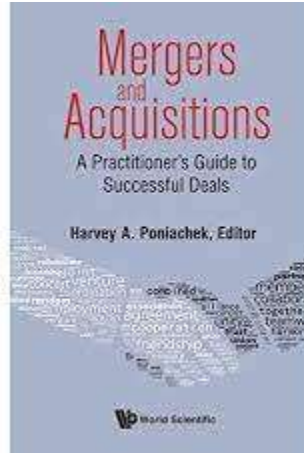


# Mergers and Acquisitions

## A Practitioner's Guide to Successful Deals



### Chapter 11

## **LEVERAGED BUYOUTS (LBOs): The Financial Engineering of Transaction and Evolution of LBOs**

By

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# LEVERAGED BUYOUTS (LBOs)

## 1. INTRODUCTION

### A. Definition & Terms

Since the start of recorded history investors have been borrowing money to achieve their dreams. More than 3,000 years ago, people were borrowing money in Mesopotamia and paying interest. Christopher Columbus borrowed from the Queen of Spain, Isabella, most of the funds required for his transatlantic voyage that discovered America. At the start of the 20th Century, J.P. Morgan raised through debt much of the funding required for the acquisition of Carnegie Steel, which was then combined with other steel companies to form U.S. Steel. With a capitalization of \$1.4 billion<sup>1</sup>, U.S. Steel was the world's most valuable corporation.

A Leveraged Buyout (LBO) is what occurs when an investor, typically a private equity investor (sometimes referred to as a financial sponsor), acquires an entity (which we will call "the Target Company"), using mainly borrowed funds. The Target Company can be a company, a division of a company, a business, or a collection of assets. The investor is typically not personally responsible for paying the debt incurred for the acquisition, nor is he required to add any other capital to support his or her investment; the acquisition debt is therefore described as being "non-recourse" to the investor. The acquisition debt is obtained by issuing bonds or securing a loan and relies on the acquired company for its repayment. The acquisition debt is repaid either from the company's operating cash flows, or from the sale of all or a portion of the company, or from the refinancing of the acquisition debt with new debt that is similarly reliant on the company for its repayment.

The amount of debt used to finance an LBO as a percentage of the purchase price, varies per the financial condition and history of the Target Company's performance, market conditions and the willingness of creditors to extend credit. Typically, the debt portion of a LBO ranges from 50%-80% of the purchase price, but in some cases debt may be as high as 95% of the purchase price. Companies with stable and predictable cash flows that can reliably service debt obligations represent the most attractive LBO candidates. To finance LBOs private-equity firms, issue a combination of syndicated loans and high yield bonds which are supported by the credit strength of the Target Company. The mechanism is described later in this chapter.

### B. History of LBOs

The leveraged buyout boom of the 1980s was spearheaded by several financial sponsors, most notably: KKR, which was founded by Jerome Kohlberg Jr., Henry Kravis, and George Roberts; The Carlyle Group, which was founded by David Rubenstein, William Conway, and Dan D'Aniello; Blackstone, which was founded by Stephan Schwartzman and Peter Peterson; and Apollo, which was founded by Leon Black<sup>2</sup>.

The acquisition of Target Companies via LBOs requires equity funding in addition to debt funding. Financial sponsors would create Limited Partnership (LP) vehicles that the sponsor controlled, which vehicles would raise funding from large pension funds, insurance companies, financial institutions, and high net worth individuals, to finance the equity portion of the acquisitions. The LP vehicles were large enough to provide equity financing for numerous acquisitions, so that the financial sponsor did not need to go into fund raising mode every time they undertook an acquisition. In turn, the LP structure benefitted investors by providing them with diversification across several Target Companies. Today there are more than 6,000 private equity firms (financial sponsors) that undertake LBOs<sup>3</sup>.

In the 1980s the investment bank Drexel Burnham Lambert and the head of its high yield bond business, Michael Milken, played a leading role in establishing the high yield bond market<sup>4</sup>. High yield bonds were an important source of funds for LBOs and provided higher leverage than banks could offer. Bank loans were another cheaper complimentary source of funds for LBOs. Bank loans would typically be underwritten by lead arranger banks, which would then reduce their risk exposure by selling the loan down to other banks. This organized process for attracting other banks to the loan financing was called a loan syndication, and LBOs were important in expanding the loan syndication market.

The signature LBO of the 1980's and 90's was the 1989 \$31.1 billion acquisition of RJR Nabisco by KKR, which was the largest leverage buyout to that time. The LBO was described in the book (and later the movie) "Barbarians at the Gate: The Fall of RJR Nabisco" written by investigative journalists Bryan Burrough and John Helyar<sup>5</sup>.

The Mega Deals of 2005-2007:

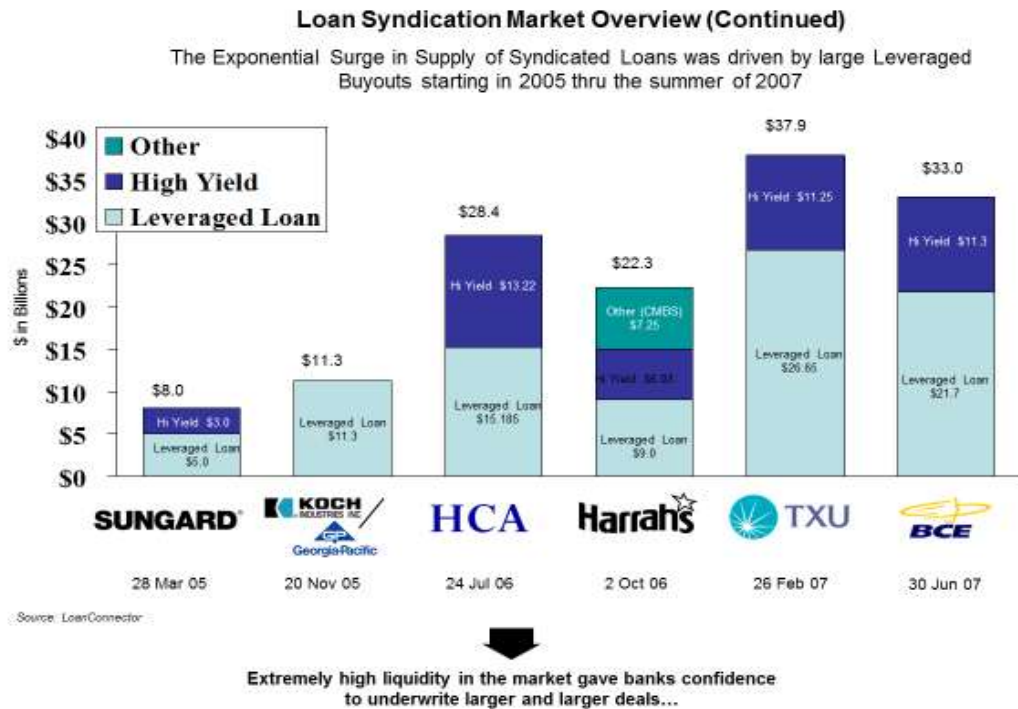
#### 2000s: The Decade of Mega Deals and the Birth of CLOs (2003-2007)



In the mid-2000s a combination of factors set the stage for a second LBO boom. This combination included decreasing interest rates, loosening lending standards, creation of loan funds known as Collateral Loan Obligations (CLOs) – which provided an aggressive

complement to commercial bank loans, and regulatory changes for publicly traded companies (specifically the Sarbanes-Oxley Act). Mega deals included the \$49 billion acquisition of the utility company TXU - the largest ever LBO - which was bought by a consortium of investors including KKR, and large LBOs for companies such as HCA, Harrahs and Sungard. Fig 1 below shows the amount of debt raised to finance these mega deals<sup>6</sup>.

Fig 1



### C. Types of LBO transactions

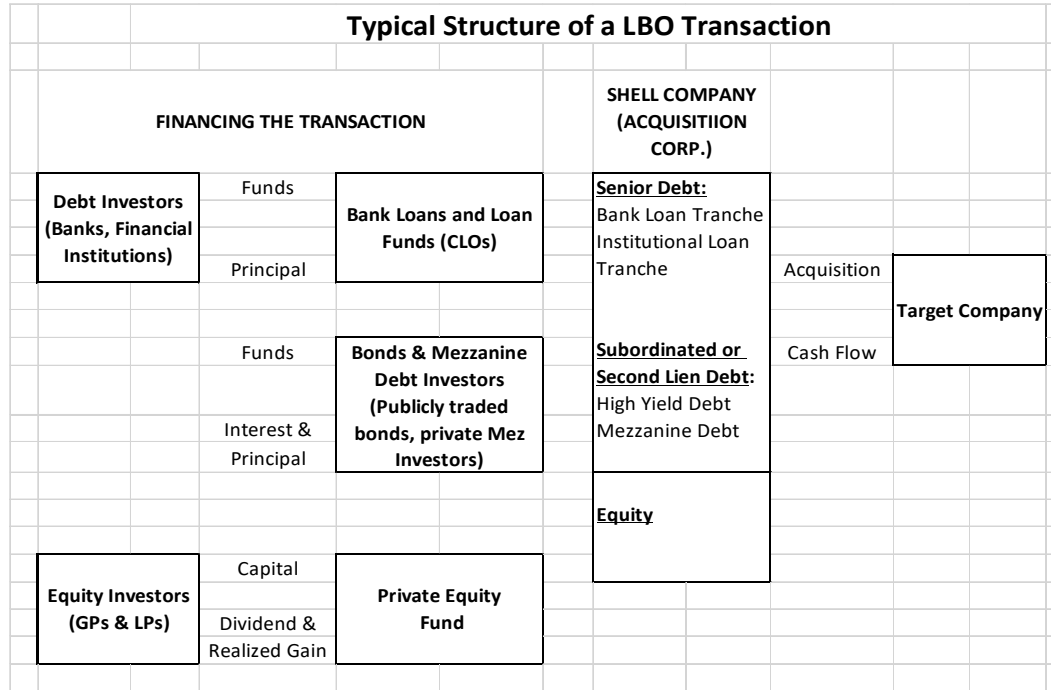
#### i. Public to Private Transactions

For a successful LBO execution, you need the cooperation of multiple parties including the investor (typically a Private Equity firm), a loan arranger (typically a commercial or investment bank) that arranges the acquisition loans, and an investment bank that underwrites the bond debt. These parties are each required to underwrite their portion of the funding at the time that the acquisition bid is made.

A shell company (let's name it Acquisition Corp.) is typically created to serve as the vehicle for the acquisition financing. Acquisition Corp. then tenders for all the shares of the public company, and if it is successful in acquiring a pre-established majority of the shares, it merges with the target company to create the surviving entity ("NewCo"), which will be responsible for paying back the acquisition debt. NewCo's

opening balance sheet reflects the new debt and equity that that was used to finance the acquisition (fig 2), and any old debt and equity that remained after the acquisition.

Fig 2.



**ii. Private to Private Transactions**

Private to private company sales are also referred to as secondary LBOs, and in such sales a private equity firm sells the Target Company to another private equity firm. Like the Public to Private transaction described above, in Private-to-Private transactions the new debt and equity financing is reflected in the opening balance sheet of the surviving entity (let’s call it NewCo) going forward.

Typically, the Target Company’s pre-existing debt is refinanced with new acquisition debt at the time of the company’s change of ownership. This is required because it is normally stipulated in the Loan Agreement governing the pre-existing loan, that upon a “change of control” of the borrower, that the loan will become due and payable. This feature forces the re-financing of the pre-existing loan and serves to prevent the equity investors from being repaid prior to the lenders. There have however been instances where the governing Loan Agreement permitted a change of control without forcing a refinancing of the pre-existing debt. Such Loan Agreements would still however have other controls to safeguard the lenders’ and loan investors’ interests. These safeguards would typically restrict the incurrence of additional debt by the loan obligor, restrict additional liens benefitting other obligors, prohibit certain types of payments (e.g. dividends to the equity) and there may also be loan acceleration triggers if the performance of the obligor materially deteriorates from

its projected levels (these triggers are called financial covenants, of which the most common is based on the borrower's Total Debt / EBITDA ratio – sometimes known as the Leverage Ratio).

### iii. **Management Buyouts Transactions**

When an LBO is led by the existing management it is called a Management Buyout or MBO. (Non-management employees sometimes also participate in MBOs). MBOs are more common in Europe and Asia than the US. In an MBO, management contributes its pre-existing company ownership to the buyout and raises the rest of the financing from other equity co-investors and from bank lenders and bond investors. MBOs can serve as a defensive mechanism that allows existing management to continue running the Target Company, rather than having the company being acquired by external parties which typically bring their own management to the LBO.

A study called “Management Buyouts as a Response to Market Pressure”, written by Andrei Shleifer and Robert W. Vishny suggested that the hostile takeover environment of the 1980's put pressure on existing management to take defensive measurements to keep their jobs<sup>7</sup>. One consequence of these measures is that companies become more efficient. In response to these market pressures, management of large publicly traded companies, like RJR Nabisco in the late 1980s, were pro-actively raising funds to defend against these raiders – basically adding debt to the existing operation by buying back the company's stock and make it almost impossible for takeover raiders to acquire the company. In the RJR Nabisco LBO, Ross Johnson, the company's CEO at the time, was trying to convince his board of directors to buy back some of RJR's shares by using funds from third party friendly investors – called White Knights. Had Ross Johnson been successful, existing management would have continued running RJR Nabisco<sup>8</sup>.

## **D. Tax Advantages of LBOs**

An equity investor that uses leverage to buy a company via an LBO can benefit from the tax deductibility of interest expense from the acquisition debt. The example below (fig 3) shows that adding debt significantly improves the investor's ROA thus making the investment more attractive. This could motivate investors to pay more for the company than they otherwise would.

As an example, let us consider a company that has no debt, a \$10 million book value for its assets and a \$10 million net worth, which generates \$1.5 million p.a. of EBIT. The company's After-tax Income (Net Income) assuming a 33% tax rate, would be \$1 million p.a. Using this Income and Balance Sheet information we can calculate that both the company's Return on Assets and that it's Return on Equity are both 10% p.a.

$$ROA = \frac{\text{Net Income}}{\text{Average Total Assets}} \Rightarrow ROA = \frac{\$1,000,000}{\$10,000,000} = 0.1 \text{ or } 10\%$$

$$ROE = \frac{\text{Return on Income}}{\text{Shareholders' Equity}} \Rightarrow ROE = \frac{\$1,000,000}{\$10,000,000} = 0.1 \text{ or } 10\%$$

Fig 3.

### Leveraged Buyouts – Enhancing Equity Returns

#### Your Business

Income Statement	ASSETS	LIABILITIES:	} ROA = 10% ROE = 10%
EBIT : \$1.5 million Interest Exp.: \$0 million Pretax Income: \$1.5 million Taxes (33%): \$0.5 million Net Income: \$1.0 million	 \$10 million	\$0 (No Debt)  EQUITY: \$10 million	

The offer: \$10mm (10 x Net Income) borrowed \$9 million (90%) at 10%

#### LBO: NewCo

Income Statement	ASSETS	LIABILITIES:	} ROA = 10% ROE = 40%
EBIT: \$1.5 million Interest Exp.: \$0.9 million Pretax Income: \$0.6 million Taxes (33%): \$0.2 million Net Income: \$0.4 million	 \$10 million	\$9 million   EQUITY: \$1 million	

5

Now let us assume, as shown in figure 4, that an acquirer initiates an offer to acquire the company at its book value of \$10 million, which is also equal to 10 times the company's Net Income. Let us assume that this transaction will be funded with 90% debt at the cost of 10% p.a. and with 10% equity.

*Interest Expense* = \$9,000,000 \* 10% = \$900,000 p.a.

In this case NewCo's Income Statement would have EBIT of \$1.5 million p.a. and \$900,000 p.a. of interest expense, which would yield Pre-Tax Income of \$600,000 p.a. and (After-Tax) Net Income of \$400,000 p.a.

Part of the additional interest expense created by the debt is offset (and in a sense subsidized by the tax payers) through a reduction in Income Taxes – this is referred to as a tax shield. In our first example the company had a tax obligation of \$500,000, while in the 2<sup>nd</sup> example NewCo would



only have a tax obligation of approximately \$200,000. Using this new Income and Balance Sheet information we can recalculate ROE as shown below.

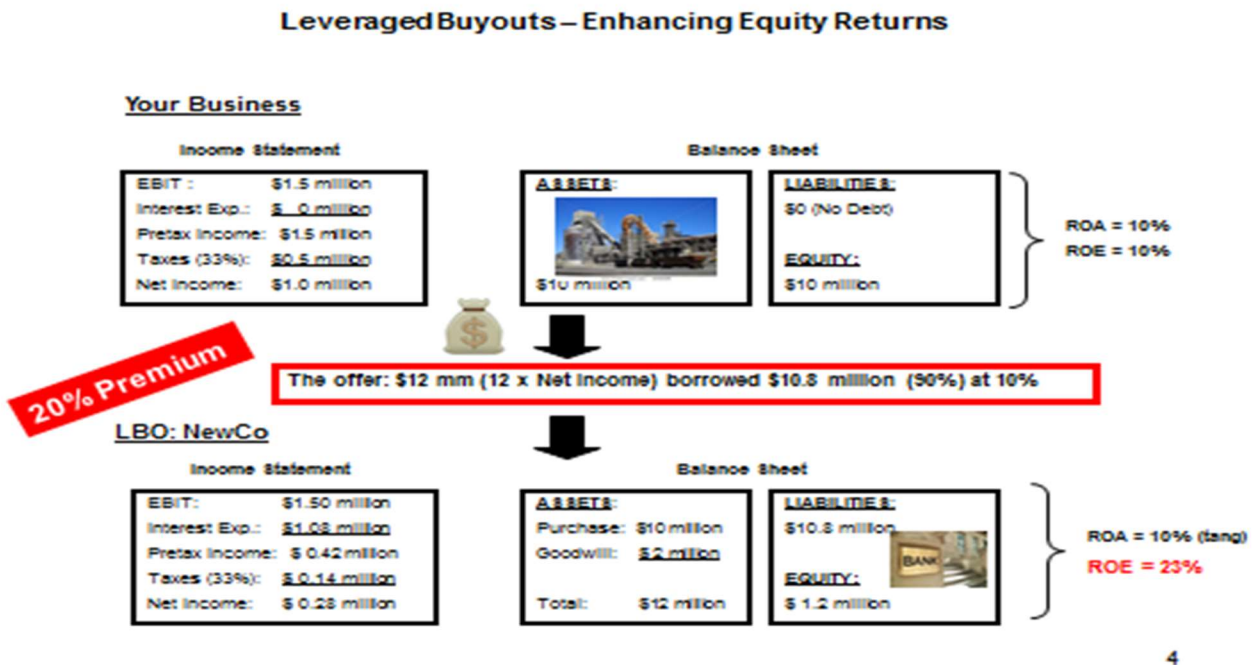
$$ROE = \frac{\text{Return on Income}}{\text{Shareholders' Equity}} \Rightarrow ROE = \frac{\$400,000}{\$1,000,000} = 0.400 \text{ or } 40.00\%$$

This example shows that the incurrence of debt creates a tax advantage for the owners of the company which can increase Shareholders' returns dramatically. Since the equity return has been quadrupled through the use of leverage the investor can afford to pay more for the company and still meet his target returns.

As shown in figure 5 below, let us assume that the acquirer offers to buy the company for \$12 million, or a 20% premium to book value, which equals 12 times the company's Net Income. The acquisition is funded with 90% debt and the cost of debt is 10%.

Due to the leverage and the debt's tax shield, despite the higher purchase price, the resulting ROE is 23.3% p.a. or more than twice the ROE with no debt.

Fig 4



The calculations are as follows:

NewCo's Pretax Income is now \$420,000 as we deduct the interest expense of \$1,080,000

$$\text{Interest Expense} = \$12,000,000 * 90\% * 10\% = \$1,068,000$$

By using the tax rate of 33%, NewCo's tax obligation is \$138,600. After deducting taxes from NewCo's pretax income, we obtain Net Income of \$281,400.

With this new Balance Sheet and Income Statement we can calculate NewCo's ROE at 23% as shown below:

$$ROE = \frac{\text{Return on Income}}{\text{Shareholders' Equity}} \quad \Rightarrow \quad ROE = \frac{\$281,400}{\$1,200,000} = 0.23 \text{ or } 23\%$$

### **Other Tax Advantages from LBOs – historical perspective**

In earlier LBOs various financiers were motivated by tax breaks and loopholes to enhance their return. A few examples from high profile transactions are highlighted below:

- **Singer Company LBO**: In 1987 the Florida financier Paul A. Bilzerian, set out to LBO the Singer Company (known for its sewing machines) which had branched out and purchased several defense and electronics companies. Each of Singer's operations were held in separate subsidiaries. Believing that the sum of the parts was worth more than the value ascribed to the overall company by the market, Mr. Bilzerian wished to break up the company and to sell each of its subsidiaries separate to avoid capital gains tax on the sale of each subsidiary, Mr. Bilzerian separated his financing vehicle (Acquisition Corp.) into a series of subsidiaries (called "mirror subsidiaries") that mirrored Singer's existing subsidiaries, and allocated the acquisition debt to each of the mirror subsidiaries according to the value attributed to each of the existing subsidiaries. Upon the acquisition of Singer, each of the mirror subsidiaries was then merged with the corresponding Singer subsidiary and the mirror debt was assumed by the Singer subsidiary. When the subsidiary's shares were sold by the parent company, the purchaser would need to pay off the assumed debt at the subsidiary, thereby depressing the value of the subsidiary's shares. This reduced the taxable income on the sale, with the effect being the same as if the tax basis of the shares had been written up by the value of the assumed debt. The mirror strategy permitted the subsidiaries to be sold with minimal taxable gains accruing to the parent company. (Despite the success of the tax structure, Bilzerian ended up miscalculating the value of the individual subsidiaries, and the common equity in the acquisition had negative returns)<sup>9</sup>.
- **Congoleum MBO**: Another example of an acquisition creating tax advantages for the buyer was the 1979 MBO of Congoleum Inc., a diversified firm in shipbuilding, flooring, and automotive accessories. The post-acquisition Congoleum was able to write up its assets by \$400MM to reflect the acquisition price. This resulted in a significant incremental tax shield for post-acquisition Congoleum, which materially enhanced the

attractiveness of the LBO. In recent years however the tax code regarding asset step ups has changed and is less favorable to LBOs<sup>10</sup>.

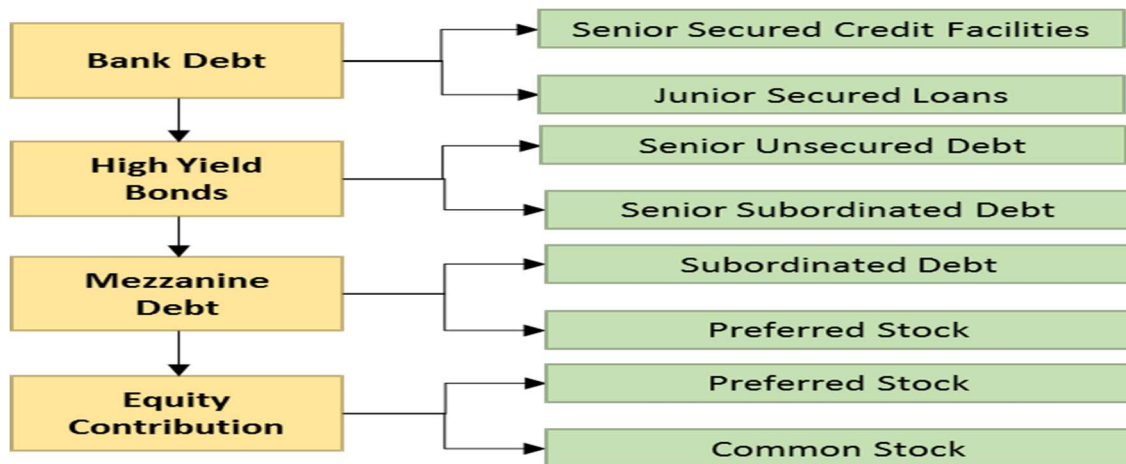
- Fairfield Gear Manufacturing – Private LBO:** Another example from the earlier LBOs is the 1989 acquisition of Fairfield Gear Manufacturing, an Indiana based company. Peter Joseph, Angus Littlejohn and Paul Levy founded a private equity firm called JLL which aimed to take advantage of a \$29mm Net Operating Loss Tax Carryforward (NOL) that they inherited from Rexene Corporation. JLL intended to use the \$29mm NOL by buying profitable companies such as Fairfield Gear Manufacturing Company (MGC) and sheltering its income by combining its tax returns with those of the company with the NOLs. JLL additionally arranged for the acquired company to sign a tax sharing agreement with JLL, which reflected in the tax benefits from the NOLs being paid by post-acquisition to JLL – basically instead of sending a check to the IRS, MGC would send the check to JLL<sup>11</sup>

Despite new, tighter rules in calculating taxes, including restrictions on capital gain tax shields, NOL carryovers and the goodwill tax deduction, new LBOs continue to benefit from elements of the tax code, the most important of which is the tax deductibility of interest expense.

### E. Capital Markets

Fig 5

The Debt Hierarchy – “Waterfall”



#### **Bank Debt and Institutional Floating Rate Loans:**

Bank Debt is the primary source of capital for a Leveraged Buyout transaction and provides a lower cost of capital than other debt tranches used to finance a transaction. Bank Debt, also mentioned as Senior Debt, typically consists of a revolving credit facility (a type of loan that can be paid and re-borrowed multiple times until its maturity - whose main purpose is to finance the

company's working capital), and one or more term loans which are only borrowed at the time of acquisition and cannot be re-borrowed after repayment. The revolving credit facility can be structured as an asset-based lending facility or as a cash flow revolver. The bank debt's interest rate is usually based on a floating benchmark (usually LIBOR) plus a spread that reflects the borrower's credit quality and market receptivity.

**A. Revolving Credit Facility or Working Capital Facility (RC)**

This is the typical "Revolver" that we come across on a company's Balance Sheet. It works similarly to the credit cards we use every day. It is a line of credit that is provided by a bank or a group of banks (aka "syndicate") to the borrowing company and has a specific withdrawal limit as well as a specified maturity date. Most companies use revolvers as an immediate injection of liquidity to support increasing capital expenditures and working capital needs. In a Leveraged Buyout, the revolver is usually priced at the same level as the term loan. In a typical Leveraged Buyout transaction, the maturity of the revolver (often referred to as its "tenor") is approximately five years or one to two years shorter than the term loan. A typical Revolver includes financial covenants (performance based financial ratios) such as the Leverage Test described above. To minimize the risk that the borrower is unable to fulfill its future interest and principal payment obligations to its banks, covenants can also be established to restrict the borrower's ability to engage in further acquisitions, to raise debt, to make dividend payments to the equity holders and to control how the borrower applies its fund. For example, a covenant may be requiring the borrower to apply the net proceeds of an asset sale to pay down debt.



Source: Intralinks

## B. Asset Based Lending Facility (ABL)

This is type of revolver is used by companies that have a strong and liquid asset base. The lender is given priority over the borrower's current assets, and additionally the lender may obtain a second priority lien (after the Term Loan lenders) over the borrower's other collateral. The amount that can be drawn under an ABL facility is governed by advance rates against the pledged assets. For example, Accounts Receivable, which are a particularly liquid current asset, are sometimes given an advance rate of 85%. Because ABLs are supported by liquid collateral they are lower risk loans, and they command a lower interest rate than traditional revolvers (which rely upon the company's future cash flows for debt repayment).

## C. Term or Leveraged Loans (TL)

Term loans are typical secured bank loans. They have a principal amortization schedule stipulating when debt repayments must be made, and a stated final maturity date for the loan. In contrast to Revolvers, once a term loan's principal is repaid it cannot be re-borrowed. Because term loans, like revolving loans, typically have priority security over the company's assets (other than those pledged to support the ABL facility), term loans are less expensive than other forms of debt that have lower seniority. There are two types of term loans as explained below.

Amortizing Term Loans – “A” type Loans (TLAs): The amortizing term loans have a specific principal repayment schedule. This type of debt is usually considered less risky because in the ordinary course of business its scheduled repayments ensure that it gets repaid first (usually from the borrower’s cashflows), and it is therefore outstanding for shorter periods of time and subject to less company risk than most other types of debt. In Leveraged Buyouts TLAs usually have the same or a similar maturity date as the Revolver. Because TLAs have lower risk than most other debt (other than ABLs) they have lower costs than most other debt.

Institutional Term Loans – “B” type Loans (TLBs): In Leveraged Buyouts Institutional Term Loans provide for only nominal amortization prior to the loan’s maturity, which makes it easier for the obligor to service these loans. Because they have a longer and more rear loaded amortization schedule than TLAs, TLBs command a higher interest rate, which makes TLBs particularly attractive to institutional investors. TLBs share in the collateral of the company alongside the TLAs and the RC Revolvers, which reduces their credit risk relative to unsecured debt, and results in their having a lower interest rate than such debt. TLBs’ ease of debt service and lower interest rate (relative to high yield debt) makes term loans attractive to borrowers. The depth of the institutional investor market for TLBs and their attractiveness to borrowers, combine to make this source of capital one of the largest or the largest for LBOs.

TLBs typically have a maturity of seven years versus the five-to-six-year maturity typical for TLAs. Most Term Loan Bs are structured without financial performance covenants (“covi-lite”), which gives more flexibility to the Private Equity investor and management to operate the company through economic downturns.

#### **D. Second Lien Loans (Junior Secured Term Loans)**

Second Lien Loans have a floating interest rate and a second priority lien on the borrower’s assets, after the Revolvers and TLAs and TLBs, which affects when the Second Lien Loans get repaid when the borrower sells assets or if goes into bankruptcy. If a company liquidates its assets or goes into bankruptcy it must first repay the afore- mentioned senior secured loans and then repay its junior secured loans – this sequence of repayments is also referred to as “waterfall”. The Second Lien Term Loans provide more flexibility and involve greater risk than the Senior Secured debt instruments and thus, they require a higher interest rate. Junior secured loans became particularly popular as a Leveraged Buyout financing option during the mid-2000s credit buildup in the U.S. Junior secured loans are often used in smaller LBOs that are too small and illiquid to support the issuance of High Yield or Subordinated Debt (which is described below).

### **High Yield or Subordinated Debt**

High yield bonds, also known as Subordinated Notes or “Junk” bonds, have lower credit ratings than the typical Corporate, Municipal and Treasury bonds. High yield bonds are typically unsecured, and they offer capital for the LBO that is junior to the senior secured lenders. This capital is typically used to increase leverage beyond the levels that banks and other senior secured institutional investors are willing to offer.

Like every bond, these notes obligate the issuer to make semi-annual interest payments to the bondholders and to repay the principal, in full, at the bond’s maturity date (usually 8 to 10 years from issuance). High yield bonds do not require principal amortization prior to their maturity date and are thereby said to have a “bullet repayment”. High yield bonds are non-investment grade securities (BB+ and below) which pay a higher interest rate to the bondholders as a compensation for the higher risk involved.

High yield bonds are priced at issuance, and they bear a fixed rate interest which is calculated based on the Treasury bonds of corresponding maturity, plus a credit spread. Generally, the yield of these bonds is 150-300 basis points higher than the yield of the investment-grade bonds. High yield bonds are typically sold to institutional buyers privately and they get registered with the SEC within one year of their issuance to be traded in an open market.

In some cases, these High-Yield bonds are structured as Paid-in-Kind (PIK) bonds. These types of bonds provide the issuer greater flexibility because they allow the issuer to pay the interest to the bondholder in either cash, or in additional bonds, or a combination of the two. When payment is made in the form of additional bonds, this can trigger an increase in the bonds’ applicable interest rate.

### **Mezzanine Debt**

Mezzanine debt refers to the financing layer between Senior debt and Equity. As previously shown, this type of debt ranks last in the hierarchy of debt available for financing. Like subordinated debt, mezzanine debt can be used to achieve a higher level of leverage than was attainable using senior debt and equity alone. This type of debt bears much more risk than typical bank debt and is often issued under unique terms to meet the issuer’s financing needs as well as to compensate the investors for providing this capital. Mezzanine debt holders are typically insurance companies, Special Purpose Vehicles (SPV) that invest in Mezzanine loans and hedge funds. Mezzanine debt interest payments are often structured to provide additional flexibility to the issuer and to compensate the lenders accordingly, with payments sometimes including PIK like notes or warrants which can be converted into the issuer’s common stock.

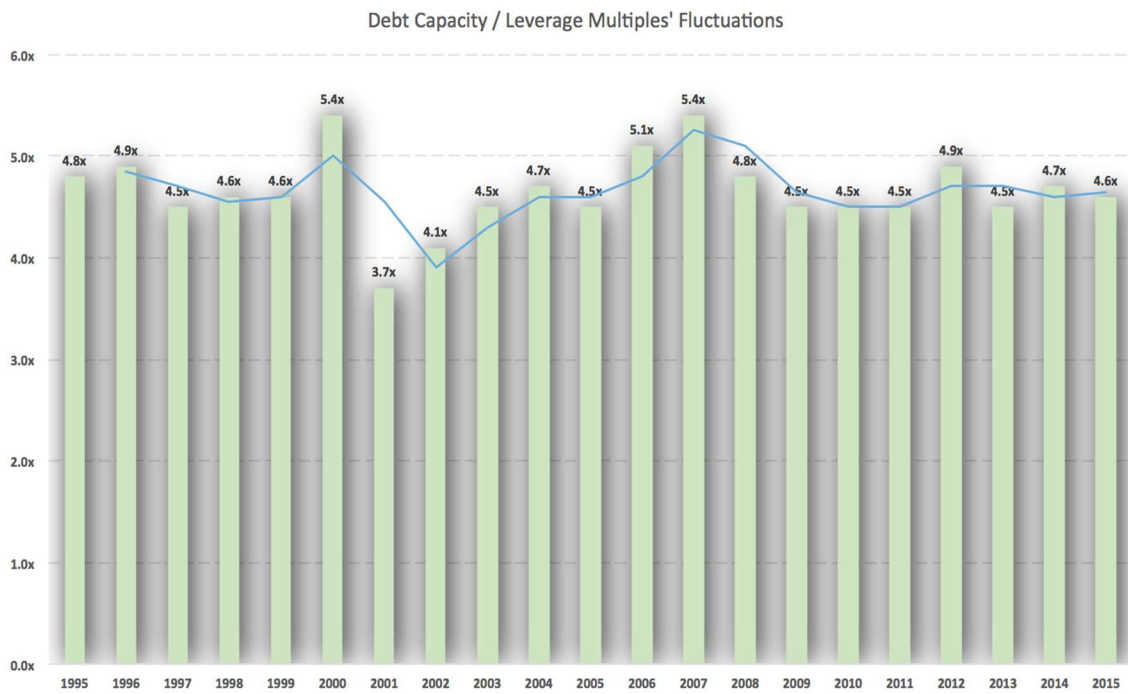
### **Equity Contribution**

The balance of the financing will come from equity, primarily in the form of cash from the sponsor. In cases where existing management participates in the LBO, they would be expected to roll over their pre-acquisition equity into the new financing. In the years of the mega deals (early to mid-

2000s) due to the size of the large LBOs a consortium of private equity sponsors was required for the largest acquisitions. Since the Equity is at the bottom of the “waterfall”, it provides a cushion for bank loan lenders and bondholders in the event the company’s enterprise value (EV) declines. In other words, if the equity contribution is 30%, in the event of a company bankruptcy and sale, the EV would need to decline by more 30% before the bondholders and then the banks would be forced to incur a loss.

The amount debt or equity in each transaction depends on the company’s debt capacity which is described later in this chapter. The table below shows that the average leverage ratio of Debt/EBITDA at the time of acquisition has varied over time, depending on market sentiment regarding economic prospects and comfort levels with leverage:

**Determination of Debt Capacity driven by Capital Markets (Fig 7)**



Source: LCD Standard & Poors

As discussed later in the chapter, the amount and type of debt that an LBO can incur is primarily based on the reliability of the borrower’s cash flows and its ability to repay debt. A common formula for describing leverage is Total Debt to EBITDA (Earnings Before Interest Taxes Depreciation and Amortization – which is referred to as the Total Leverage Ratio. The chart above shows the historical average levels accepted by the debt investors or banks who structured these LBOs. These levels are also set by demand in the capital markets. As discussed below, Debt Capacity, the company’s ability to repay debt as scheduled.



## 2. WHAT MAKES A GOOD LEVERAGED BUYOUT CANDIDATE

The key criteria in determining whether a company is a good for sponsor acquisition via an LBO candidate are as follows:

### 1. Strong and Stable Cash Flows

Maybe the most important criteria to be met is that the LBO candidate should generate strong and stable cash flows in the future to support the great burden of leverage in its capital structure. The acquired company should demonstrate that throughout the life of the Buyout it can support the scheduled interest and principal debt repayments. For example, if a company has a stable business model and predictable positive cash flows, it is both easier and safer to forecast and stress test its cashflow results under various market scenarios.

### 2. Growth Potential

Most successful Leveraged Buyout candidates have the potential for future growth, to be achieved either organically or through add-on acquisitions. Growth is important as it increases the company's revenues and provides for economies of scale and higher operating margins, which leads to greater cash flows. Increasing cash flows increases the company's value (referred to as the Enterprise Value or Terminal Value) which in enhances the sponsor's returns from the LBO.

### 3. Low Capital Expenditures

Another important criterion is the company's Capital Expenditures. Low Capital Expenditure (CapEx) requirements are an indirect way of boosting the company's cash flows. There are two types of Capital Expenditures, maintenance, and growth. Maintenance Capex is a necessary cost to continue the business' operations in a sustainable manner. Growth Capex is an optional cash outflow that occurs when the company acquires additional assets to enhance its growth and efficiency. Higher Capital Expenditure companies tend to be structured with lower initial leverage or Debt/EBITDA, as Capex is an item that will reduce the company's cash flow. In many LBOs Debt/(EBITDA-Capex) is the metric used to structure the appropriate level of debt in the initial LBO structure.

### 4. Strong Asset Base

In most LBOs a high level of leverage is used because debt is the cheapest source of capital. To provide additional safety and certainty of repayment to the lenders, the sponsor uses the Acquisition Target's assets as collateral for the loans, and a strong asset base can enhance the amount of debt that a company can incur. While company cash-flows are the primary source of debt repayment (for at least for the TLAs), asset liquidation proceeds represent a fallback source of proceeds for debt repayment and is a form of insurance for the secured lenders.

## 5. Strong Management Team

An LBO involves a lot of risk because of the leverage incurred. A strong management team is required to ensure that the company can operate efficiently under the pressure of its high leverage, and that operating miss-steps are kept to a minimum. Strong management can help increase the company's cash inflows and reduce its expenses, and in many cases private equity firms replace the company's existing management with new management that they are familiar and comfortable with, that is given big incentives to make the company perform. Private Equity firms have been known to use the same management team at different companies over time if they have strong track record.

## 3. THE CONCEPT OF LEVERAGE AND ITS ADVANTAGES FOR ENHANCING EQUITY RETURNS

### A. Return Expectation

The main goal of every business is to maximize its Shareholders' wealth. The expected Return on Equity (ROE) is mostly captured by the firm's ability to generate profits through revenue growth and cost reduction. Additional value, and thus higher returns, in a Leveraged Buyout is created through a combination of enterprise value growth and debt repayment. The acquirer should ensure that the target company can payback all the debt borrowed plus interest payments on a timely manner, which makes positive and relatively stable future cash flows one of the most important criteria for a desirable LBO. A strong asset base to provide a secondary source of repayment to the lenders is another desirable characteristic for the Target Company.

The goal for a Leveraged Buyout Transaction is to provide its sponsors and equity investors with high equity returns to compensate them for their risk. A traditional leveraged buyout transaction lasts three to five years, where the last year is the exit year (the year of the company's sale). A typical equity return expectation by the LBO investors is 20% to 25% IRR<sup>12</sup>. This is calculated based on the investment's holding period and the entry and exit values for the equity. (Note that cashflows during the LBO are typically dedicated to the repayment of debt and that they do not go to the equity. These cashflows do however reduce the company's indebtedness, and thereby increase the value allocable to the equity upon the company's sale).

- Returns generated from Enterprise Value growth:

A Financial Sponsor can generate returns by growing the Enterprise Value of the acquired business. During the investment horizon cash-flow that is not used to service debt or for maintenance capex can be reinvested to enhance the company's EBITDA. EBITDA growth which can be achieved organically (growth from within the existing business), or by acquisitions. The value of the business can also be increased if due to improved prospects, or due to a market environment where business

valuations are increased, the company is rewarded by being valued at a higher multiple of its EBITDA.

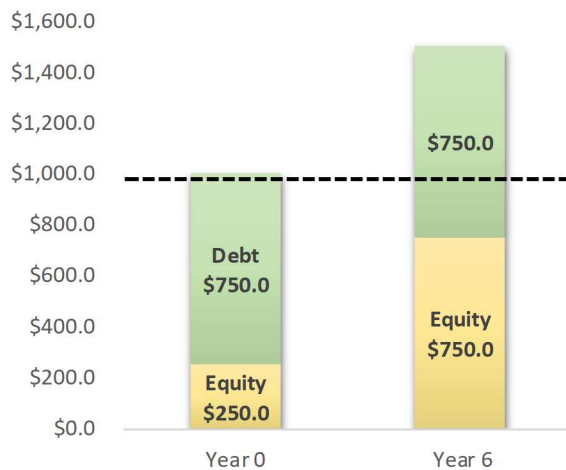
**Case 1:**

Company X is bought for \$1 billion and is sold for \$1.5 billion 6 years later. Company debt stays flat during the LBO.

<b>Assumptions - Enterprise Value Growth</b>	
Purchase Price	\$1,000.0
Equity Contribution %	<b>25.0%</b>
Equity Contribution \$	\$250.0
Debt Contribution %	<b>75.0%</b>
Debt Contribution \$	\$750.0
Debt Repayment	\$0.0
Remaining Debt	\$750.0
Exit Price Year	6
	\$1,500.0

<b>Return Calculation</b>	
Equity Contribution	\$250.0
Incremental Enterprise Value	500.0
Plus Debt Repayment	0.0
<b>Equity Value at Exit Year</b>	<b>\$750.0</b>
<b>IRR</b>	<b>20.1%</b>
<b>Multiple of Initial Capital (MOIC)</b>	<b>3.0x</b>

**Enterprise Value Growth Scenario**



We assume that the company, after fulfilling its debt interest obligations, instead of using its remaining cash flow to pay down debt, that the company re-invests the excess cash flow in the business to generate additional EBITDA. At the exit year the acquirer realizes a 50% growth in the company’s Enterprise Value as the company is now sold for \$1.5 billion. Although the company carries the same level of debt that it incurred upon its acquisition, the company achieved EBITDA growth which was reflected in the company’s Enterprise Value. This growth translates to an equity return of 20.1% p.a. over the 6-year investment period, which corresponds to a cash return of 3.0x the initial invested capital (referred to as 3x MOIC – where MOIC means Multiple of Initial Capital).

- Returns generated from Debt Repayment:

A Financial Sponsor can also generate returns by using the company's cash flow to pay down debt during the investment horizon. Debt repayment causes the debt to represent a smaller portion of the company's enterprise value, and for the equity value to increase by a corresponding amount.

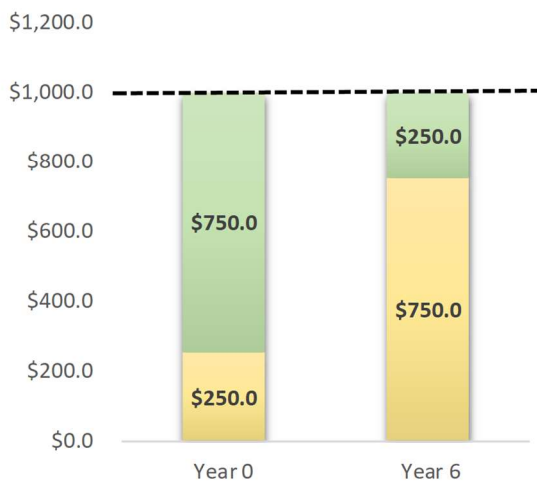
**Case 2:**

Company Y is bought for \$1 billion and 6 years later it is sold at the same price. During the intervening period the acquired pursued a strategy of increasing the company's equity value by decreasing its debt.

Assumptions - Debt Repayment		
Purchase Price		\$1,000.0
Equity Contribution %		<b>25.0%</b>
Equity Contribution \$		\$250.0
Debt Contribution %		<b>75.0%</b>
Debt Contribution \$		\$750.0
Debt Repayment		\$500.0
Remaining Debt		\$250.0
Exit Price Year	6	\$1,000.0

Return Calculation	
Equity Contribution	\$250.0
Incremental Enterprise Value	0.0
Plus Debt Repayment	500.0
<b>Equity Value at Exit Year</b>	<b>\$750.0</b>
<b>IRR</b>	<b>20.1%</b>
<b>Multiple of Initial Capital (MOIC)</b>	<b>3.0x</b>

**Debt Repayment  
Growth Scenario**



Under this scenario, the acquired company generates a cumulative cash flow (after interest payments) of \$500 million dollars. The excess cash flow is used to pay down the debt that was used to finance this acquisition. In this example the company's Enterprise Value remained unchanged through the life of the investment and the company was re-sold for \$1 billion. Due to the debt repayment, the Financial Sponsor's equity value increased from \$250 million to \$750 million, which again provides a 20.1% return on equity as well as a 3.0x multiple of the original capital to the investor at the end of the 6-year investment horizon.

#### Return Realized by Leverage - Financial Engineering

A Financial Sponsor (Private Equity firm) can employ leverage to realize higher returns. The use of leverage in an LBO is beneficial for two major reasons. The use of debt creates a tax shield for the company's earnings due to the tax deductibility of interest expense (as previously discussed). Additionally, because debt is senior to equity, its holders take on less risk and require less compensation than equity investors. As a result, debt is cheaper than equity, and the use of debt increases the equity's IRR provided that the LBO is successful.

Below are two cases of a Leveraged Buyout Transaction. In the first scenario (case 3), the transaction is financed with 25% debt and 75% equity while in the second scenario (case 4), the transaction is financed with 75% debt and 25% equity.

#### **Case 3**

In Case 3, the target company will be purchased for \$1.5 billion with low leverage. We assume that the transaction will be financed with 75% equity and only 25% debt (\$375 million) contributions. From the 5-year analysis we can see that the acquisition will generate a positive steady \$100 million each year and these cash flows were used to pay down principal and interest throughout the life of the investment (assuming no repayment of debt). At the exit year (year 5), we assume that the company will be sold for \$2.0 billion. As the 75% debt contribution, issued at the time of the acquisition, will be paid down throughout the 5-year investment period, the target's equity value will double by the exit year. This financing structure provides a return of 24.5% p.a. to the equity investors (Financial Sponsor) and the initial equity contribution (1.8x MOIC).

Case Assumptions	
Purchase Price	\$1,500.0
Equity Contribution %	75.0%
Debt Contribution %	25.0%
Cost of Debt	8.0%
Cash Flow Before Debt Service (Assuming no Growth)	\$100.0
Tax Rate	40.0%
Exit Sale Year 5	\$2,000.0

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Equity Contribution</b>	<b>(\$1,125.0)</b>					
Beginning Balance of Debt	\$375.0	\$375.0	\$293.0	\$207.1	\$117.0	\$22.6
Cash Flow Before Debt Service (Assuming no Growth)		100.0	100.0	100.0	100.0	100.0
Interest on Debt		(18.0)	(14.1)	(9.9)	(5.6)	(1.1)
Free Cash Flow		82.0	85.9	90.1	94.4	98.9
<b>Total Debt, Ending Balance</b>	<b>\$375.0</b>	<b>\$293.0</b>	<b>\$207.1</b>	<b>\$117.0</b>	<b>\$22.6</b>	<b>\$0.0</b>
<b>Sale Price</b>						\$2,000.0
Less: Total Debt						0.0
<b>Total Equity Value at Exit</b>						<b>\$2,000.0</b>
<b>IRR</b>						<b>12.2%</b>
<b>Multiple of Initial Capital (MOIC)</b>						<b>1.8x</b>

#### Case 4

In this scenario (case 4), we assume that the same transaction is financed with 75% debt and 25% equity contributions. The cost of debt is 8% and is reflected on the debt's interest expense every year. Throughout the life of the investment, we assume that the target will generate a stream of positive steady cash flows of \$75 million which will be used to cover the interest payment. As we previously mentioned, interest expense is tax deductible and for the purpose of this example we assume a tax rate of 40%. The company's earnings are lowered due to the interest payment which leads to lower tax expenses. At the exit year, the target will be sold for \$2.0 billion with an equity value of \$1.3 million. In this case, the equity contribution is much lower than the equity contribution in case 3 which provides the Financial Sponsor with a higher equity value at the exit year. The continuous reduction of debt is converted in equity value which leads to the increase of the equity return for the company's shareholders. Consequently, the calculated internal rate of return is 24.6% and MOIC of 3.0x. As you can see, the equity return in this example is much higher than the one presented on the case 3 because the cost of leverage is lower than the cost of equity due to the tax deductibility of the interest expense.

Case Assumptions	
Purchase Price	\$1,500.0
Equity Contribution %	25.0%
Debt Contribution %	75.0%
Cost of Debt	8.0%
Cash Flow Before Debt Service (Assuming no Growth)	\$100.0
Exit Price Year	5
Tax Rate	40.0%

	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Equity Contribution</b>	<b>(\$375.0)</b>					
Beginning Balance of Debt		\$1,125.0	\$1,079.0	\$1,030.8	\$980.3	\$927.3
Cash Flow Before Debt Service (Assuming no Growth)		100.0	100.0	100.0	100.0	100.0
Interest on Debt		(54.0)	(51.8)	(49.5)	(47.1)	(44.5)
Ending Free Cash Flow		46.0	48.2	50.5	52.9	55.5
<b>Total Debt, Ending Balance</b>	<b>\$1,125.0</b>	<b>\$1,079.0</b>	<b>\$1,030.8</b>	<b>\$980.3</b>	<b>\$927.3</b>	<b>\$871.8</b>
Sale Price						\$2,000.0
Less: Total Debt						(871.8)
<b>Total Equity Value at Exit</b>						<b>\$1,128.2</b>
<b>IRR</b>						<b>24.6%</b>
<b>Multiple of Initial Capital (MOIC)</b>						<b>3.0x</b>

## B. Debt Capacity

Debt Capacity is the amount of financial leverage that the acquired company can support with its future cash flows. Usually, the Purchase and Exit prices are expressed as EBITDA multiples and so is debt capacity. The debt capacity of an acquisition can be determined after taking into consideration market, industry, company, and structural risks associated with the specific target company. In every transaction the debt capacity is important because the acquirer needs to make sure that the company in question can support and maintain a certain amount of debt without the risk of bankruptcy.

Around the 1980s Leveraged Buyouts had a bad reputation in the market mainly because of several overleveraged transactions that were financed with over 90% debt. The interest burden associated with the debt contribution was extremely high and the target companies' annual cash flow streams were not strong enough to fulfill the timely payment obligations, which led to unavoidable bankruptcies.

In the late 1990s and until 2008, the typical financing structure of a Leveraged Buyout transaction consisted of 60%-70% debt and 30%-40% equity. At that time, the levels of leverage and especially the multiples of different debt sources in the transactions varied significantly from today. During the first decade of the 00s, the changes in the fundamental market conditions that encouraged the flourishing of private investment vehicles such as Collateralized Loan Obligations (CLOs), Loan Funds, and Hedge Funds, caused the leverage multiples to increase due to the high investment demand. After 2007, the turmoil in the credit market caused by the subprime mortgage crisis pushed the leverage level down from a

multiple of 6.1x to a multiple less than 5.0x. Therefore, the equity contribution increased from approximately 30% to 40%<sup>13</sup>.

The level of debt available for a financing is largely based on the target company's predicted annual cash flow. Companies with steady and positive cash flows and substantial assets were attractive LBO candidates because they could support higher debt levels and could potentially support a higher debt leverage multiple.

There are three main sources that comprise the debt financing of an LBO transaction. Below are listed all three primary sources of financing. In the financing hierarchy, the instrument on the top is associated with the lowest risk possible and thus with the lowest cost of debt.

### **C. STRUCTURING THE LBO**

They are various steps to structuring an LBO. Investment banks that advise the Private Equity investors typically consider the following:

1. Measuring Debt Capacity – What is the maximum debt banks and bondholders, or mezzanine investors are willing to lend?
2. Building a financial model that demonstrates how the debt will be serviced and how the private equity investor will meet his or hers expected return. The financial model will build top line revenue growth for the Acquisition Target, cost and income margin assumptions, capital expenditure that support the projected growth level, and interest rate assumptions for each type of debt.
3. Build the Equity cash flows including a measurable terminal value and appropriate discount rates.

#### ***Private Company Case Study – Alexandria Hotel:***

To illustrate the above steps in structuring an LBO we assume that a hotel company – Alexandria Hotel – is for sale for \$120 million or 6.0x first year's EBITDA of \$20mm. Additionally the acquirer will fees (to its M&A advisor, debt underwriters and the associated lawyers) equal to 3% of the transaction costs - \$3.6 million - for a total acquisition cost of \$123.6 million. This is shown in Transaction Sources & Uses in Fig 9 below.

The commercial banks will be invited by the sponsor's investment bank advisor to underwrite the senior secured debt for the acquisition. Banks providing these loans are usually the most conservative stakeholders for the LBO transaction. In general, among other parameters, the banks approve loans based on two criteria: 1) Maximum Leverage Ratio and 2) Loan to value. In the case of the Alexandria Hotel company, the banks approved a \$50 million loan based on 2.5x First Year EBITDA (2.5x \$20mm) and 2) Loan to value of approximately of 40% (\$50 million /\$123 million). In this case, the bank is charging floating rate LIBOR +4.0%. Based on the forward-looking LIBOR the average interest rate is around 5.34% p.a., (shown in figure 10).



The next step for the equity holder is to seek Mezzanine or subordinated bond financing. Given the smaller size of the transaction (\$120mm) the Mezzanine market is more suitable, as raising high yield debt from the public markets typically requires a minimum issuance of \$100 million. The Mezzanine facility will also be structured based on the leverage ratio of Debt/EBITDA. In this case, the mezzanine approved a note for up to 4.0x leverage including the bank debt portion. That is translated to a \$30mm Mezzanine tranche – assuming maximum debt of \$80mm based on 4.0x EBITDA leverage (4x \$20mm EBITDA) minus \$50mm of the Bank debt. Since the Mezzanine investors are taking a second position to the banks in rights to payment, the typical Mezzanine interest rate is much higher than the bank loan (4-6% p.a. higher). In the case of Alexandria Hotel, they charged a 9.0% fixed rate for 10 years.

With the debt component of the financing determined at \$80mm, the equity required to provide the remaining balance of the capital was in this case, \$43.6 million (\$123.6mm - \$80mm). At this point the equity ran its projections to determine if the acquisition met its return expectations. One approach for calculating required equity returns is to use the Capital Asset Pricing Model (CAPM). The Beta coefficient in the CAPM calculation is affected by the industry of the obligor. In this case, since the company is privately held, the beta that is used is taken from other comparable publicly traded companies in the hotel sector. Assuming the risk-free interest rate (6 year Treasury) of 1.95%, equity premium of 11.05% and a Beta of 1.633x, the required equity return for the acquisition would be 20% p.a. ( $R_{fr} + (\beta \cdot \text{Premium})$ ) or  $0.0165 + (1.633 \times 0.1105) = 20$  or 20%.

<b>COST OF EQUITY CALCULATION</b>	
<b><math>E (re) = rf + \beta \cdot Pe + e</math></b>	
6-year Treasury Note [ rf ]	1.95%
Beta for Publicly Traded Hotel [ $\beta$ ]	1.633x
Equity Premium [ Pe ]	11.05%
Firm Specific Risk Premium [e]	0.0%
<b>Cost of Equity</b>	<b>20.00%</b>

Since we have all the cost of capital components, we can calculate the after tax Weighted Average Cost of Capital (WACC) for the acquisition at 9.84% p.a. as shown in figure 9 below. The WACC will be used later to determine the value of the firm at exit or Terminal Value. The after-tax Weighted Average of Cost of Debt is also calculated at 4.305% as illustrated below:

Fig 9

TRANSACTION SOURCES & USES							
Sources:	Debt Capacity (EBITDA x)	Amount	% Capital	Expected Return	Expected Return (After Tax)	WACC (After Tax)	EBITDA Multiple
Bank Loan	2.5x	50,000,000	40.5%	5.364%	3.433%	1.39%	2.5x
Mezzanine Note		30,000,000	24.3%	9.000%	5.760%	1.40%	1.5x
Total Debt	4.0x	80,000,000	64.7%			2.79%	4.0x
Equity		43,600,000	35.3%	20.00%	20.00%	7.05%	2.2x
Total Sources		123,600,000	100.0%			9.84%	6.2x
Uses:	1st Year's EBITDA Multiple	Amount	% of Total Uses			WACD = 4.305%	
Purchase Price (EV - including Debt)	6.0x	120,000,000	97.1%				
Transaction Fees & Expenses	3.0%	3,600,000	2.9%			Tax Rate =	36.0%
Total Uses		123,600,000	100.0%				

A major part of the equity analysis is to first determine the target company's debt service obligations. The bank that is financing the senior debt portion of the transaction will provide the company (obligor) the following four terms (often called the Money Terms): 1). The Amount (\$50 million); 2) The Interest (LIBOR + 4.0%); 3) the Tenor (7 years) or Maturity of the loan (2016); and 4) the scheduled principal payments (Yr1: \$3 million, Yr2: \$5million, Yr3: \$5 million, Yr4: \$6 million, Yr5: \$7 million, Yr6: \$9 million, Yr7: \$15 million) The Mezzanine loan is also structured with set loan amount (\$30 million), interest rate (9.0% fixed), tenor (10 years) and scheduled principal payments (one payment at maturity) – see figure 10 below. Adding both the interest and principal payments will provide the total on going debt obligations that the target company is projected to service. For the floating interest payment, the model below (fig 10) assumes that LIBOR will increase by 0.05% or 50 basis points per year for the next 3 years and then by 1.0% in the 4<sup>th</sup> year. Calculating the average senior bank debt interest rate the target will pay by using the IRR approach, the rate is 5.384% p.a.

Fig 10

DEBT ASSUMPTIONS & RETURN ANALYSIS									
Bank Loan Information	Debt IRR	Terms	2010	2011	2012	2013	2014	2015	2016
Amount Outstanding (End of Year)		50,000,000	47,000,000	42,000,000	37,000,000	31,000,000	24,000,000	15,000,000	-
Schedule Principal Payments		7 years	3,000,000	5,000,000	5,000,000	6,000,000	7,000,000	9,000,000	15,000,000
Interest Payment (Calc based on last Year's Outs)		5.36%	2,150,000	2,256,000	2,226,000	2,331,000	1,953,000	1,512,000	945,000
Total Financing Payment	5.364%	(50,000,000)	5,150,000	7,256,000	7,226,000	8,331,000	8,953,000	10,512,000	15,945,000
LIBOR RATE		0.30%	0.30%	0.80%	1.30%	2.30%	2.30%	2.30%	2.30%
LIBOR Rate Increase Assumptions			0.00%	0.50%	0.50%	1.00%	0.00%	0.00%	0.00%
Corporate Bond Information									
Amount Outstanding		30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000	30,000,000
Schedule Principal Payments		10 Years	-	-	-	-	-	-	-
Interest Payment (Calc based on last Year's Outs)		9.00%	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000
Total Financing Payment	9.000%	(30,000,000)	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000	2,700,000
Total Financing			7,850,000	9,956,000	9,926,000	11,031,000	11,653,000	13,212,000	18,645,000
Total Debt Outstanding			77,000,000	72,000,000	67,000,000	61,000,000	54,000,000	45,000,000	30,000,000

Using various assumptions to predict the revenue and revenue growth, cost of revenue and operating expenses as percentage of revenue one can project the EBITDA levels of the company for the next 6 years. Also, calculating the depreciation, capital expenditures and working capital as percentage of revenues, as well as taxes shown on figure 11 below, one could calculate the Cash Flow Before Financing (CFBF). Please note that depreciation expense and amortization of

fees (calculated \$3,600,000 transaction fees found on the Transaction Sources & Uses divided by 7 years representing the bank loan tenor) are subtracted from EBITDA and then added back again – this is to calculate the projected tax expense.

The annual debt or financing obligations shown in fig 10 are subtracted from the Cash Flow Before Financing to give the stream of cash flows the equity expect to earn – a very important line to calculate the expected equity return.

Once the stream of on-going equity cash flows is projected, the equity analyst needs to determine the terminal value at an assume exit year. In the case of Alexandria, the exit year is 6 years. The Terminal Value (TV) or Enterprise Value at the exit year is calculated by using 2 methods and the average is taken from these methods. The first method used is the EBITDA Multiple method. This method assumes that the Enterprise Value in 2015 will be approximately \$153.5 million (6 x \$25.5 million 2015 EBITDA). The assumed 6 times multiple used, in this case, is the same multiple used to buy the company in 2010 (\$120mm acquisition price / \$20mm first year EBITDA) –the same multiple at which the company was bought. Expansion of the EBITDA multiple will always enhance the equity return as was illustrated earlier in the chapter. The second method used for calculating the Terminal Value is the perpetuity method or the Gordon growth approach. This method calculates the projected Enterprise Value by taking the Cash Flow Before Financing divided by a discount rate adjusted for growth. The discount rate used is the Weighted Average Cost of Capital (WACC) adjusted for 3.5% growth. The formula  $(\$16,687,992 / (0.0984 - 0.035))$  results to a terminal value of approximately \$245.8 million. The large gap between the two values (\$153.1mm and \$245.8mm) is due to low EBITDA multiple used. Given the high growth that is assumed in this model, typically, a higher multiple of EBITDA should be used for a more normal valuation. Ignoring the large gap in valuations by calculating the average of the two values the terminal value is projected at \$199 million. Of course, the stream of cash flows is for the corporate entity, so the terminal value needs to subtract the exit year debt to make the stream all equity. The debt outstanding (\$45 million) is taken from Figure 10, year 2016.

Once the stream of equity cash flows is set-up including the value of the equity after exiting the investment in year 6, the present value of these cash flows assuming the expected equity return of 20% is \$61,471,300 which is higher the initial equity investment of \$48,800,000 calculating a positive Net Present Value of \$17,871,300, and an IRR of 27.9%. At this level the equity investor would go ahead with the purchase since it meets the minimum expected return of 20% p.a. In an auction process, the equity investor could afford to pay a little more for this company – let's say 6.5x multiple – calculated at 22.0% IRR

Fig 11.



RJR Nabisco/KKR Transaction Sources & Uses (\$000's)						
Sources	Amount	% Cap	EBITDA x	Pricing	Uses	
Revolving Credit & Term Loans	-	0%		L+2.50%	Purchase Stock	25,506
Revolving Credit & Term Loans	13,600	43%		L+2.50%	Debt Refinancing	5,142
Total Band Debt	13,600	43%	3.7x		<b>Fees:</b>	
					Drexel:	
Bridge Financing	5,000	16%		Base Rate + 6% (increasing to BR+10%)	Fees as adviser	25
Increasing Rate Notes	5,000	16%		L+	Committment Fee	52.5
Partnership Dent Securities	500	2%		T + 4.0%	Funding Fee (Sub Debt)	95
Senior Convertibel Debentures	1,800	6%		(between 12.675% - 16.675% Fixed)	Financing Fee (Sub Debt)	54.4
Total Subordinated Debt	12,300	39%	3.3x		Total Drexel Fees	226.9
					Merrill Lynch	
Total Debt	25,900	82%	7.0x		Fees as adviser	25
					Committment Fee	22.5
Cumulative Exch. PIK Preferred Stock	4,059	13%	1.1x		Funding Fee (Sub Debt)	7.5
Cash Equity	1,500	5%			Financing Fee (Sub Debt)	54.4
Total Equity	5,559	18%			Total Merrill Lynch	109.4
					Morgan Stanley Fees as dealer	25
Total Sources	31,459	100%	8.5x		Wassersteinb Parella Fees as a dealer	25
					Total Investment Banking Fees	386.3
<b>Bank Debt Provided:</b>			Up Front	Fees paid		
Dai-Ichi Kangyo Bank	600	3.25%			Banking Fees (200 institutions)	325
Fuji Bank	600	3.25%			Other Transaction Expenses	100
Sanwa Bank	600	3.25%			Total Transaction Fees & Expenses	811.3
Longp Term Crddit Bank of Japan	600	3.25%				
Mitsubishi Bank Ltd	500	3.00%				
Sumitomo Bank Ltd	500	3.00%				
Nippopn Credit Bank	500	3.00%				
Tokai Bank Ltd	400	2.75%				
Mitsui Trust & Banking	350	2.50%				
Other Japanese Regional Banks	450	2.00%				31,459
Total provided by Japanese Banks	5,100					
<b>Subordinated Debr Provided</b>						
Drexel Burnham Lambert						
Merrill Lynch						
<b>Proforma EBITDA (1989 Est)</b>	<b>3,681</b>					
3m LIBOR (Jan 1989)	9.380%					

#### A. Historical Prospective

RJR was considered a pioneer in many aspects. For example, in 1913 the company introduced and marketed four new brands in the same period, which was considered risky but the strategy that the company followed proved to be successful. Additionally, although RJR was facing difficulties during the great depression due to the high competition of cheaper brands, it managed to keep up with the market by improving the packaging and wrapping of its products. Finally, although RJR was facing increasing competitive threats, it managed to survive by applying several strategies such as, diversifying into non-cigarette products, increasing its presence in other continents where cigarette growth was still trending upwards, differentiating its products, and addressing increasing health concerns at home.

#### B. Why RJR was a good LBO Candidate

As we previously discussed, a company should meet specific criteria to be considered as a good LBO candidate. RJR met all the criteria to an outstanding extent, and it was considered a very attractive LBO candidate.

First, the company presented a steady growth over the years which was unaffected by business cycles. Additionally, the company had a great survival rate against market turmoil as its unlevered beta, which measures the company's business risk, was at that time 0.69. This was a proof that the company was insensitive to market-wide fluctuations and that its products were non-cyclical.

Secondly, the firm had low debt obligations. As we previously discussed, in an LBO, the new management uses the debt capacity of the target firm's assets and for that reason, good LBO candidates are ones that have low levels of debt. RJR at that time had a debt to assets ratio of 0.3 or 30%. Thus, the low debt provided greater opportunities for debt acquisitions and further expansions, especially since RJR involved very low systematic risk.

Finally, all the problems that RJR appeared to be facing at that time appeared to be easily dealt with and the firm's profile portrayed a high potential for additional value creation. For all the above reasons, RJR was considered an excellent LBO candidate that would create opportunities for high returns.

#### C. The RJR Valuation Process

There are three major steps that need to be considered in a company's valuation. First, in a discounted cash flow analysis, to determine the company's value, the future free cash flows over several years must be determined and discounted to the present using a risk factor – the Weighted Average Cost of Capital (WACC). The WACC formula can capture the risk of the company's future cash flows while also reflecting the company's cost of equity and debt levels.

Second, after we calculate the WACC we need to project the company's unlevered free cash flow, which is essentially the cash remaining after capital expenditures and working capital requirements. This cash is what would be available to the capital holders before the debt holders are paid.

Finally, a terminal value must be calculated. The terminal value is the value of the cash flows after the end of the forecasting period. The terminal value can be calculated either by using the Perpetuity Growth Model which assumes that the company's future cash flows will continue to grow at a moderate and constant rate through infinity, or by using the Terminal Multiple Method which assumes that the company's worth can be approximated by a multiple of an operating metric, such as a multiple of EBITDA.

The above methodology was used to value RJR. A discount rate (WACC) of 12.06% was used to discount the projected cash flows for a period of 10 years. This calculation presented a value of \$15.6 Billion. Additionally, for the free cash flows to be projected, certain assumptions were taken into consideration including a steady growth rate of 3%. Finally, by adding all the discounted cash flows of RJR the total calculated firm value was \$32.6 Billion. After deducting the pre-existing long-term debt of RJR (\$5.4 Billion) the equity value was calculated at \$27.2 Billion, which divided by the company's total common shares (223.52 million) yielded a value of \$121.66 per share.

#### D. Balancing Maximum Leverage to Meet Equity Expectations:

The higher the leverage, the greater the risk, and the bigger the equity returns at the exit year of the leveraged buyout. However, one must balance the risk against the expected returns, as overleveraging a company can result in disaster (bankruptcy) if the company is unable to meet its interest and debt obligations. For this reason, banks analyze companies and determine a viable

amount of leverage that a specific company can take on. Additionally, after the big crisis of 2008, new capital restrictions were applied to banks which limited banks' own leverage and affected their ability to provide financing in general. Additionally, through moral suasion, the Federal Reserve made lending to very highly levered companies exceptionally unattractive to banks. These measures have served to contain the use of leverage in LBO acquisitions.

#### 4. LBO MODEL – BUILDING THE MODEL AND TESTING THE DEBT REPAYMENT & EQUITY RETURN ON EXCEL

##### a. Building the Historical Analysis

The first step is to collect all the company's historical financial information (10K and 10Q reports if the target is a publicly traded company). The sell side advisor is required to provide this information to interested buyers which might also include industry reports, transaction specifics and financial projections. This information is usually contained in a Confidential Information Memorandum (CIM) with additional information provided by the management through their presentations and data room.

SUMMARY									
		HISTORICAL							
		12 mos Dec-07	12 mos Dec-08	12 mos Dec-09	12 mos Dec-10	12 mos Dec-11	12 mos Dec-12	12 mos Dec-13	12 mos Dec-14
30	Revenues	6,153,000	5,907,000	4,696,000	5,071,000	5,624,000	6,321,000	6,115,000	5,983,000
31	Revenue Growth		4.2%	25.8%	-7.4%	-9.8%	-11.0%	3.4%	2.2%
32									
33	EBITDA	1,044,000	943,000	293,000	839,000	841,000	1,104,000	1,135,000	1,084,000
34	EBITDA Margin	17.0%	16.0%	6.2%	16.5%	15.0%	17.5%	18.6%	18.1%
35									
36	Interest Expenses	168,000	210,000	296,000	296,000	296,000	296,000	236,000	216,000
37	Capex	276,000.0	471,000.0	168,000.0	209,000.0	392,000.0	360,000.0	358,000.0	323,000.0
38	Working capital	55,000.0	(177,000.0)	43,000.0	129,000.0	(226,000.0)	396,000.0	257,000.0	64,000.0
39	Cash Taxes	189,000.0	76,000.0	(293,000.0)	27,000.0	(75,000.0)	148,000.0	263,000.0	139,000.0
40									
41	Cash & Short-term Investments	358,000	485,000	134,000	806,000	686,000	463,000	750,000	1,019,000
42	Bank Debt	3,595,000	4,008,000	2,960,000	3,351,000	2,729,000	1,808,000	1,622,000	2,944,000
43	Total Debt	3,595,000	4,008,000	2,960,000	3,351,000	2,729,000	1,808,000	1,622,000	2,944,000
44	Equity	2,076,000	1,621,000	1,824,000	2,471,000	2,954,000	3,137,000	3,360,000	1,525,000
45									
46	Senior Debt / EBITDA	3.4x	4.3x	10.1x	4.0x	3.2x	1.6x	1.4x	2.7x
47	Total Debt / EBITDA	3.4x	4.3x	10.1x	4.0x	3.2x	1.6x	1.4x	2.7x
48									
49	Net Senior Debt / EBITDA	3.1x	3.7x	9.6x	3.0x	2.4x	1.2x	0.8x	1.8x
50	Net Total Debt / EBITDA	3.1x	3.7x	9.6x	3.0x	2.4x	1.2x	0.8x	1.8x
51									
52	EBITDA / Interest	6.2x	4.5x	1.0x	2.8x	2.8x	3.7x	4.8x	5.0x
53	EBITDA - Capex / Interest	4.6x	2.2x	0.4x	2.1x	1.5x	2.5x	3.3x	3.5x
54	Debt / Capitalization	63.4%	71.2%	61.9%	57.6%	48.0%	36.6%	32.6%	65.9%

##### b. Setting up the Transactions Sources & Uses

###### i. Assumption of Purchase Price – Use of Capital

The private equity firm might hire an advisor (buyside advisor) to assist them with the purchase price. In general, an experienced private equity firm will use basic assumption first to run the numbers, such as EBITDA purchase multiples. The purchase price is one number that the private equity will need to adjust as negotiations and/or competitive bidding proceeds. In addition to financing the purchase price, in most LBOs the existing debt is repaid at the time of acquisition, so this debt repayment also must be financed. These uses of cash,

and transaction fees and expenses, are all incorporated in preparing the Transaction Uses for the LBO.

Uses	Stock Price	Shares Outstanding (000s)	Amount	Enterprise Value	Multiple of EBITDA
Cash			(519,000.0)		
Stock Purchase	\$ 35.00	177,000	6,195,000		
Refinance Existing Debt			2,944,000		
Assumption of Debt			-	9,139,000	8.4x
Transaction Fees & Expenses	3.00%		274,170		
<b>Total Uses</b>			<b>8,894,170</b>		

ii. Assumption of Financing & Debt Repayment – Source of Capital

The Sources of Capital are determined by the Target Company's debt capacity. Debt can include bank loans and second lien loans (Secured Debt Facilities), mezzanine notes and public senior or subordinated bonds (High Yield debt). The exact debt mix is affected by the size of the transaction and the credit appetite of the debt markets.

TRANSACTION SOURCES & USES							
Sources (\$000s)	Debt Capacity EBITDA x	Calculated Debt based on DC	New Commit. (Rounded)	Funded	% Cap	EBITDA x	Spread (bps) / Fixed
Cash			519,000	519,000			
Revolver			1,000,000	-	0.0%		400.0
Term Loan A			-	-	0.0%		
Term Loan B	3.50x	3,794,000	3,800,000	3,800,000	42.7%	3.5x	400.0
New Term Loan			-	-	0.0%		
Other Bank Debt / Existing			-	-	0.0%		
Total Bank Debt			4,800,000	3,800,000	42.7%	3.5x	
Senior Secured Notes			-	-	0.0%		0.0%
Total Secured Debt			4,800,000	3,800,000	42.7%	3.5x	
Senior Unsecured / Subordinated Notes	2.00x	2,168,000	2,200,000	2,200,000	24.7%	2.0x	8.0%
Junior Subordinated Notes			-	-	0.0%		0.0%
Total Subordinated Debt			2,200,000	2,200,000	24.7%	2.0x	
Total Debt	5.50x		7,000,000	6,000,000	67.5%	5.5x	
Equity				2,894,170	32.5%	2.7x	
<b>Total Sources</b>			<b>7,000,000</b>	<b>8,894,170</b>	<b>100.0%</b>	<b>8.2x</b>	

One of the debt capacity methods for determining the amounts of debt are to assume a senior debt leverage and total debt leverage ratio of Senior Debt / EBITDA and Total Debt / EBITDA, respectively. For argument's sake let's assume the debt markets can take 3.5x and 5.5x Senior and Total Leverage, respectively. After the debt facilities are determined the balance of the financing should come from private equity. Sometimes, all or some of the Target's existing cash can be used as source of capital.

The Transaction Sources & Uses will also include terms of the debt facilities including interest rate and tenor. The interest rates are reflecting the market's appetite for that company's



credit risk. The secured debt facilities are usually priced with a floating rate component such as LIBOR and a spread. The High Yield debt facilities usually have a fixed interest rate.

c. Setting up the opening Pro Forma Balance Sheet by linking the Transaction Sources & Uses

The Transaction Sources & Uses will be affect the opening pro-forma balance sheet. One starts with the Target's last reported Balance Sheet, and then inserts the new debt and equity in place of the pre-existing debt and equity. Assets are written up or down as applicable, with Goodwill often being a major new entry in the Balance Sheet.

Most of the items that were used to build the Transaction Sources & Uses will be carry over as adjustments (Debt or Credit) to the existing balance sheet in the following steps:

1. The entire sources of capital including the debt and equity will be on the Credit column contributing to the starting Liabilities and Net Worth of the opening proforma balance sheet.
2. The existing debt and the entire new worth will be zeroed out by debiting in the column.
3. Most of the transaction fees & expenses used in the Transaction Sources & Uses table will be debited in the Asset side as Capitalized Expenses which later will be amortized down to zero based on the length of time of the debt that will be repaid.
4. Cash that is used in the Transaction Sources & Uses could be either debited or credited depending on whether the private equity used the Target's existing cash as to help purchase the Target, or whether cash was added to the Balance Sheet (to enhance the company's financial flexibility going forward) as part of the financing.
5. Once all the above items are determined, the difference in the credit column will be Goodwill which is basically the premium paid for the company over the value of the company's identifiable assets.
6. All other balance sheet items such as Current Assets, Fixed Assets, Current Liabilities and other Long-Term Liabilities (except for debt) will carried over to the new opening pro-forma balance sheet.

The Pro-forma Balance Sheet represents the target company's opening balance sheet. It is for modeling purposes the year "Zero" balance sheet.

BALANCE SHEET												
	Dec-08	Dec-09	Dec-10	Dec-11	Dec-12	Dec-13	Dec-14	Dec-14	Transaction Adjustm.		Dec-14	
									Debit	Credit		
<b>ASSETS</b>												
Cash	485,000	134,000	806,000	686,000	463,000	750,000	1,019,000	1,019,000	(519,000)		500,000	
Short-Term Investments	-	-	-	-	-	-	-	-			-	
Accounts Receivable	552,000	445,000	887,000	911,000	941,000	908,000	907,000	907,000			907,000	
Inventory	986,000	783,000	802,000	812,000	361,000	217,000	236,000	236,000			236,000	
Other Current Assets	143,000	127,000	126,000	125,000	124,000	121,000	159,000	159,000			159,000	
Total Current Assets	2,166,000	1,489,000	2,621,000	2,534,000	1,869,000	1,996,000	2,321,000	2,321,000			1,802,000	
Gross Fixed Assets	3,609,000	3,421,000	3,323,000	3,274,000	3,198,000	3,034,000	2,634,000	2,634,000			2,634,000	
(Accum. Depreciation)												
Total Fixed Assets	3,609,000	3,421,000	3,323,000	3,274,000	3,198,000	3,034,000	2,634,000	2,634,000			2,634,000	
Capitalized Exp.									274,170		274,170	
Purchase Goodwill	1,639,000	-	-	-	-	-	-	-	4,670,000		4,670,000	
Other Intangibles	596,000	2,063,000	2,067,000	2,053,000	2,025,000	2,032,000	1,956,000	1,956,000			1,956,000	
Other Investm's & Assets	1,693,000	1,788,000	1,765,000	1,699,000	1,743,000	1,700,000	1,748,000	1,748,000			1,748,000	
<b>Total Assets</b>	<b>9,703,000</b>	<b>8,761,000</b>	<b>9,776,000</b>	<b>9,560,000</b>	<b>8,855,000</b>	<b>8,762,000</b>	<b>8,659,000</b>	<b>8,659,000</b>			<b>13,084,170</b>	
<b>LIABILITIES &amp; SHAREHOLDER EQUITY</b>												
Accounts Payable	2,182,000	2,022,000	2,029,000	1,859,000	1,864,000	1,825,000	2,080,000	2,080,000			2,080,000	
Accrued Expenses											-	
Other Current Liabilities											-	
Total Current Liabilities	2,182,000	2,022,000	2,029,000	1,859,000	1,864,000	1,825,000	2,080,000	2,080,000			2,080,000	
Revolver											-	
Term Loan A											-	
Term Loan B									3,800,000		3,800,000	
New Term Loan											-	
Other Bank Debt / Exisiting	4,008,000	2,960,000	3,351,000	2,729,000	1,808,000	1,622,000	2,944,000	2,944,000	2,944,000	-	-	
Senior Secured Notes											-	
Senior Unsecured / Subordinated Notes										2,200,000	2,200,000	
Junior Subordinated Notes											-	
Total Debt	4,008,000	2,960,000	3,351,000	2,729,000	1,808,000	1,622,000	2,944,000	2,944,000			6,000,000	
Deferred Taxes	1,150,000	31,000	24,000	46,000	85,000	48,000	38,000	38,000			38,000	
Other Liabilities & OPEB	719,000	1,903,000	1,886,000	1,971,000	1,956,000	1,904,000	2,069,000	2,069,000			2,069,000	
Minority Interest	23,000	21,000	15,000	1,000	5,000	3,000	3,000	3,000			3,000	
Total Liabilities	8,082,000	6,937,000	7,305,000	6,606,000	5,718,000	5,402,000	7,134,000	7,134,000			10,190,000	
<b>OWNER'S EQUITY</b>												
Treasury Stock											-	
Preferred Stock											-	
Common Stock	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,894,170	2,894,170	
Add'l Paid-in-Capital	493,000	552,000	805,000	963,000	816,000	661,000	47,000	47,000	47,000		-	
Other	(391,000)	(283,000)	(283,000)	(348,000)	(338,000)	(335,000)	(508,000)	(508,000)	(508,000)		-	
Retained Earnings	1,517,000	1,553,000	1,947,000	2,337,000	2,657,000	3,032,000	1,984,000	1,984,000	1,984,000		-	
Total Equity	1,621,000	1,824,000	2,471,000	2,954,000	3,137,000	3,360,000	1,525,000	1,525,000			2,894,170	
<b>Total Liabilities &amp; Equity</b>	<b>9,703,000</b>	<b>8,761,000</b>	<b>9,776,000</b>	<b>9,560,000</b>	<b>8,855,000</b>	<b>8,762,000</b>	<b>8,659,000</b>	<b>8,659,000</b>	<b>8,894,170</b>	<b>8,894,170</b>	<b>13,084,170</b>	

#### d. Building the Projections

All lines of the income, cash flow and balance sheet statements need to be addressed in projecting them out. Each item is determined by certain assumptions, but in general, most items projected will grow at the same pace as the revenue will grow. Of course, each item from these statements is reviewed closely and the final projection represents the seller's and buyer's best of future expectations.

SUMMARY								
	PROJECTED							
	12 mos Dec-14	12 mos Dec-15	12 mos Dec-16	12 mos Dec-17	12 mos Dec-18	12 mos Dec-19	12 mos Dec-20	12 mos Dec-21
Revenues	5,983,000	6,098,920	6,344,146	6,650,695	6,967,341	7,256,107	7,559,378	7,877,958
Revenue Growth	-2.2%	1.9%	4.0%	4.8%	4.8%	4.1%	4.2%	4.2%
EBITDA	1,084,000	1,126,665	1,176,124	1,228,501	1,284,464	1,339,508	1,396,925	1,456,828
EBITDA Margin	18.1%	18.5%	18.5%	18.5%	18.4%	18.5%	18.5%	18.5%
Interest Expenses		366,000	361,871	373,176	380,573	396,316	383,314	369,172
Capex		333,336	346,738	363,493	380,799	396,581	413,157	430,569
Working capital		(11,434)	25,734	43,733	42,896	34,216	36,412	38,756
Cash Taxes		154,981	168,586	177,818	189,196	198,076	216,146	235,148
Cash & Short-term Investments	500,000	722,915	1,009,578	1,329,326	1,668,118	2,012,868	2,395,588	2,284,283
Bank Debt	3,800,000	3,762,000	3,724,000	3,686,000	3,648,000	3,610,000	3,572,000	3,000,000
Total Debt	6,000,000	5,962,000	5,924,000	5,886,000	5,848,000	5,810,000	5,772,000	5,200,000
Equity	2,894,170	3,255,793	3,649,160	4,064,069	4,505,527	4,967,705	5,472,045	6,020,724
Senior Debt / EBITDA	3.5x	3.3x	3.2x	3.0x	2.8x	2.7x	2.6x	2.1x
Total Debt / EBITDA	5.5x	5.3x	5.0x	4.8x	4.6x	4.3x	4.1x	3.6x
Net Senior Debt / EBITDA	3.0x	2.7x	2.3x	1.9x	1.5x	1.2x	0.8x	0.5x
Net Total Debt / EBITDA	5.1x	4.7x	4.2x	3.7x	3.3x	2.8x	2.4x	2.0x
EBITDA / Interest		3.1x	3.3x	3.3x	3.4x	3.4x	3.6x	3.9x
EBITDA - Capex / Interest		2.2x	2.3x	2.3x	2.4x	2.4x	2.6x	2.8x
Debt / Capitalization		64.7%	61.9%	59.2%	56.5%	53.9%	51.3%	46.3%

i. Setting up the Operating Assumptions – setting up Income statement

Revenue is the first item that is projected. The Revenue growth assumption is very important because it affects the rest of the Income Statement's items. Revenue growth depends on the target company's business. For example, for a manufacturing company revenue growth could be based on volume and price increases/decreases. For a service company, such as a hotel company, the drivers for revenue growth would be Occupancy Rate and Average Daily Rate, and for a cable company, it could be based on subscriber growth for each product and pricing for that product.

Cost of Revenues and Operating Expenses could be calculated based on a percentage of revenue or each item within those expense categories could be driven by detailed expense analysis. The analysis could include hourly wages, number of workers and daily shifts – all annualized. Other expense drivers could be based on fixed or variable components. Operating expenses such as selling, general and administrative expenses are usually driven as a percentage of revenue unless they are specific expenses that the private equity firm identifies. In many cases the private equity will include cost savings and cost rationalization. These cost savings could include one-time reduction of personnel, plant closures or on-going expense controls that will improve operating margins going forward.

<b>INCOME STATEMENT</b>										
	<b>PROJECTED</b>									
	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21		
<b>REVENUE</b>	5,983,000	6,098,920	6,344,146	6,650,695	6,967,341	7,256,107	7,559,378	7,877,958		
Sales Growth	-2.2%	1.9%	4.0%	4.8%	4.8%	4.1%	4.2%	4.2%		
<b>COST OF SALES (excl. Deprec.)</b>	1,507,000	1,514,535	1,571,274	1,651,651	1,732,814	1,802,825	1,876,741	1,954,803		
<b>Gross Profit</b>	4,476,000	4,584,385	4,772,872	4,999,044	5,234,526	5,453,282	5,682,636	5,923,155		
Gross Margin	74.8%	75.2%	75.2%	75.2%	75.1%	75.2%	75.2%	75.2%		
<b>OPERATING EXPENSES</b>	3,392,000	3,457,720	3,596,748	3,770,543	3,950,062	4,113,775	4,285,711	4,466,327		
<b>EBITDA BEF. OTHER</b>	1,084,000	1,126,665	1,176,124	1,228,501	1,284,464	1,339,508	1,396,925	1,456,828		
% Sales	18.1%	18.5%	18.5%	18.5%	18.4%	18.5%	18.5%	18.5%		
Other Expense	-	-	-	-	-	-	-	-		
Other (Income)	-	-	-	-	-	-	-	-		
<b>EBITDA (Op. Cash Flow)</b>	1,084,000	1,126,665	1,176,124	1,228,501	1,284,464	1,339,508	1,396,925	1,456,828		
EBITDA Margin	18.1%	18.5%	18.5%	18.5%	18.4%	18.5%	18.5%	18.5%		
Depreciation	201,000	204,894	213,133	223,431	234,069	243,770	253,959	264,661		
<b>EBIT from cont. oper.</b>	883,000	921,771	962,992	1,005,070	1,050,395	1,095,737	1,142,967	1,192,167		
Operating Margin	14.8%	15.1%	15.2%	15.1%	15.1%	15.1%	15.1%	15.1%		
Amort. of Goodwill / Intangibles	-	-	-	-	-	-	-	-		
Amort. of Fees	-	39,167	39,167	39,167	39,167	39,167	39,167	39,167		
Other Non-Oper. Cash Expense	-	-	-	-	-	-	-	-		
Other Non-Oper. Cash (Income)	-	-	-	-	-	-	-	-		
<b>EBIT</b>	883,000	882,604	923,824	965,903	1,011,228	1,056,570	1,103,799	1,153,000		
<b>INTEREST EXPENSE (INCOME):</b>										
Short Term Investment (Income)		-	(2,229)	(7,644)	(16,587)	(35,044)	(45,386)	(56,868)		
Revolver		-	-	-	-	-	-	-		
Term Loan A		-	-	-	-	-	-	-		
Term Loan B		190,000	188,100	204,820	221,160	255,360	252,700	250,040		
New Term Loan		-	-	-	-	-	-	-		
Other Bank Debt / Existing		-	-	-	-	-	-	-		
Senior Secured Notes		-	-	-	-	-	-	-		
Senior Unsecured / Subordinated Notes		176,000	176,000	176,000	176,000	176,000	176,000	176,000		
Junior Subordinated Notes		-	-	-	-	-	-	-		
Total Interest Expense		366,000	361,871	373,176	380,573	396,316	383,314	369,172		
EBT and Gain on Asset Sales		516,604	561,954	592,727	630,655	660,254	720,485	783,828		
Gain on Asset Sales		-	-	-	-	-	-	-		
Income Before Taxes		516,604	561,954	592,727	630,655	660,254	720,485	783,828		
Tax Rate		30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%		
Tax Expense		154,981	168,586	177,818	189,196	198,076	216,146	235,148		
Net Income bef. Extraordinary		361,623	393,367	414,909	441,458	462,178	504,340	548,679		
Extraord. Chrg (after tax)		-	-	-	-	-	-	-		
<b>NET INCOME (LOSS)</b>		361,623	393,367	414,909	441,458	462,178	504,340	548,679		

ii. Setting up other assumptions in the Income Statement

After the Earnings Before Interest Taxes, Depreciation and Amortization (EBITDA) there are some other expenses that need to be addressed in the income statement. These items are as follows:

1. Depreciation: Depreciation expense is either calculated as % of Revenue or based upon depreciation schedules that are built off the actual assets. These depreciation expenses are based on fixed assets' useful life.
2. Amortization Expenses: These expenses are calculated based on amortization schedules. For example, Capitalized Expense reflects the fees and expenses charged in the LBO (which are then capitalized), and the amortization of this asset is based on the life of the underlying benefit. In the case of bank loan fees and loan legal expenses, the expense would be amortized over the life of the loan - usually 7 years.
3. Interest Payments: These payments are carried over from the debt schedule page
4. Taxes: The tax rate used for calculating annual tax expenses is either given or is based on the specific tax situation of the borrower. The conservative assumption for this

tax rate is usually 40%. The annual tax expense is calculated by multiplying the tax rate times the Earnings before tax (after interest payments).

5. Other non-operating expense items: In many cases the projections include other non-operating expenses such as one-time expense related to the LBO or predetermined expenses such as private equity management fees. These expenses are based on set schedules or as a percent of income or revenue.

OPERATING ASSUMPTIONS (INCOME, CASH FLOW AND BALANCE SHEET STATEMENTS)								
	PROJECTED							
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
<b>Revenue Growth</b>								
Owned, Leased and Consolidated Joint Venture Hotels	-4.4%	-2.0%	0.0%	2.0%	3.0%	3.0%	3.0%	3.0%
Management Fees, Franchise Fees and Other Income	9.5%	10.0%	14.0%	12.0%	10.0%	7.0%	7.0%	7.0%
Vacation Ownership and Residential	-27.1%	-10.0%	-5.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Revenues from Managed and Franchised Properties	3.7%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
<b>Cost of Good as % of Sales</b>								
Owned, Leased and Consolidated Joint Venture Hotels	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%	24.4%
Management Fees, Franchise Fees and Other Income	35.6%	35.6%	35.6%	35.6%	35.6%	35.6%	35.6%	35.6%
Vacation Ownership and Residential	55.9%	55.9%	55.9%	55.9%	55.9%	55.9%	55.9%	55.9%
Other Revenues from Managed and Franchised Properties	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%	13.9%
<b>Operating Expense as % of Total Revenue</b>	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%	56.7%
Depreciation % of Revenue	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%
Other Expenses % of Revenue	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Income % of Revenue		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Non-Oper. Expenses % of Revenue		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Non-Operating Income % of Revenue		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Amort. of Goodwill / Intangibles		-	-	-	-	-	-	-
Amort. of Fees		-	-	-	-	-	-	-
<b>Capex % of Revenue</b>	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%	5.5%
<b>Other Investments % of Revenue</b>	-0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accounts Receivable Days		55.3	55.3	55.3	55.3	55.3	55.3	55.3
Inventory Turns		6.39	6.39	6.39	6.39	6.39	6.39	6.39
Other Current Assets % of Revenue		2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
Accounts Payable Days		503.8	503.8	503.8	503.8	503.8	503.8	503.8
Accrued Expenses % of Revenue		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Current Liabilities % of Revenues		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

### iii. Debt Schedule - Principal & Interest Payments – building the balance sheet

Setting up the projected debt schedule involves the calculation of interest and principal payments. The principal payments are usually negotiated with the bank that leads the bank financing. Normally bank loan facilities have scheduled principal payments set for every year from 1%-10% of the initial loan<sup>15</sup>. The junior debt such as Mezzanine notes or corporate bonds do not normally have scheduled amortization, and the only principal payment is paid at the end of term. In many cases the private equity runs a “cash sweep” approach that uses excess cash to prepay the bank debt. This in turn affects bank debt outstanding, interest expense, the interest expense tax shield, and taxes. These items affect the balance sheet, income statement and cash flow statement of the borrower.

The bank loan is based on a floating reference rate such as LIBOR plus a spread. The model could assume that LIBOR will be based on the LIBOR futures curve, or it could simply assume an increase every year up to a particular level. For a fixed debt facility, such as corporate bonds, the bond is not payable until maturity and the projected interest payment should be the same every year.

DEBT SCHEDULES / ANALYSIS								
	PROJECTED							
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
<b>Interest Rate Assumptions</b>								
LIBOR Rate	1.00%	1.00%	1.00%	1.50%	2.00%	3.00%	3.00%	3.00%
LIBOR increase / Decrease		0.0%	0.0%	0.5%	0.5%	1.0%	0.0%	0.0%
<b>Short-Term Investments</b>								
Outstanding	-	222,915	509,578	829,326	1,168,118	1,512,868	1,895,588	1,784,283
Increase / (Decrease)		222,915	286,663	319,748	338,792	344,750	382,721	(111,305)
Interest		-	2,229	7,644	16,587	35,044	45,386	56,868
Interest rate		1.00%	1.00%	1.50%	2.00%	3.00%	3.00%	3.00%
<b>Revolver</b>								
Outstanding	-	-	-	-	-	-	-	-
Increase / (Decrease)		-	-	-	-	-	-	-
Scheduled Amortization		-	-	-	-	-	-	-
Cash Sweep if any		-	-	-	-	-	-	-
Interest		-	-	-	-	-	-	-
Interest rate		5.00%	5.00%	5.50%	6.00%	7.00%	7.00%	7.00%
<b>Term Loan A</b>								
Outstanding	-	-	-	-	-	-	-	-
Increase / (Decrease)		-	-	-	-	-	-	-
Scheduled Amortization		-	-	-	-	-	-	-
Cash Sweep if any		-	-	-	-	-	-	-
Interest		-	-	-	-	-	-	-
Interest rate		1.00%	1.00%	1.50%	2.00%	3.00%	3.00%	3.00%
<b>Term Loan B</b>								
Outstanding	3,800,000	3,762,000	3,724,000	3,686,000	3,648,000	3,610,000	3,572,000	-
Increase / (Decrease)		(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(3,572,000)
Scheduled Amortization		(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(3,572,000)
Cash Sweep if any		(260,915)	(324,663)	(357,748)	(376,792)	(382,750)	(420,721)	(460,695)
Interest		190,000	188,100	204,820	221,160	255,360	252,700	250,040
Interest rate		5.00%	5.00%	5.50%	6.00%	7.00%	7.00%	7.00%
<b>Senior Unsecured / Subordinated Notes</b>								
Outstanding	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000
Increase / (Decrease)		-	-	-	-	-	-	-
Interest		176,000	176,000	176,000	176,000	176,000	176,000	176,000
Interest rate		8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%

- iv. Setting up Working Capital, Capital Expenditure, and other cash flow items – linking the changes of the balance sheet.

The Cash Flow Statement items such as changes in working capital and capital expenditures are to an extent driven from revenue growth. The working capital line in the Cash Flow Statement includes changes in accounts receivable, inventory, payables, and accrued expenses. These changes are the difference between this years and last year's Balance Sheet levels for these to entries. If the asset increases from one year to the next, the difference is recorded as a negative cash item in the cash flow statement. If the asset decreases from one year to the next, that difference is recorded as a positive cash item in the cash flow statement. Any liability or net worth changes in the balance sheet are recorded in the cash flow statement as positive cash if these changes increase from year to year and negative if these changes decrease from year to year.

The Capital Expenditures are usually broken down into two categories: maintenance and growth capital expenditures. Both capital expenditures are typically presented as a percentage of revenue, unless the private equity runs a specific schedule for capital expenditures.

<b>CASH FLOW STATEMENT</b>								
	<b>PROJECTED</b>							
	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos	12 mos
	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21	
<b>OPERATING ACTIVITIES:</b>								
Net Income (Loss)	361,623	393,367	414,909	441,458	462,178	504,340	548,679	
Depreciation	204,894	213,133	223,431	234,069	243,770	253,959	264,661	
Amort. Goodwill & Fees	39,167	39,167	39,167	39,167	39,167	39,167	39,167	
Non-Oper. Expense (Income)	-	-	-	-	-	-	-	
Gain on Sale of Assets	-	-	-	-	-	-	-	
Interest Expense	366,000	361,871	373,176	380,573	396,316	383,314	369,172	
Tax Expense	154,981	168,586	177,818	189,196	198,076	216,146	235,148	
<b>Adjusted EBITDA (Op. Cash Flow)</b>	<b>1,126,665</b>	<b>1,176,124</b>	<b>1,228,501</b>	<b>1,284,464</b>	<b>1,339,508</b>	<b>1,396,925</b>	<b>1,456,828</b>	
Cash Taxes	(154,981)	(168,586)	(177,818)	(189,196)	(198,076)	(216,146)	(235,148)	
Change in Working Capital	(11,434)	25,734	43,733	42,896	34,216	36,412	38,756	
Non-Oper. Income (Expense)	-	-	-	-	-	-	-	
Change in Other Assets	-	-	-	-	-	-	-	
Change in Other Liabilities	-	-	-	-	-	-	-	
Subtotal	960,251	1,033,273	1,094,417	1,138,164	1,175,648	1,217,192	1,260,436	
<b>INVESTMENT ACTIVITIES:</b>								
Capital Expenditures	(333,336)	(346,738)	(363,493)	(380,799)	(396,581)	(413,157)	(430,569)	
Other Investments	-	-	-	-	-	-	-	
Acquisitions	-	-	-	-	-	-	-	
Total Capex / Acquisitions	(333,336)	(346,738)	(363,493)	(380,799)	(396,581)	(413,157)	(430,569)	
Divestitures	-	-	-	-	-	-	-	
Other Investments	-	-	-	-	-	-	-	
Subtotal	(333,336)	(346,738)	(363,493)	(380,799)	(396,581)	(413,157)	(430,569)	
<b>AVAILABLE CASH FLOW (FACF)</b>	<b>626,915</b>	<b>686,534</b>	<b>730,924</b>	<b>757,365</b>	<b>779,066</b>	<b>804,035</b>	<b>829,867</b>	
<b>FINANCING ACTIVITIES:</b>								
Cash Interest Expense	(366,000)	(361,871)	(373,176)	(380,573)	(396,316)	(383,314)	(369,172)	
Cash Common Stock Dividends (-)	-	-	-	-	-	-	-	
Cash Preferred Stock Dividends (-)	-	-	-	-	-	-	-	
Preferred Stock Issued (Purchased)	-	-	-	-	-	-	-	
Common Equity Issued (Purchased)	-	-	-	-	-	-	-	
Cash Available for Debt Amortization	260,915	324,663	357,748	376,792	382,750	420,721	460,695	
Revolver	-	-	-	-	-	-	-	
Term Loan A	-	-	-	-	-	-	-	
Term Loan B	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(3,572,000)	
New Term Loan	-	-	-	-	-	-	-	
Other Bank Debt / Existing	-	-	-	-	-	-	-	
Senior Secured Notes	-	-	-	-	-	-	-	
Senior Unsecured / Subordinated Notes	-	-	-	-	-	-	-	
Junior Subordinated Notes	-	-	-	-	-	-	-	
Total Debt Payments	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(38,000)	(572,000)	
FX Effect	-	-	-	-	-	-	-	
Free Cash Flow	222,915	286,663	319,748	338,792	344,750	382,721	(111,305)	
Beginning Cash Balance	-	222,915	509,578	829,326	1,168,118	1,512,868	1,895,588	
Required Operating Cash	-	-	-	-	-	-	-	
<b>CASH SURPLUS/(NEEDS)</b>	<b>222,915</b>	<b>509,578</b>	<b>829,326</b>	<b>1,168,118</b>	<b>1,512,868</b>	<b>1,895,588</b>	<b>1,784,283</b>	

v. Setting up the projected Balance Sheet

After the time zero Balance Sheet is set, some Balance Sheet items are driven from last year's Balance Sheet and this year's Income Statement and possibly the Cashflow Statement. For example, Capitalized Expenses reflect last year's Balance Sheet level minus this year's Capitalized Expense Amortization, and Retained Earnings reflect last year's level plus Net Income - (because there are no dividends in most LBOs). Property, Plant and Equipment, reflects last years' level, less this year's depreciation, plus this year's Capital Expenditures.

On the other hand, some Balance Sheet items, such as Accounts Receivable and Accounts Payable are not affected by the previous year's Balance Sheet and are instead a function of

Revenues or Expenses. If, however one wishes to more closely project these entries and wants to project them based on a particular turnover ratio, one can project them as follows:

1. Accounts Receivables (A/R): A function of Revenues divided by annual A/R turnover.
2. Inventory: A function of Revenues divided by annual Inventory turnover.
3. Accounts Payable (A/P): A function of Supplier Expenses divided by A/P turnover.

<b>BALANCE SHEET</b>								
	PROJECTED							
	Dec-14	Dec-15	Dec-16	Dec-17	Dec-18	Dec-19	Dec-20	Dec-21
<b>ASSETS</b>								
Cash	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
Short-Term Investments	-	222,915	509,578	829,326	1,168,118	1,512,868	1,895,588	1,784,283
Accounts Receivable	907,000	924,573	961,748	1,008,220	1,056,222	1,099,998	1,145,973	1,194,268
Inventory	236,000	237,180	246,065	258,653	271,363	282,327	293,902	306,127
Other Current Assets	159,000	162,081	168,598	176,744	185,159	192,833	200,893	209,359
<b>Total Current Assets</b>	<b>1,802,000</b>	<b>2,046,749</b>	<b>2,385,990</b>	<b>2,772,943</b>	<b>3,180,862</b>	<b>3,588,026</b>	<b>4,036,356</b>	<b>3,994,038</b>
Gross Fixed Assets	2,634,000	2,967,336	3,314,074	3,677,567	4,058,366	4,454,947	4,868,104	5,298,673
(Accum. Depreciation)	-	(204,894)	(418,027)	(641,458)	(875,528)	(1,119,298)	(1,373,257)	(1,637,918)
<b>Total Fixed Assets</b>	<b>2,634,000</b>	<b>2,762,441</b>	<b>2,896,047</b>	<b>3,036,108</b>	<b>3,182,838</b>	<b>3,335,649</b>	<b>3,494,847</b>	<b>3,660,755</b>
Capitalized Exp.	274,170	235,003	195,836	156,669	117,501	78,334	39,167	0
Purchase Goodwill	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000	4,670,000
Other Intangibles	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000	1,956,000
Other Investm's & Assets	1,748,000	1,748,000	1,748,000	1,748,000	1,748,000	1,748,000	1,748,000	1,748,000
<b>Total Assets</b>	<b>13,084,170</b>	<b>13,418,193</b>	<b>13,851,872</b>	<b>14,339,720</b>	<b>14,855,202</b>	<b>15,376,009</b>	<b>15,944,371</b>	<b>16,028,792</b>
<b>LIABILITIES &amp; SHAREHOLDER EQUITY</b>								
Accounts Payable	2,080,000	2,090,400	2,168,712	2,279,651	2,391,675	2,488,305	2,590,326	2,698,069
Accrued Expenses	-	-	-	-	-	-	-	-
Other Current Liabilities	-	-	-	-	-	-	-	-
<b>Total Current Liabilities</b>	<b>2,080,000</b>	<b>2,090,400</b>	<b>2,168,712</b>	<b>2,279,651</b>	<b>2,391,675</b>	<b>2,488,305</b>	<b>2,590,326</b>	<b>2,698,069</b>
Revolver	-	-	-	-	-	-	-	-
Term Loan A	-	-	-	-	-	-	-	-
Term Loan B	3,800,000	3,762,000	3,724,000	3,686,000	3,648,000	3,610,000	3,572,000	-
New Term Loan	-	-	-	-	-	-	-	3,000,000
Other Bank Debt / Existing	-	-	-	-	-	-	-	-
Senior Secured Notes	-	-	-	-	-	-	-	-
Senior Unsecured / Subordinated Notes	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000	2,200,000
Junior Subordinated Notes	-	-	-	-	-	-	-	-
<b>Total Debt</b>	<b>6,000,000</b>	<b>5,962,000</b>	<b>5,924,000</b>	<b>5,886,000</b>	<b>5,848,000</b>	<b>5,810,000</b>	<b>5,772,000</b>	<b>5,200,000</b>
Deferred Taxes	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000
Other Liabilities & OPEB	2,069,000	2,069,000	2,069,000	2,069,000	2,069,000	2,069,000	2,069,000	2,069,000
Minority Interest	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
<b>Total Liabilities</b>	<b>10,190,000</b>	<b>10,162,400</b>	<b>10,202,712</b>	<b>10,275,651</b>	<b>10,349,675</b>	<b>10,408,305</b>	<b>10,472,326</b>	<b>10,008,069</b>
<b>OWNER'S EQUITY</b>								
Treasury Stock	-	-	-	-	-	-	-	-
Preferred Stock	-	-	-	-	-	-	-	-
Common Stock	2,894,170	2,894,170	2,894,170	2,894,170	2,894,170	2,894,170	2,894,170	2,894,170
Add'l Paid-in-Capital	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Retained Earnings	-	361,623	754,990	1,169,899	1,611,357	2,073,535	2,577,875	3,126,554
<b>Total Equity</b>	<b>2,894,170</b>	<b>3,255,793</b>	<b>3,649,160</b>	<b>4,064,069</b>	<b>4,505,527</b>	<b>4,967,705</b>	<b>5,472,045</b>	<b>6,020,724</b>
<b>Total Liabilities &amp; Equity</b>	<b>13,084,170</b>	<b>13,418,193</b>	<b>13,851,872</b>	<b>14,339,720</b>	<b>14,855,202</b>	<b>15,376,009</b>	<b>15,944,371</b>	<b>16,028,792</b>

Tying it all Together: For the model to work correctly, so that future projected Assets are equal to future projected Liabilities, all model entries must tie to other entries, as follows:

- a. All the entries in the Income Statement must tie back to the Cashflow Statement.
- b. All entries in the Cashflow Statement that are not dependent on Balance Sheet entries (e.g., Capital Expenditures) must tie back to the Balance Sheet.



- c. All entries in the Balance Sheet Statement that are not dependent on the Cashflow statement (e.g., Accounts Payable) must tie back to the Balance Sheet.

## 5. SECURITIES EXCHANGE COMMISSION & BANK REGULATIONS

Securities Exchange Commission (SEC)<sup>16</sup>

The SEC's Office of Investor Education and Advocacy issued an Investor Bulletin to educate individual investors about high-yield corporate bonds, also called "junk bonds." These bonds are primarily used for LBOs. While they generally offer a higher yield than investment-grade bonds, high-yield bonds also carry a higher risk of default.

The SEC states the following regarding High Yield Bonds:

"Some investors with a greater risk tolerance may find high-yield corporate bonds attractive, particularly in low interest rate environments. If you are considering buying a high-yield bond, it is important that you understand the risks involved. These are:

**"Default Risk.** Also, referred to as credit risk, this is the risk that a company will fail to make timely interest or principal payments and default on its bond. Defaults also can occur if the company fails to meet certain terms of its debt agreement. Because high-yield bonds are typically issued by companies with higher risks of default, this risk is particularly important to consider when investing in high-yield bonds.

**"Interest rate risk.** Market interest rates have a major impact on bond investments. The price of a bond moves in the opposite direction than market interest rates—like opposing ends of a seesaw. This presents investors with interest rate risk, which is common to all bonds. In addition, the longer the bond's maturity, the more time there is for rates to change and, as a result, affect the price of the bond. Therefore, bonds with longer maturities generally present greater interest rate risk than bonds of similar credit quality that have shorter maturities.

**Economic risk.** If the economy falters, some investors are likely to try to sell their bonds. In what is known as a "flight to quality," several investors may decide to replace their riskier high-yield bonds with safer ones, such as U.S. treasury bonds. If there are more sellers than buyers for high-yield bonds, the supply will exceed demand and prices of the bonds will fall. In addition, some companies that issue high-yield bonds may be less able to weather challenging economic circumstances, increasing the risk of default.

**"Liquidity risk.** liquidity is the ability to sell an asset, such as a bond, for cash when the owner chooses. Bonds that are traded frequently and at high volumes may have stronger liquidity than bonds that trade less frequently. liquidity risk is the risk that investors seeking to sell their bonds may not receive a price that reflects the true value of the bonds (based on the bond's interest rate and creditworthiness of the company). High-yield bonds may be subject to more liquidity risk than, for example, investment-grade bonds."

Leveraged Lending Guidelines<sup>17</sup>:

Following the financial crisis of 2008, the Office of the Comptroller of the Currency (OCC), the Board of Governors of the Federal Reserve System (Board), and the Federal Deposit Insurance Corporation (FDIC) issued lending guidance for financing LBOs. According to these government agencies, in a letter issued on October 2013 stated that “given the high-risk profile of leveraged transactions, financial institutions engaged in leveraged lending need to adopt a risk management framework that has an intensive and frequent review and monitoring process. The framework should have as its foundation written risk objectives, risk acceptance criteria, and risk controls. A lack of robust risk management processes and controls at a financial institution with significant leveraged lending activities could contribute to supervisory findings that the financial institution is engaged in unsafe-and-unsound banking practices”. This letter had a significant impact of how banks lend money to finance LBOs. For one, to avoid criticism, the initial Leveraged Ratio of Total Debt / EBITDA needs to be at 6.0x or less, or the transaction model needs to show (to the Regulators’ satisfaction) that 50% of the transaction’s total debt will be repaid in less than 7 years.

## 6. SUMMARY OF KEY POINTS

- A Leveraged Buyout (LBO) is the acquisition by an investor of a company with mostly borrowed money. The Debt for the acquisition is scheduled to be repaid by the operating cash flows of the company and/or proceeds from selling the company or refinancing the acquisition debt with new debt. The investor is not personally responsible for paying the debt nor is he required to add any other capital to support his or her investment.
- LBOs have been around for 100 years but became more organized in the late 1980s with the creation of the syndicated loan market and the organization by the financial sponsors of mega private equity funds to be used for LBOs.
- There are three types of LBOs: Public to Private Transactions, Private to Private Transactions and Management Buyouts.
- LBOs typically reduce a company’s tax payments (and hence increase the returns available to its equity investors), primarily due to the tax shield from interest expense, and on occasion due to the tax shield from increased depreciation and amortization expense following the write up of a company’s assets upon its LBO.
- Over the years some LBO tax benefits, and strategies have however been eliminated.
- The debt financing of an LBO is provided by the traditional commercial banks, by Collateralized Loan Obligation funds, insurance companies, hedge funds and other types of funds, and in the case of public High Yield Bonds by more varied public investors.
- There are many types of debt facilities used in the financing of an LBO including Bank Debt, High Yield Debt and Mezzanine Notes.

- A good LBO needs to have strong cash flows, good growth prospects, low capital expenditures, a strong asset base and strong management.
- The concept of leverage enhances the equity returns because of the low cost of debt. The equity return can be enhanced by Enterprise Value growth, debt repayment and by acquisition multiple expansion.
- In structuring an LBO, the first measurement is debt capacity. Basically, what is the maximum level of debt that a company can support
- LBO financial modeling starts with complete historical information, a considered projection of future operating performance, and a modelling of the acquisition debt and the projected equity returns.
- The SEC regulates High Yield issuance, while the Office of the Comptroller of the Currency (OCC), the Board of Governors of the Federal Reserve System (“the Fed”), and the Federal Deposit Insurance Corporation (FDIC), regulate banks’ lending for LBOs.

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