

# Welcome to Wall Street Prep's Financial Modeling Quick Lessons!

This Quick Lesson Primer focuses on Leveraged Buyout (LBO) Modeling. Once you have this LBO primer under your belt, proceed to the “Building a simple LBO Model Video Lesson.” If you’re already comfortable with the intuition of an LBO, you can jump straight to the videos.

## **LBO Intuition: How an LBO is Like Buying a House**

Many of us do an LBO in our own lives without even realizing it when we buy a house. Let’s say you are thinking about buying a house for \$500,000 (\$80,000 down payment, \$420,000 mortgage) that will serve you as an investment property.

### Purchase price assumptions

Converting that into investment-banking-speak, we can define the terms in the simple house purchase described above as follows:

- Enterprise value (transaction value) = Value of the entire property (\$500,000)
- Net debt = \$420,000 mortgage.
- Equity value = \$80,000 down payment

Another way to think about the equity value is to think of it as the residual value after all non-equity claims (in this case, just the \$420,000 loan) are paid off.

### Exit Assumptions

In order to determine whether this investment property is worth purchasing, you have to make some assumptions about what rental income down the road will look like, as well as how much you think you might be able to sell the house for at some point in the future. Accordingly, you assume the following:

- 5 years from now you could sell the house for, say, \$550,000
- 5 years from now, the mortgage you’re carrying on the property will decline from \$420,000 to \$200,000 as cash flows generated through the asset’s operations (rental income) will be sufficient to not only pay interest but to pay down debt principal. Note: With a typical mortgage, it takes 30 years to pay down the mortgage, but with an LBO, debt repayments are typically more aggressive (3-7 years) and accomplished through cost cutting and selling off portions of the business.

This implies that you believe the equity value of the property will increase from the original \$80,000 down payment to \$350,000 (\$550,000 – \$200,000) at exit. Remember, the equity value of your home is the residual value after all non-equity claims are paid off.

### Typical Private Equity Firm Exits

As a property owner your options to monetize your investment are limited to selling the property. Of course, this is just a simple example - private equity investors (the guys doing actual LBOs), on the other hand, can typically monetize their profits by selling the target to another buyer, selling to the public in an IPO, or recapitalizing the business (involves borrowing money again from the banks, which levers up the balance sheet again, and pocketing the proceeds through a dividend.

### **Concept Checker: A Simple LBO Drill**

With some of the basic intuition laid out in the discussion above, let's begin our simple LBO example.:

It is 2009, and a group of financial sponsors are contemplating taking CVS "private." The financial sponsors believe that under investor pressure, CVS' management is under pressure to open too many stores, is spreading itself thin, and is hesitant to slash prices to compete effectively with cheaper drugstores because they'll miss EPS estimates in the short term. Taking CVS private would entail that the company undergo a recapitalization to an initially highly-levered capital structure.

We have identified some pre-deal information and made some transaction and exit year assumptions as follows:

#### **1) What is CVS' assumed purchase price (transaction value) in the exit year?**

Answer: \$120.0

Comment: Our assumption of \$15b in EBITDA and an exit multiple of 8.0x implies a price of \$120b at exit.

#### **2) What is CVS' implied equity value at the exit year?**

Answer: 116.0

Comment: With a debt burden of \$4b at exit, equity value at exit is \$120b less the outstanding debt.

#### **3) What is the maximum initial equity contribution by the sponsors?**

Answer: 55.9

Comment: Since sponsors expect \$116b in equity at exit, they'd be willing to put in no more than \$55.9b at the initial deal date given their 20% required annualized return. Formula:  $\$116/(1+20\%)^4$ .

**4) What is the maximum initial transaction value?**

Answer: 93.4

Comment: Lenders are willing to lend no more than \$37.5b; sponsors are willing to invest no more than \$55.9b. As a result, no more than \$93.4b is available to pay the pre-deal lenders and shareholders.

**5) What is the highest purchase price the sponsors would be willing to pay for each of CVS' shares today?**

Answer: \$55.63

Comment: Of the \$93.4b in funds available to LBO CVS, \$10b goes to pay off pre-deal CVS debt, while the remaining \$83.4 is used to buy the 1.5b CVS shares outstanding. Formula:  $\$83.4/1.5 = \$55.63/\text{share}$ .

**6) Given CVS' market trading level, is an LBO possible under these assumptions?**

Answer: Yes

Comment: Current CVS shares trade for \$30; \$55.63 represents a substantial premium.

## **Building a Simple LBO Model**

With this primer under your belt, watch the LBO video series at:

<http://www.wallstreetprep.com/blog/financial-modeling-quick-lesson-simple-lbo-model>