

PRIVATE EQUITY INTERVIEW PREPARATION

The Paper LBO Playbook

A hand-solved system for the most common technical exercise in private equity interviews - sources and uses, debt paydown, exit math, and the explanation the interviewer is actually grading.

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The exercise that decides the offer

Every private equity process ends with the same test. Most candidates fail it for the same reasons.

A paper LBO is a simplified leveraged buyout analysis performed entirely without Excel, a calculator, or a phone. The interviewer gives you a handful of assumptions about a hypothetical company - revenue, margin, purchase multiple, leverage, growth, hold period - and asks you to calculate the returns to a private equity sponsor. You work on a blank sheet of paper, a whiteboard, or out loud. Ten to fifteen minutes later, you state a MOIC and an IRR and explain where they came from.

USING THE EXAMPLES

These are fictional practice cases. Follow each case's timing, tax, interest and cash-sweep assumptions. Where cash moves before exit, calculate returns from the actual cash-flow sequence.

It is the single most common technical exercise in private equity interviews, and it has spread: growth equity funds, credit funds, and an increasing number of investment banking superdays now use some version of it. If you are recruiting for the 2027 associate class - or for a PE analyst seat straight out of undergrad - you will face one.

10-15	5	6	0
MINUTES ALLOTTED	STEPS IN THE FRAMEWORK	NUMBERS YOU MUST PRODUCE	CALCULATORS ALLOWED

Why firms still use it

Paper LBOs survive because they simulate a real skill. A partner evaluating a teaser does not open Excel - they do a back-of-the-envelope calculation in the margin and decide in five minutes whether the deal deserves a model. The paper LBO tests whether you can do the same. Specifically, it reveals four things:

- 01 **Conceptual understanding.** Anyone can populate a pre-built model. Solving by hand forces you to know how debt, cash flow, and valuation actually connect to produce a return.
- 02 **Mental math under pressure.** If you cannot take 8% of \$150 million in your head, you will struggle in a live deal environment - and the interviewer knows it.
- 03 **Communication.** You must narrate your thinking as you go, exactly as you would when a partner challenges your assumptions across a table.
- 04 **Excel dependence.** Many banking analysts can build an LBO template without understanding it. The paper LBO is the filter that separates the two groups.

A self-practice scorecard

Use these five dimensions for self-practice. The suggested weights are an editorial rubric, not an employer scorecard or a survey of interviewers. Adjust the exercise to any instructions you receive.

DIMENSION	WEIGHT	WHAT IT LOOKS LIKE
Structure	30%	You state a roadmap up front and follow it step by step
Technical accuracy	25%	Correct formulas; ending debt (not entry debt) subtracted at exit
Mental math	20%	Quick, accurate arithmetic; sensible rounding, stated out loud
Communication	15%	You narrate each calculation and check in at each step
Composure	10%	You catch and correct your own errors without unraveling

USE THE PRACTICE RUBRIC

In this practice rubric, structure, technical accuracy and mental math carry 75% of the available points. Track the error you made and repeat the exercise after correcting it. The score is not an estimate of your hiring prospects.

Notice what is *not* on the scorecard: decimal-point precision. Getting 19.3% instead of 19.4% costs you nothing. What kills candidates is conceptual errors - calculating interest on the wrong balance, forgetting to add fees to the equity check, subtracting entry debt at exit. Those suggest you do not understand the machine, and no amount of polish recovers from that.

A HARD TRUTH

Most candidates fail paper LBOs not because the math is hard - it is rarely more than multiplication and division - but because they have never done one under a clock. The arithmetic panics them, the structure collapses, and they start guessing. Preparation is the entire game.

What makes this playbook different

Most LBO guides fail in one of four ways: they are too theoretical (concept without method), too brief (five pages cannot prepare you for follow-up questions), too Excel-centric (useless in a room with no computer), or they contain no practice problems. This playbook is built specifically for the paper format.

Every concept is taught with mental math in mind, every section includes hand-worked examples with the arithmetic shown, and the ten practice problems progress from an eight-minute warm-up to a full multi-event case study - each followed by a note on what the interviewer is actually listening for as you solve.

How to use this playbook

Three reading plans, depending on how much runway you have.

If you have four or more weeks

- 01 **Week 1 - Fundamentals.** Read Part 01 thoroughly, including the terminology chapter; every term you don't know is a tripwire in a live interview. Work every example with a pen and paper, not just in your head.
- 02 **Week 2 - The framework.** Memorize the 5-step framework in Part 02 until you can recite it cold. Practice each step in isolation before combining them. Complete Problems 1-3.
- 03 **Week 3 - Returns and mental math.** Parts 03 and 04 are your competitive edge; most candidates wing the IRR conversion and lose points they didn't need to lose. Complete Problems 4-7.
- 04 **Week 4 - Advanced and strategy.** Work Problems 8-10, read Part 06 for the mid-hold events, and study Part 07 carefully. Deliver at least two full problems out loud, timed.

If you have one to two weeks

Focus exclusively on the 5-step framework (Part 02) and the practice problems (Part 05). Skim the fundamentals only where something is unclear - doing problems teaches faster than reading theory. Complete at least five problems under timed conditions, and memorize the three IRR anchors in Part 03: 2.0x over five years is 15%, 2.5x is 20%, 3.0x is 25%.

If your interview is tomorrow

- Memorize the 5-step framework and the opening script in the next chapter.
- Review the MOIC-to-IRR cheat sheet (Part 03) and the formula page in the Appendix.
- Work Problem 1 and Problem 2 completely, by hand, tonight.
- Read "Red flags and recovery moves" in Part 07 - knowing how to recover matters more than one more practice rep.
- Sleep. You will not learn new material in 24 hours, but you can protect what you know.

PRACTICE PROTOCOL

Always practice with a pen and blank paper, timed, with no calculator and no phone. After each problem: check every line against the solution, identify the exact step where any error entered, and redo the problem from scratch the next day. Repetition under interview conditions is the only preparation that transfers.

Q.01 How many paper LBOs should I do before an interview? CANDIDATES ASK

Ten to fifteen, with repeats counting. The goal is not exposure to every variant - it is making the base mechanics automatic so your working memory is free for the twist the interviewer adds. Candidates who have done Problems 1-5 three times each outperform candidates who did twenty problems once, sloppily.

INTRODUCTION • 0.3

The 10-minute solving system

Every paper LBO reduces to six numbers, produced in a fixed order. This page is the map for the whole book.

Interviewers vary the assumptions endlessly - margin expansion, add-ons, dividend recaps - but the solve is always the same spine. You are producing six numbers, in order, and each one depends only on the ones before it:

#	NUMBER	HOW YOU GET IT	FRAMEWORK STEP
1	Entry equity	Purchase EV + fees – debt raised	Steps 1-2
2	Projected EBITDA	Revenue growth × margin, year by year	Step 3
3	Debt paydown	Cumulative free cash flow over the hold	Step 4
4	Exit equity	Exit EBITDA × exit multiple – ending debt	Step 5
5	MOIC	Exit equity ÷ entry equity	Step 5
6	IRR	Convert MOIC using the anchor table	Step 5

THE SPINE OF EVERY PAPER LBO

Entry Equity = Purchase EV + Fees - Debt

Exit Equity = Exit EBITDA × Exit Multiple - Ending Debt

MOIC = Exit Equity ÷ Entry Equity

IRR ≈ MOIC^(1/years) - 1

The clock

In a 30-minute interview you typically get 10-15 minutes for the exercise itself. Budget it before you start - the most common failure mode is spending seven minutes on the operating model and rushing the returns, which are the only numbers the interviewer actually cares about.

PHASE	TIME	WHAT YOU'RE DOING
Open + confirm assumptions	1-2 min	State the roadmap; read back the inputs
Entry math + sources & uses	2-3 min	EV, debt, entry equity
Operating model	3-4 min	Revenue → EBITDA → FCF for each year
Debt schedule	2 min	Roll the balance forward, year by year
Exit + returns	1-2 min	Exit equity, MOIC, IRR
Summary	30 sec	Two sentences: the numbers and the drivers

How to open

The first thirty seconds set the grade. State the framework before you touch a number - it signals organization, and it buys you thinking time while you write the assumptions down.

"I'll walk through this in five steps. First, entry assumptions. Second, a sources and uses table to get the purchase price and equity check. Third, the operating model - revenue, EBITDA, and free cash flow. Fourth, debt paydown. And fifth, exit value and returns. Let me confirm the assumptions: \$100 million of revenue, 20% EBITDA margin, a 10x entry multiple, 5x leverage, 8% interest, 5% growth, and a five-year hold at the same exit multiple. Did I capture everything?"

DO THIS

Narrate your math as you go: "Twenty of EBITDA at ten times is 200 of enterprise value." Silence reads as uncertainty even when the math is right - and narration lets the interviewer redirect you early if you've misheard an assumption, instead of at minute nine.

The rest of this book builds each step in depth, then drills the whole system through ten problems. By the time you finish Problem 10, this page should feel less like a map and more like muscle memory.

PART 01

The Fundamentals

Everything in a paper LBO reduces to one question: how does sponsor equity at entry become sponsor equity at exit? This part builds that intuition layer by layer - the transaction, the capital structure, the vocabulary, and the cash flow engine.

- 1.1 What a leveraged buyout actually is
- 1.2 The capital structure, layer by layer
- 1.3 Key terminology
- 1.4 Sources & uses deep dive
- 1.5 The income statement for LBOs
- 1.6 Free cash flow in an LBO

1.1 • FUNDAMENTALS

What a leveraged buyout actually is

The mechanics are simple. The judgment about when they work is what interviewers are testing.

A leveraged buyout is the acquisition of a company financed largely with borrowed money, where the acquired company's own cash flows service and repay the debt. The target's assets and cash flows are the collateral. As debt shrinks over the hold period, the sponsor's equity claim on the same enterprise grows - that transfer from lenders to owners is the engine of private equity returns.

The basic LBO economics

Strip away the jargon and an LBO is three moves:

- 01 **Purchase.** A PE firm buys a company for \$500 million, writing a \$200 million equity check and borrowing \$300 million from banks and credit funds. The company is now highly leveraged.
- 02 **Operation.** Over roughly five years the company generates cash. That cash pays interest and, crucially, repays principal. By year five the \$300 million of debt might be down to \$100 million.
- 03 **Exit.** The firm sells the company for \$700 million. It repays the remaining \$100 million of debt and keeps \$600 million. The \$200 million check became \$600 million - a 3.0x return.

THE RETURN FORMULA

Exit Equity = Exit Enterprise Value - Ending Debt

MOIC = Exit Equity ÷ Entry Equity

IRR = $\text{MOIC}^{(1/\text{Years})} - 1$

Why leverage works

Both columns below buy and sell the same company at the same prices. The only difference is who finances the purchase.

	ALL CASH	LBO (60% DEBT)
Purchase price	\$500M	\$500M
Equity invested	\$500M	\$200M
Debt at entry	-	\$300M
Exit enterprise value (year 5)	\$700M	\$700M
Ending debt	-	\$100M
Equity proceeds	\$700M	\$600M
Profit	\$200M	\$400M
MOIC	1.4x	3.0x

The \$300 million of debt let the sponsor control a \$500 million asset with \$200 million of capital. Same company, same prices - more than double the return. That is the whole point of the "L" in LBO.

THE DOUBLE-EDGED SWORD

Leverage amplifies losses exactly as it amplifies gains. In an all-cash deal, a 20% decline in value is a 20% loss. In a deal financed 80/20 with debt, a 20% decline in enterprise value wipes out 100% of the equity. This is why lenders size debt off cash flow coverage, not sponsor appetite.

The four sources of value creation

Interviewers ask "what drives returns in an LBO?" constantly. There are four levers, and knowing their rough contribution - and their reliability - is the difference between a memorized answer and an informed one.

- 01 **Operational improvement.** Revenue growth and margin expansion increase EBITDA. Attribute the dollar gain using a fixed multiple before separately measuring any multiple change.
- 02 **Deleveraging.** Cash available after operations, interest and reinvestment repays principal. Its contribution depends on the actual schedule; it is not a fixed percentage of return.
- 03 **Multiple expansion (15-25%).** Exiting at a richer multiple than entry. The least controllable lever; disciplined firms underwrite deals assuming exit at the entry multiple and treat expansion as gravy.
- 04 **Financial engineering (5-10%).** Refinancings, dividend recaps, capital structure optimization. Real but small, and interviewers discount candidates who lead with it.

Q.02 Why not finance the whole deal with debt? CORE PRACTICE

Lenders assess repayment capacity, security and downside as well as leverage. A debt-to-EBITDA ratio alone cannot establish a sustainable debt amount. Model interest, principal, working capital and reinvestment, then test whether liquidity survives a weaker operating case.

THE PE PARTNER'S PERSPECTIVE

When a partner evaluates a deal, she focuses on deleveraging and operational improvement because those are controllable. A good LBO works even if the exit multiple equals the entry multiple. If a deal only pencils with multiple expansion, it isn't underwritable - it's a market-timing bet wearing an LBO costume.

The capital structure, layer by layer

Every layer of an LBO balance sheet, priced at current market levels.

Every LBO has a capital structure - the specific stack of debt and equity that finances the acquisition. It determines interest cost, the cash available for paydown, and ultimately returns. In a paper LBO you'll usually be handed one blended debt figure, but understanding the full stack lets you ask intelligent questions and handle the multi-tranche problems (see Problem 9).

LAYER	× EBITDA	ILLUSTRATIVE PRICING	KEY TERMS
Revolving credit facility	0.5-1.0x	SOFR + 200-300 bps	Undrawn at close; working capital backstop
Term Loan A	1.0-2.0x	SOFR + 225-300 bps	Amortizing; 5-7 year maturity; bank-held
Term Loan B	2.0-3.5x	SOFR + 325-400 bps	Bullet repayment; 6-7 years; institutional
Unitranche (private credit)	4.0-5.5x	SOFR + 450-550 bps	Single tranche replacing TLB + junior debt
High yield bonds	1.0-2.0x	7-9.5% fixed	7-10 year maturity; larger deals
Mezzanine / subordinated	0.5-1.5x	11-14%, often part PIK	Equity kickers possible; last debt in line
Sponsor equity	3.5-6.0x	Targets 20-25% IRR	The residual; first loss, last paid

2026 UPDATE

For a floating-rate loan, all-in cash interest is the applicable benchmark plus contractual spread, subject to any floor. Hypothetically, a 4% benchmark and 350 basis-point spread give 7.5%. Use the prompt's rate and do not treat this example as a current quote. A unitranche can combine senior and junior financing in one facility; availability and terms vary by borrower and market.

How to think about each layer

Revolver. A corporate credit card: available for working capital swings, typically undrawn at close. Ignore it in a paper LBO unless the interviewer raises it.

Term Loan A. Senior bank debt that amortizes - scheduled principal payments each year. Banks like getting their money back gradually. In paper LBOs, TLA is usually folded into a single debt number.

Term Loan B. The workhorse of syndicated LBO debt. Non-amortizing ("bullet") principal due at maturity, which maximizes cash flow available for optional paydown. When a paper LBO says "assume 100% of free cash flow sweeps to debt," it is describing TLB-style debt.

Unitranche. A single private-credit facility that blends senior and junior risk into one instrument. Dominant in middle-market LBOs since the mid-2020s - worth name-checking in interviews with any firm that uses direct lenders.

High yield bonds. Fixed-rate notes sold to institutional investors. More expensive than bank debt but longer-dated with looser covenants. Common in large-cap deals.

Mezzanine. Subordinated debt between senior debt and equity, at 11-14%, sometimes with warrants or PIK (payment-in-kind) features. Used when the sponsor wants leverage beyond senior capacity.

WORKED EXAMPLE - READING A CAPITAL STRUCTURE

Interviewer: *"The deal is financed with 4.5x senior debt at 7% and 1.5x mezz at 12%."*

Translation: if EBITDA is \$100 million, total debt is \$600 million - \$450 million senior and \$150 million mezzanine. Blended rate: $(\$450M \times 7\% + \$150M \times 12\%) \div \$600M = (\$31.5M + \$18M) \div \$600M = 8.25\%$. Do this conversion immediately; every later step needs dollars, not multiples.

The equity contribution

The sponsor's equity check is always the residual: everything the transaction needs that debt doesn't cover.

EQUITY CONTRIBUTION

$$\text{Equity} = \text{Purchase Enterprise Value} + \text{Transaction Fees} - \text{Debt Raised}$$

Equity is the funding plug after debt, rollover and other sources. If a practice deal uses \$100 debt against \$200 total uses, sponsor equity is \$100, or 50%. The feasible leverage depends on the actual cash flow, lender terms and downside case; do not infer it from a generic market range.

1.3 • FUNDAMENTALS

Key terminology

Interviewers assume fluency. They will not pause to define acronyms mid-problem.

Know these cold before proceeding. Each one is a potential tripwire; together they are the vocabulary of every question that follows.

TERM	DEFINITION	FORMULA / NOTE
Enterprise value (EV)	Total value of the business, all capital providers	Equity Value + Debt – Cash
Equity value	Value belonging to shareholders	EV – Net Debt
EBITDA	Earnings before interest, taxes, depreciation & amortization	Revenue – COGS – OpEx (excl. D&A)
EBIT	Operating income	EBITDA – D&A
Net income	Bottom-line profit	(EBIT – Interest) × (1 – Tax Rate)
Free cash flow (FCF)	Cash available for debt paydown	EBITDA – CapEx – Interest – Taxes (paper LBO form)
Leverage ratio	Debt relative to earnings	Total Debt ÷ EBITDA
Interest coverage	Ability to service interest	EBITDA ÷ Interest Expense
MOIC	Multiple on invested capital	Exit Equity ÷ Entry Equity
IRR	Annualized return, time-weighted	$MOIC^{(1/Years)} - 1$
Entry multiple	EV/EBITDA paid at purchase	Purchase EV ÷ Entry EBITDA
Exit multiple	EV/EBITDA received at sale	Exit EV ÷ Exit EBITDA
Sponsor	The PE firm making the investment	-
Hold period	Years between acquisition and exit	Typically 4-6 years
Platform company	Initial acquisition in a consolidation strategy	-
Add-on acquisition	Smaller acquisition merged into the platform	-
Dividend recap	New debt raised to pay the sponsor a dividend	-
PIK interest	Interest accrued to principal, not paid in cash	Debt grows instead of shrinking