as mechanics. Know the formulas cold, then be ready to say which method you trust for a given company and why.

Most questions have two layers. **What to say** is a short answer you could give in an interview. The notes underneath explain why it is right, so you can handle the follow-up.

Do not memorise answers word for word. Learn the logic, then practise saying it out loud.

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A note on conventions

Worked examples use a 25% tax rate unless the question states otherwise. Where U.S. GAAP and IFRS differ in a way interviewers ask about, the guide says so. Most African markets report under IFRS; U.S. firms will expect U.S. GAAP. Say which you are assuming.

Enterprise value and equity value

Almost every valuation question depends on knowing which value you are measuring and which metric belongs with it.

1.1 What is the difference between enterprise value and equity value?

What to say

Equity value is what the shareholders' stake is worth: share price times diluted shares for a public company. Enterprise value is the value of the operating business to all capital providers: equity plus debt, preferred stock and non-controlling interests, less cash and non-operating assets.

A useful picture: enterprise value is the price of the house, equity value is what the owner keeps after repaying the mortgage.

1.2 Walk me from equity value to enterprise value.

	\$m
Equity value (50m diluted shares × \$20)	1,000
Plus: debt	300
Plus: preferred stock	50
Plus: non-controlling interests	50
Less: cash	(100)
Enterprise value	1,300

Also subtract non-operating assets such as equity-method investments, and consider adding debt-like items such as lease liabilities and underfunded pensions. Whatever you include in enterprise value, be consistent with the EBITDA you divide it by.

1.3 Why do you subtract cash?

What to say

Cash is not part of the operating business, and a buyer effectively gets it back: it could use the cash to repay debt or pay itself a dividend. Strictly, you subtract only excess cash, not the minimum the business needs to operate, but in practice most analysts subtract all of it.

1.4 Why do you add non-controlling interests?

What to say

When a company owns more than 50% of a subsidiary, it consolidates 100% of that subsidiary's revenue and EBITDA. To keep the multiple consistent, enterprise value must also include 100% of the subsidiary, so we add the value of the stake the parent does not own.

The same logic in reverse explains why we subtract equity-method investments: their value is in equity value, but their earnings are not in EBITDA.

1.5 Why add preferred stock?

What to say

Preferred shareholders have a claim on the company ahead of common shareholders, so they are a provider of capital. Like debt, preferred stock has to be paid off by a buyer.

1.6 Can equity value or enterprise value be negative?

What to say

Market equity value cannot be negative, because neither share price nor share count can be. Book equity can be. Enterprise value can be negative when a company holds more cash than its market value plus debt, which sometimes happens to distressed or out-of-favour companies.

1.7 Enterprise value is \$100 and equity value is \$150. What is net debt?

What to say

Negative \$50. The company holds \$50 more cash than debt, ignoring other items.

1.8 How do you calculate diluted shares?

What to say

Start with basic shares and add the dilution from in-the-money options, warrants and convertibles. For options, the treasury stock method assumes the exercise proceeds are used to buy back shares at the current price.

Example. 100 shares at \$10 and 10 options with a \$5 strike. Exercising creates 10 shares and \$50 of proceeds, which buys back 5 shares. Diluted shares are 105 and diluted equity value is \$1,050.

Convertibles are treated as converted if in the money, in which case you add the new shares and remove the debt. For comparable companies, some analysts count only exercisable options; for an acquisition, count all options expected to vest on the change of control.

1.9 Why can't you use EV/Earnings or Price/EBITDA?

What to say

Because the numerator and denominator must refer to the same capital providers. Enterprise value belongs to debt and equity, so it pairs with metrics before interest, such as revenue, EBITDA and EBIT. Equity value belongs to shareholders only, so it pairs with metrics after interest, such as net income and levered free cash flow.

Valuation methods

2.1 What are the main valuation methods?

What to say

Comparable companies, precedent transactions and discounted cash flow. Comparable companies apply the multiples at which similar public companies trade. Precedent transactions apply the multiples paid in past acquisitions of similar businesses. A DCF values the company as the present value of its future cash flows. An LBO analysis is often added to show what a financial buyer could pay.

Method	Strengths	Weaknesses
Comparable companies	Market-based, current, easy to explain	True peers are rare; no control premium; markets can misprice whole sectors
Precedent transactions	Reflects what buyers actually paid, including control premiums	Few relevant deals; data can be stale; each deal has its own circumstances
DCF	Based on the company's own cash flows; less swayed by market mood	Very sensitive to assumptions, especially terminal value and discount rate
LBO	Shows the price a sponsor can pay to hit its target return	Driven by financing conditions and return targets, not intrinsic value

2.2 Which method usually gives the highest value?

What to say

Precedent transactions usually come out above comparable companies, because acquisition prices include a control premium. A DCF can land anywhere, depending on the assumptions, and management projections tend to be optimistic. An LBO usually gives the lowest value because it uses a higher required return than the cost of capital in a DCF.

Precedents can come in below comparables when public markets have rallied since the deals happened, or when the only relevant deals were small private companies sold cheaply.

2.3 Which method is best?

What to say

It depends on the situation, so I would use all three and triangulate. I would weight the DCF more for a business with predictable cash flows that differs from its peers, comparables more when there are good peers and a functioning market, and precedents more for a control transaction with relevant recent deals.

2.4 What other valuation methods are there, and when do you use them?

- **Sum of the parts.** For companies with distinct divisions, value each with its own peers and add them up.
- **Liquidation value.** For distressed companies, what the assets would fetch if sold, less liabilities. It shows what creditors and shareholders would recover.
- **Replacement cost.** What it would cost to rebuild the asset base; common in asset-heavy industries.
- **Dividend discount model.** For banks and insurers, where debt is part of operations rather than financing.

2.5 Which multiples do you use for different industries?

Situation	Common metrics
Most operating companies	EV/EBITDA, EV/EBIT, P/E
Fast-growing, unprofitable companies	EV/Revenue, EV/Gross profit, user or subscriber metrics
Banks and insurers	P/E, price to book, price to tangible book
Real estate investment trusts	Price to funds from operations (FFO), net asset value
Capital-intensive businesses	EV/EBIT or EV/(EBITDA – capex), to account for reinvestment

2.6 Why might two similar companies trade at different multiples?

What to say

Differences in growth, margins, capital intensity, risk and quality of earnings. The one with faster growth, recurring revenue, lower capex or a stronger market position deserves a higher multiple. Differences in leverage also affect P/E, and differences in accounting, such as lease treatment, affect EV/EBITDA.

2.7 Why would a public company be worth more than an identical private one?

What to say

Liquidity and transparency. Public shares can be sold quickly and the company must disclose audited information, so investors accept a lower return. Private company valuations often include a discount for lack of marketability.

2.8 How would you value a company with no revenue?

What to say

Build a longer-term projection of when revenue and cash flow arrive and discount it at a high rate, sense-check against the valuations of similar companies in recent funding rounds, and use operating metrics such as users, subscribers or pipeline value where there is a reliable relationship to value.

2.9 What should you consider when valuing a company in another country?

What to say

Use local peers where possible, and adjust for differences in accounting standards, interest rates, inflation, tax and country risk. Keep cash flows and the discount rate in the same currency, and be explicit about the currency and inflation assumptions.

In African markets

Listed peers are often few and thinly traded, so comparable multiples can be unreliable, and many analysts lean on precedent transactions from private deals and DCFs instead. When you build a DCF in local currency, the risk-free rate and expected inflation must also be local; mixing a U.S. dollar discount rate with naira or cedi cash flows is a common and costly mistake.

The DCF in detail

3.1 Walk me through a DCF.

What to say

Project unlevered free cash flow for five to ten years. Calculate a terminal value for the years beyond, using either an exit multiple or a perpetuity growth rate. Discount the cash flows and the terminal value back to today at the weighted average cost of capital. The sum is enterprise value. Subtract net debt and other claims to get equity value, and divide by diluted shares for a per-share value.

3.2 How do you calculate unlevered free cash flow?

What to say

EBIT times one minus the tax rate, plus depreciation and amortisation, minus capital expenditure, minus the increase in net working capital.

Levered free cash flow also subtracts after-tax interest and net debt repayments. It belongs to equity holders, so it is discounted at the cost of equity and gives equity value directly.

Watch the sign: an increase in working capital is subtracted. Some prep materials write it with a plus sign.

3.3 What is WACC, and how do you calculate it?

What to say

The weighted average cost of capital is the blended return required by all capital providers, weighted by the target capital structure. $WACC = \text{cost of equity} \times \text{equity weight} + \text{cost of debt} \times (1 - \text{tax rate}) \times \text{debt weight}$, plus the cost of preferred stock times its weight if there is any.

Example. 60% equity at 10.6%, 40% debt at 6% pre-tax, 25% tax: $0.6 \times 10.6\% + 0.4 \times 6\% \times 0.75 = 6.4\% + 1.8\% = 8.2\%$.

Use market values and a target or long-run capital structure, not book values.

3.4 How do you calculate the cost of equity?

What to say

Usually with the capital asset pricing model: the risk-free rate plus beta times the equity risk premium. The risk-free rate is typically a long-dated government bond yield in the same currency as the cash flows. The equity risk premium is the extra return investors expect from equities over that rate.

Example. Risk-free rate 4%, beta 1.2, equity risk premium 5.5%: $4\% + 1.2 \times 5.5\% = 10.6\%$. Practitioners commonly use an equity risk premium somewhere around 4% to 6% for developed markets, often with a country risk premium on top for emerging markets.

3.5 What is beta, and why do you unlever and relever it?

What to say

Beta measures how much a stock moves relative to the market; the market's beta is 1. A company's observed beta reflects both its business risk and its leverage. To estimate beta for a private company, take peers' betas, strip out each peer's leverage to get an unlevered or asset beta, take the median, then relever it at the target company's capital structure.

Unlevered beta = levered beta $\div$ $(1 + (1 - \text{tax rate}) \times \text{debt/equity})$. Relevered beta = unlevered beta $\times$ $(1 + (1 - \text{tax rate}) \times \text{debt/equity})$. This common form assumes the debt itself carries no market risk.

Example. A peer has beta 1.2 and debt/equity of 0.5, with 25% tax: unlevered beta = $1.2 \div 1.375 = 0.87$. Relevered at debt/equity of 1.0: $0.87 \times 1.75 = 1.53$.

3.6 How does leverage affect the cost of equity and WACC?

What to say

More debt raises the cost of equity, because shareholders bear more risk. At moderate levels, WACC usually falls as cheaper, tax-deductible debt replaces equity. Beyond a point, the risk of financial distress pushes both the cost of debt and the cost of equity up, and WACC rises again.

3.7 Which is cheaper, debt or equity?

What to say

Debt. Lenders rank ahead of shareholders, so they accept a lower return, and interest is usually tax deductible.

3.8 Should a \$500m company or a \$5bn company have a higher cost of equity?

What to say

Usually the smaller company. It tends to be less diversified, less liquid and more vulnerable to shocks, so investors demand a higher return. Its WACC is likely higher too, though that also depends on capital structure.

3.9 How do you calculate terminal value, and which method do you prefer?

What to say

The exit multiple method applies a multiple, usually EV/EBITDA, to the final year's metric. The perpetuity growth method assumes cash flow grows at a constant rate forever: final-year free cash flow $\times (1 + g) \div (WACC - g)$. Bankers tend to use the multiple method because it ties to market data; I would calculate both and check that each implies a sensible version of the other.

Example. Final-year free cash flow \$100m, WACC 10%, growth 3%: $\$100m \times 1.03 \div 7\% = \$1,471m$. If final-year EBITDA is \$150m, that implies an exit multiple of about 9.8x. If that looks high for the sector, the growth assumption is probably too high.

The long-term growth rate should not exceed the long-run growth of the economy the company operates in, measured in the same currency.

3.10 What are the main weaknesses of a DCF?

What to say

It is only as good as its projections; terminal value often makes up most of the value; small changes in WACC or growth move the answer a lot; and it assumes a constant capital structure and discount rate. It is also hard to apply to companies with unpredictable cash flows and to financial institutions.

3.11 Why not use a standard DCF for a bank?

What to say

For a bank, debt and deposits are raw materials, not financing, and interest is part of operating income. Unlevered free cash flow and enterprise value lose their meaning. Banks are valued on equity: a dividend discount model or residual income model, and multiples such as P/E and price to tangible book.

3.12 Which has a bigger impact: a 10% cut in revenue or a 1 percentage point cut in the discount rate?

What to say

It depends on the assumptions, but in a typical DCF the discount rate change is larger. With a perpetuity at a 10% discount rate and 3% growth, cutting the rate to 9% raises value by about 17% ($1/6\%$ versus $1/7\%$). A 10% revenue cut lowers value by about 10% if margins hold, and more if operating leverage squeezes margins.

3.13 If you do not trust management's projections, what do you do?

What to say

Build my own case with more conservative assumptions, compare the plan against the company's historical performance and peers, and run sensitivity tables on the drivers that matter most, typically growth, margins and the discount rate.

Corporate finance and capital structure

4.1 Explain the time value of money.

What to say

A dollar today is worth more than a dollar in the future, because today's dollar can be invested to earn a return, and because future money carries risk and loses purchasing power to inflation. The discount rate captures all three.

Present value = future cash flow $\div (1 + r)^n$. Compound annual growth rate = (ending value $\div$ beginning value) $^{1/n} - 1$, where n is the number of years between the two values.

4.2 What are NPV, IRR and payback, and how would you decide whether to invest in a project?

What to say

NPV is the present value of a project's cash flows less its cost; a positive NPV creates value. IRR is the discount rate at which NPV is zero. Payback is how long it takes to recover the initial investment, ignoring the time value of money. I would invest if NPV is positive at the company's cost of capital for that risk level, which usually means IRR exceeds that cost.

When projects are mutually exclusive or differ in size, rely on NPV. IRR can mislead for unconventional cash flows and ignores scale.

4.3 You put \$100 in the bank, receive \$2 a year for 19 years, and \$102 in year 20. What is the IRR?

What to say

2%. The investment behaves like a bond bought at par with a 2% coupon, so the yield equals the coupon regardless of the term.

4.4 Would you take \$100 a year forever or \$1,000 today?

What to say

It depends on the discount rate. A perpetuity is worth the payment divided by the rate, so the two are equal at 10%. Below 10%, take the perpetuity; above 10%, take the \$1,000.

4.5 Would you rather have \$100 today or \$200 in four years?

What to say

Doubling in four years is about a 19% annual return. If I could not earn that elsewhere at similar risk, and trust the payment, I would take the \$200.

4.6 When should a company raise debt instead of equity?

What to say

When it has stable cash flow to service the debt, room in its capital structure, and investments whose returns exceed the after-tax cost of borrowing. Debt is cheaper and does not dilute shareholders. Equity makes more sense when cash flows are uncertain, leverage is already high, or the shares are richly valued.

4.7 Why would a company issue preferred stock?

What to say

It sits between debt and equity: it pays a fixed dividend, ranks ahead of common shareholders, usually carries limited voting rights, and can be structured to receive favourable treatment from rating agencies. It lets a company raise capital without the fixed obligations of debt or the full dilution of common equity.

4.8 Why would a company buy back shares, and what does it signal?

What to say

To return surplus cash to shareholders, often because management believes the shares are undervalued, and to offset dilution from employee equity. It can signal confidence. It can also signal a lack of better investment opportunities, and a debt-funded buyback raises risk.

Buybacks reduce share count, which increases earnings per share if the earnings yield on the shares exceeds the after-tax return forgone on the cash used.

4.9 Why do companies pay dividends, and how are they taxed?

What to say

Mature companies with more cash than investment opportunities return it to shareholders, and a steady dividend signals confidence. Dividends are paid from after-tax profit and are not deductible for the company, so profits are taxed at the corporate level and again when shareholders receive them.

Shareholder tax rates depend on the country and the investor. In the U.S., qualifying dividends are taxed at the lower long-term capital gains rates for individuals, and corporate shareholders may receive a dividends-received deduction. Many African countries apply a withholding tax on dividends.

4.10 A company has \$10m of cash, 1m shares and nothing else. What is the share price? It then wins \$10m in a lottery and announces it will use the

winnings to buy back shares at \$25 in one month. What is the share price today?

What to say

\$10 at first. After the lottery, \$20. At \$25, the buyback retires 0.4m shares, leaving 0.6m shares that own \$10m, or \$16.67 each. If every shareholder can tender pro rata, each share receives $40\% \times \$25 + 60\% \times \$16.67 = \$20$, so the price stays \$20 today. Overpaying in a buyback transfers value from shareholders who stay to those who sell; it does not create value.

4.11 You and a friend each own half of a company. It lists and issues new shares equal to 20% of the enlarged company. What do you own?

What to say

40%. The founders keep 80% between them, split equally.

4.12 A company has \$100m of revenue and \$20m of EBITDA. It cuts prices by 10%. What volume increase keeps EBITDA flat?

What to say

It depends on the cost structure. If all \$80m of costs are fixed, revenue must return to \$100m at 90% of the old price, so volume must rise about 11%. If all costs are variable, each unit's contribution falls from 20% of the old price to 10%, so volume must double.

4.13 Which boosts EBITDA most: a 20% volume increase, a 20% price increase, or a \$15m cost cut on \$100m of revenue?

What to say

The price increase, which adds the full \$20m to EBITDA if volumes hold. The volume increase adds \$20m of revenue but also adds variable costs. The cost cut adds \$15m.

4.14 What is operating leverage?

What to say

The share of a company's costs that are fixed. With high operating leverage, profit rises faster than revenue on the way up and falls faster on the way down. That is why EBITDA usually grows faster than revenue in a business with fixed costs.

4.15 What are coverage and leverage ratios, and how do you judge credit risk?

What to say

Leverage ratios compare debt to earnings or capital, such as debt/EBITDA and net debt/EBITDA. Coverage ratios compare earnings to interest, such as EBITDA/interest and $(\text{EBITDA} - \text{capex})/\text{interest}$, the second showing whether the company can pay interest and still reinvest. Together with liquidity, industry risk, the maturity schedule and management, they indicate how likely a company is to meet its obligations.

4.16 A company has senior debt priced at SOFR + 500 bps, expected to recover 70% in default, and junior debt expected to recover 30%. What should the junior spread be?

What to say

Using the simplification that $\text{spread} \approx \text{annual default probability} \times \text{loss given default}$: the senior loss given default is 30%, so a 5% spread implies a default probability of about 16.7%. The junior debt loses 70% in default, so its spread should be about $16.7\% \times 70\% \approx 11.7\%$, or SOFR + roughly 1,170 bps.

Both tranches share the same default probability because the same company is borrowing. Real spreads also include a liquidity and risk premium, so treat this as a framework, not a pricing model.

4.17 What is a PIPE?

What to say

A private investment in public equity: a public company sells shares or convertibles directly to a small group of investors, usually at a discount, instead of through a marketed offering. It is faster and cheaper to execute.

4.18 Describe the IPO process and its pros and cons.

What to say

The company hires banks, prepares audited financials and a prospectus, files with the regulator, markets the offering to investors in a roadshow, sets the price based on demand, and begins trading. Pros: capital, liquidity for existing owners, a currency for acquisitions and employee equity. Cons: cost, disclosure, short-term market pressure and loss of some control.

A big first-day price jump means the company sold shares for less than investors would pay, often called money left on the table. Some discount is normal to compensate new investors for risk.

Bonds, rates and options

Buy-side interviews touch these lightly, but a clear answer shows breadth. Markets-focused roles will go much deeper.

5.1 How are bond prices and yields related?

What to say

Inversely. A bond's price is the present value of its coupons and principal. If market yields rise, those fixed cash flows are discounted at a higher rate and the price falls; the coupons themselves do not change.

A 5% bond when market rates rise to 8% trades below par until its yield reaches about 8%.

5.2 What drives a corporate bond's yield?

What to say

The government bond yield for the same maturity and currency, plus a credit spread for the risk that the company defaults and for liquidity. A BBB bond pays a higher coupon than a AAA bond because of its higher default risk.

5.3 What are duration and convexity?

What to say

Duration measures how sensitive a bond's price is to interest rates; roughly, the percentage price change for a 1 percentage point change in yield. Convexity measures how that sensitivity changes as rates move; bonds with positive convexity gain more when rates fall than they lose when rates rise by the same amount.

A zero-coupon bond's duration equals its maturity, so a five-year zero has a duration of five years. It is more rate-sensitive than a coupon bond of the same maturity, which is why a 30-

year zero is riskier than a 30-year coupon bond, and why you would buy the zero if you expect rates to fall.

5.4 How do you value a perpetual bond?

What to say

Divide the annual coupon by the required yield. A perpetual bond paying \$1,000 a year at a 10% yield is worth \$10,000. A perpetual zero-coupon bond is worth nothing, because it never pays anything.

5.5 What does the yield curve show?

What to say

Yields on government bonds across maturities. It normally slopes upward because investors want extra return for lending longer. An inverted curve, with short rates above long rates, suggests markets expect rates to fall, often because of a slowdown.

Three classic explanations: expectations theory (long rates reflect expected short rates), liquidity preference (investors demand a premium for longer maturities), and market segmentation (different investors dominate different maturities).

5.6 Inflation data came in low, but bond prices fell. Why?

What to say

Bonds price in expected future inflation and interest rates, not last month's data. Something else may have raised those expectations, such as strong growth data, central bank comments or heavy government borrowing.

5.7 Why does inflation hurt lenders?

What to say

Fixed-rate lenders receive fixed payments whose real value falls as prices rise. A 7% loan earns a 5% real return when inflation is 2%, but only 4% when inflation rises to 3%.

5.8 What drives an option's value?

What to say

The Black-Scholes inputs: the underlying price, the strike price, time to expiry, volatility, the risk-free interest rate and dividends. Higher volatility and more time increase the value of both calls and puts. Higher interest rates increase call values and reduce put values. Dividends reduce call values and increase put values.

5.9 What is put-call parity?

What to say

For European options with the same strike and expiry on a non-dividend-paying stock, call – put = stock price – present value of the strike. A long call plus cash equal to the discounted strike has the same payoff as a long put plus the stock, so they must cost the same.

5.10 Quick option questions.

- **A put with a \$250 strike expires today and the stock is at \$220.** It is worth \$30, its intrinsic value.
- **A put's strike is below the stock price.** It is out of the money.
- **A call's strike is below the stock price.** It is in the money.
- **Which is worth more, a put on a volatile stock or on a stable one?** The volatile one, all else equal.
- **A December or January call?** January, because more time adds value.
- **When would you sell a call?** When you expect the stock to stay flat or fall, and want to collect the premium.
- **Holding a risky corporate bond is similar to?** Owning a risk-free bond and selling a put on the company's assets: you keep the premium (the extra yield) but bear losses if the company fails.

5.11 What kind of investment has a negative beta?

What to say

One that tends to rise when the market falls: put options on an index, short positions, or inverse funds. Gold is often cited, but its beta has historically been close to zero rather than reliably negative.

5.12 Are markets efficient?

What to say

Large, liquid markets such as major government bonds and large-company stocks are close to efficient: public information is priced in quickly. Smaller, less-covered and emerging markets are less efficient, which is where research and patient capital can earn an edge, legally, through better analysis rather than inside information.

Comps and precedents, in practice

Every analyst spends their first year spreading comparables. Interviewers know that, and they ask about the mechanics rather than the concept.

6.1 How do you choose a comparable set?

What to say

Similar business model first, then similar economics: growth, margins, capital intensity and end markets. Then similar size and geography, because a \$200m company and a \$20bn company in the same sector trade differently. I would start from the company's own peer disclosure, its competitors named in filings, analyst coverage universes and industry classification codes, then cut the list to the five or six that genuinely compare and explain the exclusions.

6.2 What does spreading comps actually involve?

- Pull the latest share count from the cover of the most recent filing and the price as of a set date, then compute diluted equity value with the treasury stock method.
- Build net debt from the balance sheet: debt, finance leases, preferred, non-controlling interests, less cash and equivalents, adjusted for anything debt-like.
- Calculate last-twelve-month figures by taking the last full year, adding the recent stub period and subtracting the same stub a year earlier.
- Calendarise companies with different year ends so every multiple refers to the same twelve months.
- Normalise the metric: strip out one-off gains and charges, and treat leases and capitalised costs consistently.
- Present the median and the mean, plus the range, and say which you rely on and why.

Two mistakes that get noticed: mixing a current share price with a stale share count, and using a metric that includes a one-off gain in the denominator, which makes the company look cheap.

6.3 LTM or forward multiples?

What to say

Forward multiples, where reliable estimates exist, because value depends on future cash flow and because the market prices the next twelve months. Use last-twelve-month multiples for private companies and for precedent transactions, where forward figures are not available, and always state which you are using. A company can look expensive on LTM and cheap on forward if earnings are about to inflect.

6.4 Where do you find precedent transaction data, and what do you check?

What to say

Press releases and merger documents for public targets, the acquirer's filings, and databases for private deals. Check the announcement date, the metric the multiple was based on, whether it was last-twelve-month or forward, whether synergies were included, whether it was a control transaction, and how the market has moved since. A three-year-old multiple from a different rate environment is a data point, not a benchmark.

6.5 How do you present a valuation conclusion?

What to say

A football field chart: a bar for each method showing the range it implies, with the DCF range, the comparable company range, the precedent range, and often an LBO floor and the 52-week trading range. Then a concluded range that overlaps most methods, with one sentence on which method you weighted and why.

6.6 What is a control premium, and what is a minority discount?

What to say

A control premium is the amount above the market price paid to acquire control, because the buyer gains the ability to direct cash flows and capture synergies. A minority discount is the mirror image: a stake without control is worth less per share. Precedent transactions include control premiums; trading comparables do not, which is why the two sets of multiples differ systematically.

Advanced DCF topics

7.1 What is the mid-year convention?

What to say

Discounting each year's cash flow as if it arrives in the middle of the year rather than at the end, using periods of 0.5, 1.5, 2.5 and so on. It is more realistic, since cash arrives through the year, and it raises the valuation slightly. Be consistent with the terminal value: if cash flows use mid-year periods, the terminal value is usually discounted at the final mid-year period or adjusted explicitly.

7.2 How do you handle a valuation date part-way through a year?

What to say

Discount only the remaining cash flow of the current year, pro-rated for the months left, then full years after that. This is the stub period. The same discipline applies in an LBO closing mid-year.

7.3 How do you treat net operating losses in a DCF?

What to say

Two acceptable approaches. Either model the cash tax directly, applying the NOL against taxable income subject to any annual limit, which changes free cash flow year by year; or value the business at a full tax rate and add the present value of the tax savings separately as a non-operating asset. Do not do both.

7.4 How do you normalise capex and working capital in the projection?

What to say

Capex should trend towards a level consistent with maintaining and growing the asset base: in a steady state, roughly depreciation plus growth capex. If the company has under-invested, the projection should include catch-up spending. Working capital should be modelled on days consistent with history, not held flat, because a growing business absorbs cash.

A common error: a terminal year with growth of 3% but capex equal to depreciation and no working capital investment. Growth is not free.

7.5 How do you sanity-check a terminal value?

What to say

Three checks. What share of total enterprise value is terminal value: above about 75% means the answer rests on assumptions beyond the forecast. What exit multiple does the perpetuity growth method imply, and is it credible for the sector. What growth rate does the exit multiple method imply, and is it below long-run nominal GDP growth in that currency.

7.6 How do you value a company in a high-inflation, high-rate emerging market?

What to say

Keep everything in one currency and be consistent about inflation. If you model in local currency, project nominal cash flows including local inflation and discount at a local nominal cost of capital built from a local risk-free rate. If you model in dollars, translate at forward rates that reflect the inflation differential and use a dollar discount rate with a country risk premium. Mixing a dollar discount rate with nominal local cash flows is the single most common error in African valuation work.

7.7 What is a country risk premium, and how is it estimated?

What to say

An addition to the cost of equity for the extra risk of operating in a specific country. The common approaches are the sovereign credit spread of the country's hard-currency bonds over a benchmark, sometimes scaled up for the higher volatility of equities relative to bonds, or published country risk premium estimates. Apply it based on where the company earns its cash flows, not where it is listed.

7.8 Are there other premiums or adjustments to the cost of equity?

What to say

A size premium is often added for small companies, on the evidence that they have historically earned more than beta alone predicts. Some practitioners add a company-specific premium for concentration or key-person risk. Both are judgemental, so state them explicitly rather than burying them in beta, and show the valuation with and without.

7.9 What is adjusted present value?

What to say

Valuing the business as if it were all-equity financed, then adding the present value of financing effects, mainly the interest tax shield, less the expected cost of financial distress. It is the cleaner method when leverage changes materially over time, which is exactly the situation where WACC's assumption of a constant capital structure breaks down.

7.10 When would you use a sum-of-the-parts valuation?

What to say

When divisions have genuinely different economics and comparable sets: a conglomerate, a telecom with a mobile money business, a bank with an insurance arm. Value each with its own method and peers, add them, then subtract net debt and an allowance for head office costs and any holding company discount.

Capital structure theory

Asked more often than candidates expect, particularly by interviewers who studied finance formally. Short, precise answers work best.

8.1 What do Modigliani and Miller say about capital structure?

What to say

In a world without taxes, bankruptcy costs or information problems, capital structure does not affect firm value: the value of the business depends on its assets, and using more debt simply reallocates the same cash flows and raises the cost of equity to offset the cheaper debt. Once you add corporate taxes and the deductibility of interest, value rises with leverage by the present value of the tax shield.

8.2 So why doesn't every company use 90% debt?

What to say

Because of the costs of financial distress: higher borrowing costs, lost customers and suppliers, managers forced to make short-term decisions, restricted investment, and eventually the direct costs of default. The trade-off theory says there is an optimal level where the marginal tax benefit equals the marginal distress cost. It sits lower for businesses with volatile cash flows and intangible assets, and higher for stable, asset-backed ones.

8.3 What is the pecking order theory?

What to say

Companies prefer internal funds first, then debt, then equity last, because issuing equity signals to the market that management thinks the shares are expensive. It explains why profitable companies often carry little debt: they simply have not needed outside money.

8.4 How does leverage affect WACC in practice?

What to say

WACC typically falls as cheap, tax-deductible debt replaces equity, reaches a minimum, then rises as distress risk pushes up the cost of both debt and equity. The curve is shallow near the bottom, which is why in practice companies target a rating or a leverage range rather than a precise optimum.

8.5 Why might a company target a credit rating rather than a leverage ratio?

What to say

Because the rating determines access to the bond market, the cost of funding, and in some cases the willingness of customers to sign long contracts. Falling below investment grade can force some investors to sell and can trigger contractual consequences, so companies manage to the threshold rather than to a theoretical optimum.

8.6 Does dividend policy affect value?

What to say

In theory, no: paying a dividend simply moves value from the share price to the shareholder's pocket. In practice it matters through taxes, signalling, and the discipline it imposes on management's use of cash. A company that pays out too much and underinvests destroys value, and so does one that hoards cash it cannot invest well.

8.7 What is the agency cost of debt, and of equity?

What to say

Agency costs of equity arise when managers spend shareholders' money on empire building or comfort rather than returns; debt disciplines that by forcing cash out as interest. Agency costs of debt run the other way: a highly leveraged company's shareholders have an incentive to take excessive risk, since they capture the upside while lenders bear the downside, which is why covenants exist.

Quick-fire bank

Question	Answer
Two companies are identical except one has more debt. Which has the higher equity value?	Neither necessarily: the leveraged one has a higher cost of equity and less equity value at the same enterprise value, plus a tax shield benefit.
Which is higher, unlevered or levered beta?	Levered, because debt adds risk to equity holders.
If a company issues debt and buys back stock, what happens to EPS?	Usually rises if the earnings yield exceeds the after-tax cost of debt, while risk rises too.
Why is the cost of equity higher than the cost of debt?	Equity is residual: no contractual payments and last in liquidation, so investors demand more.
Does a share buyback change enterprise value?	No, in theory: cash falls and equity value falls by the same amount, so enterprise value is unchanged.
What happens to WACC if the tax rate rises?	WACC falls slightly, because the interest tax shield is worth more.
What is the equity risk premium?	The extra return investors require for holding equities rather than risk-free bonds.
Why use market values rather than book values in WACC?	Because investors' required returns relate to what they could sell the securities for today, not historical cost.
What does a negative net debt company imply for EV/EBITDA?	Enterprise value is below equity value, so the multiple looks lower than the equity valuation implies.
Why do high-growth companies trade on revenue multiples?	Because earnings are negative or unrepresentative; the market prices the revenue it expects to become profit later.
How does a rise in interest rates affect valuations?	Discount rates rise, so present values fall, and the effect is largest for long-duration assets whose cash flows are far in the future.

What is a liquidity discount?	A reduction in value for shares that cannot be sold quickly, applied to private companies and thinly traded stocks.
Which is more reliable, a DCF of a utility or of a software start-up?	The utility: contracted, regulated cash flows are forecastable, so the model is not carried entirely by terminal value.
What does EV/EBIT capture that EV/EBITDA misses?	The cost of using capital assets, which matters when comparing capital-intensive companies with asset-light ones.
If free cash flow is negative, can the company still be valuable?	Yes, if the spending builds assets or customers that generate cash later at a return above the cost of capital.
How would you value a company with volatile commodity-linked earnings?	Use mid-cycle or normalised earnings, show the valuation across a price deck, and rely less on a single-point DCF.

Test yourself

Answer each one out loud before checking.

#	Question
1	A company has 200m shares at \$15, \$1bn of debt and \$400m of cash. What is its enterprise value?
2	The same company has \$400m of EBITDA. What is its EV/EBITDA?
3	Risk-free rate 5%, beta 0.8, equity risk premium 6%. What is the cost of equity?
4	Final-year free cash flow is \$50m, WACC 9%, growth 2%. What is the terminal value?
5	100 shares at \$20, 20 options with a \$10 strike. How many diluted shares?
6	A company earns \$30m EBITDA and \$20m levered free cash flow. It was bought for \$300m with \$100m of debt. Two years later, with no EBITDA growth, what exit multiple returns the original equity?
7	A growing company's working capital rises by \$15m. What happens to unlevered free cash flow?
8	Why would you use price to book for a bank rather than EV/EBITDA?
9	If rates rise, which falls more in price: a 10-year zero-coupon bond or a 10-year 6% coupon bond?
10	A company with \$5bn in equity value says its stock rose 15% last year. The market rose 20% and the stock's beta is 1. Did it do well?

ANSWERS

Answers

#	Answer
1	Equity value \$3bn + debt \$1bn - cash \$0.4bn = \$3.6bn.
2	$\$3.6\text{bn} \div \$400\text{m} = 9.0\text{x}$.
3	$5\% + 0.8 \times 6\% = 9.8\%$.
4	$\$50\text{m} \times 1.02 \div 7\% = \$729\text{m}$ (to the nearest million).
5	20 new shares; proceeds of \$200 buy back 10 shares at \$20. Diluted shares = 110.
6	Equity invested was \$200m. After two years, \$40m of free cash flow has repaid debt to \$60m. Enterprise value must be \$260m, or 8.7x EBITDA.
7	It falls by \$15m.
8	For a bank, debt is an operating input and interest is part of revenue, so enterprise value and EBITDA are not meaningful. Book equity is closely tied to the regulatory capital that drives what a bank can earn.
9	The zero-coupon bond. It has a longer duration because all its cash arrives at maturity.
10	No. With a beta of 1, it should have matched the market's 20%, so it underperformed by about 5 points on a risk-adjusted basis.

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