LBO Paper

In a paper LBO exercise, you will be expected to complete the important steps of a very simplified LBO model with the use of paper and pencil and without the use of a calculator.

A few tips:

(i) Ensure you allocate sufficient time to accurately compute every formula, as any mistake will inevitably affect the returns you calculate

(ii) Construct a clear and straightforward paper LBO using precise steps. The interviewer will request that you explain your thought process and calculations, ensuring you can walk through the reasoning behind each step

(iii) Keep practicing the exercise until you've mastered it flawlessly. Achieving proficiency in paper LBO requires practice, so make sure to run through several paper LBO scenarios before your upcoming private equity interview

Entry Assumptions:

- Private Equity Fund A acquires Target Company A for 15.0x last 12 months (LTM) EBITDA at the end of Year 0. EBITDA at the end of Year 0 is of €9m.
- Acquisition is financed with €50m of debt, the remaining being financed with equity (we assumed there are no fees). Debt is "bullet" (i.e. assume all debt pay-down occurs at the moment of the sale at the end of Year 3). Interest rate on debt is of 10%

Profit & Losses and Cash Flow items:

- Target Company A expects to reach €15m EBITDA in Year 1, €25m in Year 2, and €35m in Year 3
- Capital expenditures are expected to reach €10m in Year 1, €15m in Year 2, and €20m in Year 3
- Depreciation & Amortization is expected to reach €10m in Year 1, €15m in Year 2, and €20m in Year 3
- Working capital is expected to remain stable at €10m over the period
- Assume a constant tax rate of 30%

Exit Assumptions:

- Private Equity Fund A sells Target Company A for 11.0x last 12 months (LTM) EBITDA at the end of Year 3

1) Calculate the purchase price of Target Company A

2) Calculate the debt and equity funding amounts used for the purchase price

3) Calculate the cumulative levered free cash flow (FCF)

4) Calculate ending purchase price (exit value)

5) Calculate returns, i.e. Multiple on Invested Capital ("MOI")

Answers:

1) The purchase price of a company is called Enterprise Value (“EV”). EV = acquisition multiple * acquisition metric. In this case, Target Company A is acquired based on a LTM EBITDA multiple. Thus, EV = 9.0 * EBITDA Year 1 = 15.0 * 9 = €135m

2) Purchase price is financed with equity and debt, so Purchase Price = Equity + Debt. Debt is of €50m, implying that Equity Need is of €135m - €50m = €85m. Note the exercise assume there are no fees

3) Free Cash Flow (“FCF”) = EBITDA – Capex – Interests – Taxes

FCF Year 1 = 15 – 10 – 10%*50 – 0 = 0

FCF Year 2 = 25 – 15 – 10%*50 – 1.5 = 3.5

FCF Year 3 = 40 – 20 – 10%*50 – 4.5 = 10.5

Cumulated FCF = FCF Year 1 + FCF Year 2 + FCF Year 3 = €14.0m

4) As for entry purchase price, exit price is EV = exit multiple * exit metric. In this case Target Company A is sold based on a LTM EBITDA multiple. Thus, EV = 11.0 * EBITDA Year 3 = 11.0 * 40 = €440m

5) At exit, Private Equity Fund A repays debt and keeps equity value and cash generated for itself. Thus, value for Private Equity Fund A at exit is = EV – Debt + Cash = 440 – 50 +14 = €404m

Capital gain for Private Equity Fund A is = total value at exit – equity invested = 404 – 85 = €319m

Multiple on Invested Capital = Value at exit / equity invested = 404 / 85 = 4.8x