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MONEY AND INVESTING



**SNEAK PEEK OF WHAT'S
INSIDE:**

4 QUICK & EASY
INSIDER TIPS TO
READING AN LBO
FINANCIAL MODEL

Reading an LBO Model: A HOW TO Guide

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A leveraged buyout model, otherwise known as an LBO, is a valuation model that estimates the current value of a business to a financial buyer. This estimate is based on the business's forecasted financial performance. A simple LBO model uses historical data (such as income statements and balance sheets) of the potential investment company to estimate its future value.

A financial model like an LBO allows for a private equity firm to buy a company with a large debt-to-equity ratio. In this case, debt refers to the amount of money leveraged and/or borrowed. Traditionally, when purchasing an investment company, debt consists of 50-80% of the purchase price. The more debt a firm takes on when acquiring a company produces the potential for a greater return on investment, should the private equity firm choose to exit the deal.

As such, a firm wants to invest in a company with a large amount of debt. To do so, private equity firms use an LBO model to assess the debt and potential return on a particular investment. Utilizing an LBO allows a firm to use the perfect amount of debt which ensures an even greater return and profit with less risk. Once a firm acquires an investment company, the firm uses the company's cash flow to pay down the outstanding debt, yielding greater returns if the firm chooses to exit the investment later on.

LBO models are widely used among the private equity industry. This article will walk you through the important elements of an LBO model to help you utilize this tool for future investments. The following elements are:

1. The Implied EBITDA* Valuation
2. The Internal Rate of Return (IRR)
3. Leveraging Debt
4. Investment Summary

*EBITDA is a widely used acronym (earnings before interest, taxes, depreciation and amortization) that allows outsiders to understand a business's ability to generate cash flow for its owners and for judging a company operating performance

The Big Kahuna

These "transaction terms", seen in the image to the right, are what a financial model is working towards, its end goal; a valuation of a company. These terms include a company's EBITDA, the implied valuation of the company, and the multiple of how many times EBITDA the implied valuation is.

This end goal estimate is based off of certain assumptions that allow for a private equity firm to pay their implied valuation for the company. In this example, the private equity firm will pay \$10 million for 100% of the new company (NewCo).

This implied valuation of \$10 million is the most important part of the transaction terms. This is how much the buyer will pay for the new company. Every component of an LBO contributes towards this valuation and will be explained later throughout this article. This implied valuation is based off of a multiple of EBITDA (in red below). EBITDA multiples reflect the market perceptions of the company's growth prospects. Due to this, two companies with similar prospects and operating characteristics should trade at similar implied multiples.

Every private equity firm comes to a different but similar valuation. All firms take into account how much money they can pay based on how much debt they take on and their investors return on investment.

Transaction Terms	
2018 EBITDA	1,586
Seller's fixed consideration ⁽⁴⁾	\$ 7,000
Seller's fixed consideration ⁽⁴⁾ multipl	4.4x
Implied Valuation	10,000
Implied Multiple	6.3x

\$ in thousands

The Money Maker

"It (IRR) is perhaps the most important number in the private equity world"

As mentioned before, the implied valuation is based off of several components of an LBO. An essential component is the exit multiple, shown in the table below as 6.00x. This EBITDA exit multiple estimates the rate the firm will sell the company at, if they choose to do so in the future. The example below shows the EBITDA multiple for a private equity firm selling this company 3 years after the purchase date. The characteristics of this multiple are similar to the EBITDA multiple above but it is the selling multiple not the buying multiple. In this case, the firm is buying the company at a 6.3x EBITDA multiple and assuming they sell it in 3 years for 6x EBITDA.

Estimating the future EBITDA multiple allows for a firm to estimate the future internal rate of return (IRR) when they sell the company. The IRR is a metric used to calculate the profitability of potential investments by looking at a series of cash flows. This IRR is seen below in percentages and is looked at in three scenarios; flat, base, and a growth rate. Many firms chose to be conservative in their assumptions and like to look at the IRR for the base rate.

The key concept in measuring performance in private equity funds is the IRR. Many private equity firms aim to exit an investment with an IRR of around 20-30%. This percentage number changes as you fidget with the amount of debt, equity, and cash put up on the investment. In this scenario, the base rate yields almost a 50% IRR with an exit multiple of 6.00x, alluding to the potential profitability of this investment. With that high of an IRR percentage, a private equity firm is able to pay more for the company, allowing for a higher implied valuation.

Summary of Projected Investors' Internal Rates of Return (IRR)			
	3 Year IRR		
	----- EBITDA Multiples -----		
	5.50x	6.00x	6.50x
Investors Returns - Prior to Carry Performance-Based Ratchet Adjustment			
Growth	54.15%	57.53%	62.91%
Base	46.20%	49.61%	54.74%
Flat	29.52%	33.09%	37.72%

Senior and Senior Subordinated Debt-to-EBITDA							
Growth	At Close	2.58x	1.87x	1.18x	0.51x	0.01x	0.00x
Base	3.31x	2.71x	2.10x	1.49x	0.87x	0.24x	0.00x
Flat		3.02x	2.69x	2.33x	1.94x	1.51x	1.03x
Debt Service Coverage							
Growth	At Close	2.05x	2.52x	3.27x	4.65x	7.98x	18.65x
Base	1.80x	1.97x	2.31x	2.82x	3.66x	5.31x	10.04x
Flat		1.80x	1.92x	2.08x	2.29x	2.58x	3.00x

Less is More

One of the most important concepts of an LBO model is leveraging money. Hence the name "leveraged buyout", this model is formed around the concept of borrowing money. Borrowing money decreases the amount of risk a private equity firm has in an investment. The figure above shows the rate at which a firm can leverage capital and pay that debt back in a timely fashion.

The senior subordinate Debt-to-EBITDA at close number is the rate at which you can borrow money from the bank. In the private equity industry, the market looks at allowing banks to lend about 3x the EBITDA amount of the potential investment to a private equity firm. This number (roughly 3x EBITDA) is loaned to the private equity firm and paid back with interest.

This interest and the ability to pay back the initial bank loan is forecasted by the debt service coverage number in the figure above. This number is a measure of the cash flow available to pay current debt obligations. This number has to be greater than 1x in order to be able to pay back the debt in a timely manner, often measured annually.

Investment Summary

The investment summary part of an LBO model is the amount of investor money, loaned bank money, and equity that a firm is using to buy the company. Equity is the part of the company that the current owners of management are keeping in order to retain stake in the company. In many situations, if the current owners chose to keep 20% of equity in the company, their equity would be 20% of the valuation estimate. As investors, the bank, and current owners provide capital to invest in the company, they all yield different rates of return on their investment. This can be through interest rates, dividends, or the percentage of ownership when the firm chooses to exit the investment. These different tiers of investors get different rates of return based on the amount of risk they hold in investing their money into this potential deal. This is shown below on the left where the firm is using \$1.2 million of their investor money and borrowing 500k of money from Mezzane investors (bank). The right table shows the 20% "option carry" that is the current owners equity, should they want to retain ownership of the company.

Firm Investment Summary		
Firm Investors	\$ 1,200	30.4%
Mezz	500	12.6%
	0	0.0%
	0	0.0%
	0	0.0%
Total	\$ 1,700	43.0%

Investment Summary			
Firm	\$ 1,700	70.0%	100.0%
Management	0	0.0%	0.0%
		0.0%	0.0%
Firm Carry		20.0%	0.0%
Option Pool		10.0%	0.0%
Total	\$ 1,700	100.0%	100.0%

The Finale

LBO models are intricate financial models that contain many elements that work towards and change the end goal. What a private equity firm will pay for a potential investment is shown in the implied valuation, the big kahuna of an LBO model. The internal rate of return, debt-to-equity ratio, and type of investments used to fund the purchase are just a couple big factors that form the implied valuation a private equity firm comes to for a potential investment.

As you begin to learn more about each separate component, it is helpful to see them together in a complete LBO model to understand how they all contribute to the end goal. A completed LBO model is provided on the last page for your reference.

Please go to wsj.com for more How To's written by Summer Dvorak

