

LBO with cash sweep

You are considering taking over a target corporation. You would operate the asset for 5 years and then sell it at an exit trailing EV-to-EBITDA multiple of 11.

Last year's EBITDA was \$100M. You can acquire the property at an entry trailing EV-to-EBITDA multiple of 10. The target has \$50M in excess cash and other non-operating assets on its books. You will need to pay book value for those.

You are going to finance 80% of the overall purchase with a fixed-payment debt with yearly payment, a 20-year term, and a yearly interest rate of 6%.

You expect to grow EBITDA by 1% a year for the next 5 years. You expect CAPEX to be \$20M in years 1 and 3 and no CAPEX otherwise. Linear depreciation deductions are 5% of the purchase price and of any subsequent 5% capital expenditure. Working capital is 25% of EBITDA throughout.

The company's effective income tax rate is 20%. You are not subject to any capital gains taxation so that cash-flows from reversion are untaxed.

- 1) You require a 15% return at the equity level from this investment. What is the NPV of the equity investment?
- 2) Assume now that you can use 50% of any positive FCFE to accelerate the retirement of debt (this is called a cash-sweep). Assuming you make full use of that option, what is your IRR?

Note: Assuming that a fraction of FCFE goes to amortization instead of the more standard fraction of net additions to cash is a shortcut. It will spare us a couple details.