LBO Questions and Answers – Advanced (12 Questions)

223. Tell me about all the different kinds of debt you could use in an LBO and the differences between everything

Chart about the most important types of debt

Debt Type	Revolver	Term Loan A	Term Loan B	Senior Notes	Subordinated Notes	Mezzanine
Interest Rate:	Lowest	Low	Higher	Higher	Higher	Highest
Floating / Fixed?	Floating			Fixed		
Cash Pay?	Yes					Cash / PIK
Tenor:	3-5 years	4-6 years	4-8 years	7-10 years	8-10 years	8-12 years
Amortization:	None	Straight Line	Minimal	Bullet		
Prepayment?	Yes			No		
Investors:	Conservative Banks			HFs, Merchant Banks, Mezzanine Funds		
Seniority	Senior Secured			Senior Unsecured	Senior Subordinated	Equity
Secured?	Yes			Sometimes	No	
Call Protection?	No	Sometimes		Yes		
Covenants:	Maintenance			Incurrence		

Tenor: how many years a loan will be outstanding

Each type of debt is arranged in order of rising interest rates – so a revolver has the lowest interest rate, Term Loan A is slightly higher, B is slightly higher, Senior Notes are higher than Term Loan B, and so on

"Seniority" refers to the order of claims on a company's assets in a bankruptcy – the Senior Secured holders are first in line, followed by Senior Unsecured, Senior Subordinated, and then Equity Investors

"Floating" or "Fixed" Interest Rates: A "floating" interest rate is tied to LIBOR. For example, L + 100 means that the interest rate of the loan is whatever LIBOR is at currently, plus 100 basis points (1.0%). A fixed interest rate, on the other hand, would be 11%. It doesn't "float" with LIBOR or any other rate

Amortization: "straight line" means the company pays off the principal in equal installments each year, while "bullet" means that the entire principal is due at the end of the loan's lifecycle. "Minimal" just means a low percentage of the principal each year, usually in the 1-5% range

Call Protection: Is the company prohibited from "calling back" – paying off or redeeming – the security for a certain period? This is beneficial for investors because they are guaranteed a certain number of interest payments

224. How would an asset write-up or write-down affect an LBO model? Walk me through how you adjust the BS in an LBO model

This is similar to a merger model – you calculate goodwill, other intangibles, and the rest of the write-ups in the same way, and then the BS adjustments (like subtracting cash, adding in capitalized financing fees, writing up assets, wiping out goodwill, adjusting the deferred tax assets/liabilities, adding in new debt, etc.) are almost the same

The key differences:

1. In an LBO model you assume that the existing shareholders' equity is wiped out and replaced by the equity the private equity firm contributes to buy the company. You may also add in preferred stock, management rollover, or rollover from option holders to this number as well depending on what you're assuming for transaction financing
2. In an LBO model you'll usually be adding a lot more tranches of edbt vs what you would see in a merger model
3. In an LBO model you're not combining the two companies' BSs

225. Normally we care about the IRR for the equity investors in an LBO – the PE firm that buys the company – but how do we calculate the IRR for the debt investors?

For the debt investors, you need to calculate the interest and principal payments they receive from the company each year

Then you simply use the IRR function in excel and start with the negative amount of the original debt for Year 0, assume that the interest and principal payments each year are your cash flows and then assume that the remaining debt balance in the final year is your exit value

Most of the time, returns for debt investors will be lower than returns for the equity investors, but if the deal goes poorly or the PE firm can't sell the company for a good price, the reverse could easily be true

You don't calculate IRR until the debt is paid off. This usually happens when the target is sold, and is paid off by the new acquirer. Sometimes the tenor can be paid off pre transaction or post transaction though. We can't calculate IRR until the entire debt is paid

off. You increase or decrease T the length of the debt to reflect this. You adjust the discount rate until the NPV of cash flows is equal to zero. That discount rate is the IRR

226. Why might a private equity firm allot some of a company's new equity in an LBO to a management option pool, and how would this affect the model?

This is done for the same reason you have an earnout in an M&A deal: the PE firm wants to incentivize the management team and keep everyone on board until they exit the investment

The difference is that there's no technical limit on how much management might receive from such an option pool: if they hit it out of the park, maybe they'll all become millionaires

In your LBO model, you would need to calculate a per-share purchase price when the PE firm exits the investment, and then calculate how much of the proceeds go to the management team based on the treasury stock method

An option pool by itself would reduce the PE firm's return, but this is offset by the fact that the company should perform better with this incentive in place

227. Why would you use PIK (payment in kind) debt rather than other types of debt, and how does it affect the debt schedules and the other investments?

You'd use PIK debt because it doesn't require cash interest. Interest instead accrues to the principal

Unlike normal debt, a PIK loan doesn't require the borrower to make cash interest payments – instead, the interest just accrues to the loan principal, which keeps going up over time. A PIK "toggle" allows the company to choose whether to pay the interest in cash or have it accrue to the principal (these have disappeared since the credit crunch)

PIK is more risky than other forms of debt and carries with it a higher interest rate than traditional bank debt or high yield debt

Adding it to the debt schedules is similar to adding high-yield debt with a bullet maturity – except instead of assuming cash interest payments, you assume that the interest accrues to the principal instead

You should then include this interest on the IS, but you need to add back any PIK interest on the CFS bc it's a non cash expense

228. What are some examples of incurrence covenants? Maintenance covenants?

Incurrence covenants:

1. Company cannot take on more than $2 billion of total debt
2. Proceeds from any asset sales must be earmarked to repay debt
3. Company cannot make acquisitions of over $200 million in size
4. Company cannot spend more than $100 million on capex each year

Maintenance covenants:

1. Total debt/EBITDA cannot exceed 3.0x
2. Senior debt/EBITDA cannot exceed 2.0x
3. (total cash payable debt + capitalized leases)/EBITDAR cannot exceed 4.0x
4. EBITDA/interest expense cannot fall below 5.0x
5. EBITDA/cash interest expense cannot fall below 3.0x
6. (EBITDA – capex)/interest expense cannot fall below 2.0x
7. Debt/EBITDA cannot exceed a certain multiple and EBITDA/Interest cannot fall below a certain multiple

229. Just like a normal M&A deal, you can structure an LBO either as a stock purchase or as an asset purchase. Can you also use section 338(h)(10) election?

In most cases, no – bc one of the requirements for section 338(h)(10) is that the buyer must be a C corporation. Most private equity firms are organized as LLCs or limited partnerships, and when they acquire companies in an LBO, they create an LLC shell company that acquires the company on paper

No the buyer has to be a C corporation

230. Walk me through how you calculate optional repayments on debt in an LBO model

You can only pay off the revolver and term loans (bank loans) because they have a prepayment option. Debt waterfall

First, note that you only look at optional repayments for revolvers and term loans – high yield debt doesn't have a prepayment option, so effectively it's always $0

First, you check how much cash flow you have available based on you beginning cash balance, minimum cash balance, cash flow available for debt repayment from the cash flow statement, and how much you use to make mandatory debt repayments

Then, if you've used your revolver at all you pay off the maximum amount that you can with the cash flow you have available

Next, for term loan A you assume that you pay off the maximum you can, taking into account that you've lost any cash flow you used to pay down the revolver. You also need to take into account that you might have paid off some of term loan A's principal as part of the mandatory repayments

Finally, you do the same thing for term loan B, subtracting from the cash flow available for debt repayment what you've already used up on the revolver and term loan A. And just like term loan A, you need to take into account any mandatory repayments you've made so that you don't pay off more than the entire term loan B balance

The formulas here get very messy and depend on how your model is set up, but this is the basic idea for optional debt repayment

231. Explain how a revolver is used in an LBO model

Used if mandatory debt repayment exceeds cash available, like a credit card

A revolver is used when the cash required for your mandatory debt repayments exceeds the cash flow you have available to repay them

The formula is: revolver borrowing = MAX(0, total mandatory debt repayment – cash flow available to repay debt)

The revolver starts off undrawn, meaning that you don't acvutally borrow money and don't accrtue a balance unless you need it – similar to how credit cards work

You add any required revolver borrowing to your running total for cash flow available for debt repayment before you calculate mandatory and optional debt repayments

Within the debt repayments themselves, you assume that any revolver borrowing from previous years is paid off first with excess cash flow before you pay off any term loans

232. How would you adjust the income statement in an LBO model?

The most common adjustments listed:

1. Cost savings: often you assume the PE firm cuts costs by laying off employees, which could affect COGS, operating expenses or both
2. New depreciation expense: this comes form any pp&e write-ups in the transaction
3. New amortization expense: this includes both the amortization from written-up intangibles and from capitalized financing fees
4. Interest expense on LBO debt: you need to include both cash cand PIK interest here

5. Sponsor management fees: sometimes PE firms charge a management fee to a company to account for the time and effort they spend managing it
6. Common stock dividend: although private companies again don't pay dividends to shareholders, they could pay out a dividend recap to the PE investors
7. Preferred stock dividend: If preferred stock is used as a form of financing in the transaction, you need to account for preferred stock dividends on the IS

Cost savings and new depreciation/amortization hit the operating income line. Interest expense and sponsor management fees hit pre-tax income. And you need to subtract the dividend items form you NI number

233. In an LBO model, is it possible for debt investors to get a higher return than the PE firm? What does it tell us about the company we're modeling?

Yes and it happens more commonly than you'd expect. Rem high-yield debt investors often get interest rates of 10-15% or more – which effectively guarantees an IRR in that range for them

So no matter what happens to the company or the market, that debt gets repaid and the debt investors get the interest payments

But if the median EBITDA multiples contract, or the company fails to grow or actually shrinks – in these cases the PE firm could easily get an IRR below what the debt investors get

234. Most of the time, increased leverage means an increased IRR. Explain how increasing the leverage could reduce the IRR

This scenario is admittedly rare, but it could happen if the increase leverage increases interest payments or debt repayments to very high levels, preventing the company from using its cash flow for other purposes

Sometimes in LBO models, increasing the leverage increases the IRR up to a certain point – but then after that the IRR starts falling as the interest payments or principal repayments become too big

For this scenario, you would need a "perfect storm" of:

1. Relative lack of cash flow / EBITDA growth
2. High interest payments and principal repayments relative to cash flow
3. Relatively high purchase premium or purchase multiple to make it more difficult to get a high IRR in the first place