## TUCK SCHOOL OF BUSINESS AT DARTMOUTH

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 PRIVATE EQUTTY AND ENTREPRENEURSHIP
## Note on Leveraged Buyouts

A leveraged buyout, or LBO, is the acquisition of a company or division of a company with a substantial portion of borrowed funds. In the 1980s, LBO firms and their professionals were the focus of considerable attention, not all of it favorable. LBO activity accelerated throughout the 1980s, starting from a basis of four deals with an aggregate value of $\$ 1.7$ billion in 1980 and reaching its peak in 1988 , when 410 buyouts were completed with an aggregate value of $\$ 188$ billion ${ }^{1}$.

In the years since 1988, downturns in the business cycle, the near-collapse of the junk bond market, and diminished structural advantages all contributed to dramatic changes in the LBO market. In addition, LBO fund raising has accelerated dramatically. From 1980 to 1988 LBO funds raised approximately $\$ 46$ billion; from 1988 to 2000, LBO funds raised over $\$ 385$ billion $^{2}$. As increasing amounts of capital competed for the same number of deals, it became increasingly difficult for LBO firms to acquire businesses at attractive prices. In addition, senior lenders have become increasingly wary of highly levered transactions, forcing LBO firms to contribute higher levels of equity. In 1988 the average equity contribution to leveraged buyouts was $9.7 \%$. In 2000 the average equity contribution to leveraged buyouts was almost $38 \%$, and for the first three quarters of 2001 average equity

[^0]This case was prepared by John Olsen T'03 and updated by Salvatore Gagliano T'04 under the supervision of Adjunct Assistant Professor Fred Wainwright and Professor Colin Blaydon of the Tuck School of Business at Dartmouth College. It was written as a basis for class discussion and not to illustrate effective or ineffective management practices.

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contributions were above $40 \%^{3}$. Contributing to this trend was the near halt in enterprise lending, in stark comparison to the 1990s, when banks were lending at up to 5.0x EBITDA. Because of lenders' over-exposure to enterprise lending, senior lenders over the past two years are lending strictly against company asset bases, increasing the amount of equity financial sponsors must invest to complete a transaction. ${ }^{4}$

These developments have made generating target returns (typically 25 to 30\%) much more difficult for LBO firms. Where once they could rely on leverage to generate returns, LBO firms today are seeking to build value in acquired companies by improving profitability, pursuing growth including roll-up strategies (in which an acquired company serves as a "platform" for additional acquisitions of related businesses to achieve critical mass and generate economies of scale), and improving corporate governance to better align management incentives with those of shareholders.

## History of the LBO

While it is unclear when the first leveraged buyout was carried out, it is generally agreed that the first early leveraged buyouts were carried out in the years following World War II. Prior to the 1980s, the leveraged buyout (previously known as a "bootstrap" acquisition) was for years little more than an obscure financing technique.

In the years following the end of World War II the Great Depression was still relatively fresh in the minds of America's corporate leaders, who considered it wise to keep corporate debt ratios low. As a result, for the first three decades following World War II, very few American companies relied on debt as a significant source of funding. At the same time, American business became caught up in a wave of conglomerate building that began in the early 1960s. In some cases, corporate governance guidelines were inconsistently implemented. ${ }^{5}$ The ranks of middle management swelled and corporate profitability began to slide. It was in this environment that the modern LBO was born.

In the late 1970s and early 1980s, newly formed firms such as Kohlberg Kravis Roberts and Thomas H. Lee Company saw an opportunity to profit from inefficient

[^1]and undervalued corporate assets. Many public companies were trading at a discount to net asset value, and many early leveraged buyouts were motivated by profits available from buying entire companies, breaking them up and selling off the pieces. This "bust-up" approach was largely responsible for the eventual media backlash against the greed of so-called "corporate raiders", illustrated by books such as The Rain on Macy's Parade and films such as Wall Street and Barbarians at the Gate, based on the book by the same name.

As a new generation of managers began to take over American companies in the late 1970s, many were willing to consider debt financing as a viable alternative for financing operations. Soon LBO firms' constant pitching began to convince some of the merits of debt-financed buyouts of their businesses. From a manager's perspective, leveraged buyouts had a number of appealing characteristics:

- Tax advantages associated with debt financing,
- Freedom from the scrutiny of being a public company or a captive division of a larger parent,
- The ability for founders to take advantage of a liquidity event without ceding operational influence or sacrificing continued day-to-day involvement, and
- The opportunity for managers to become owners of a significant percentage of a firm's equity.


## The Theory of the Leveraged Buyout

While every leveraged buyout is unique with respect to its specific capital structure, the one common element of a leveraged buyout is the use of financial leverage to complete the acquisition of a target company. In an LBO, the private equity firm acquiring the target company will finance the acquisition with a combination of debt and equity, much like an individual buying a rental house with a mortgage (See Exhibit 1). Just as a mortgage is secured by the value of the house being purchased, some portion of the debt incurred in an LBO is secured by the assets of the acquired business. The bought-out business generates cash flows that are used to service the debt incurred in its buyout, just as the rental income from the house is used to pay down the mortgage. In essence, an asset acquired using leverage helps pay for itself (hence the term "bootstrap" acquisition).

In a successful LBO, equity holders often receive very high returns because the debt holders are predominantly locked into a fixed return, while the equity holders receive all the benefits from any capital gains. Thus, financial buyers invest in highly leveraged companies seeking to generate large equity returns. An LBO fund
will typically try to realize a return on an LBO within three to five years. Typical exit strategies include an outright sale of the company, a public offering or a recapitalization. Table 1 further describes these three exit scenarios.

Table 1. Potential investment exit strategies for an LBO fund.

| Exit Strategy | Comments |
| :--- | :--- |
| Sale | Often the equity holders will seek an outright sale to a strategic <br> buyer, or even another financial buyer |
| Initial Public Offering | While an IPO is not likely to result in the sale of the entire entity, <br> it does allow the buyer to realize a gain on its investment |
| Recapitalization | The equity holders may recapitalize by re-leveraging the entity, <br> replacing equity with more debt, in order to extract cash from the <br> company |

## LBO Candidate Criteria

Given the proportion of debt used in financing a transaction, a financial buyer's interest in an LBO candidate depends on the existence of, or the opportunity to improve upon, a number of factors. Specific criteria for a good LBO candidate include:

- Steady and predictable cash flow
- Clean balance sheet with little debt
- Strong, defensible market position
- Limited working capital requirements
- Minimal future capital requirements
- Heavy asset base for loan collateral
- Divestible assets
- Strong management team
- Viable exit strategy
- Synergy opportunities
- Potential for expense reduction


## Transaction Structure

An LBO will often have more than one type of debt in order to procure all the required financing for the transaction. The capital structure of a typical LBO is summarized in Table 2.

Table 2. Typical LBO transaction structure.

| Offering | Percent of Transaction | Cost of Capital | Lending Parameters | Likely Sources |
| :---: | :---: | :---: | :---: | :---: |
| Senior Debt | $50-60 \%$ | $7-10 \%$ | 5-7 Years Payback <br> 2.0x - 3.0x EBITDA <br> 2.0x interest coverage | Commercial banks Credit companies Insurance companies |
| Mezzanine Financing | 20-30\% | 10-20\% | 7-10 Years Payback <br> 1.0 - 2.0x EBITDA | Public Market Insurance companies LBO/Mezzanine Funds |
| Equity | 20-30\% | $25-40 \%$ | 4-6 Year Exit Strategy | Management <br> LBO funds <br> Subordinated debt holders <br> Investment banks |

It is important to recognize that the appropriate transaction structure will vary from company to company and between industries. Factors such as the outlook for the company's industry and the economy as a whole, seasonality, expansion rates, market swings and sustainability of operating margins should all be considered when determining the optimal debt capacity for a potential LBO target. For a detailed illustration of the mechanics of an LBO transaction, see Exhibit 2, which models a hypothetical buyout scenario.

## Pros and Cons of Using Leverage

There are a number of advantages to the use of leverage in acquisitions. Large interest and principal payments can force management to improve performance and operating efficiency. This "discipline of debt" can force management to focus on certain initiatives such as divesting non-core businesses, downsizing, cost cutting or investing in technological upgrades that might otherwise be postponed or rejected outright. In this manner, the use of debt serves not just as a financing technique, but also as a tool to force changes in managerial behavior.

Another advantage of the leverage in LBO financing is that, as the debt ratio increases, the equity portion of the acquisition financing shrinks to a level at which a private equity firm can acquire a company by putting up anywhere from 20-40\% of the total purchase price.

Interest payments on debt are tax deductible, while dividend payments on equity are not. Thus, tax shields are created and they have significant value. A firm can increase its value by increasing leverage up to the point where financial risk makes the cost of equity relatively high compared to most companies.

Private equity firms typically invest alongside management, encouraging (if not requiring) top executives to commit a significant portion of their personal net worth to the deal. By requiring the target's management team to invest in the acquisition, the private equity firm guarantees that management's incentives will be aligned with their own.

The most obvious risk associated with a leveraged buyout is that of financial distress. Unforeseen events such as recession, litigation, or changes in the regulatory environment can lead to difficulties meeting scheduled interest payments, technical default (the violation of the terms of a debt covenant) or outright liquidation, usually resulting in equity holders losing their entire investment on a bad deal.

The value that a financial buyer hopes to extract from an LBO is closely tied to sales growth rates, margins and discount rates, as well as proper management of investments in working capital and capital expenditures. Weak management at the target company or misalignment of incentives between management and shareholders can also pose threats to the ultimate success of an LBO. In addition, an increase in fixed costs from higher interest payments can reduce a leveraged firm's ability to weather downturns in the business cycle. Finally, in troubled situations, management teams of highly levered firms can be distracted by dealing with lenders concerned about the company's ability to service debt.

## Buyout Firm Structure and Organization

The equity that LBO firms invest in an acquisition comes from a fund of committed capital that has been raised from institutional investors, such as corporate pension plans, insurance companies and college endowments, as well as individual "qualified" investors. A qualified investor is defined by the SEC as (i) an individual with net worth, or joint net worth with spouse, over $\$ 1$ million, or (ii) an individual with income over $\$ 200,000$ in each of the two most recent years or joint income
with spouse exceeding $\$ 300,000$ for those years and a reasonable expectation of the same income level in the current year. Buyout funds are structured as limited partnerships, with the firm's principals acting as general partner and investors in the fund being limited partners. The general partner is responsible for making all investment decisions relating to the fund, with the limited partners responsible for transferring committed capital to the fund upon notice of the general partner.

As a general rule, funds raised by private equity firms have a number of fairly standard provisions:

Minimum Commitment: Prospective limited partners are required to commit a minimum amount of equity. Limited partners make a capital commitment, which is then drawn down (a "takedown" or "capital call") by the general partner in order to make investments with the fund's equity.

Investment or Commitment Period: During the term of the commitment period, limited partners are obligated to meet capital calls upon notice by the general partner by transferring capital to the fund within an agreed-upon period of time (often 10 days). The term of the commitment period usually lasts for either five or six years after the closing of the fund or until 75 to $100 \%$ of the fund's capital has been invested, whichever comes first.

Term: The term of the partnership formed during the fund-raising process is usually ten to twelve years, the first half of which represents the commitment period (defined above), the second half of which is reserved for managing and exiting investments made during the commitment period.

Diversification: Most funds' partnership agreements stipulate that the partnership may not invest more than $25 \%$ of the fund's equity in any single investment.

The LBO firm generates revenue in three ways:
Carried Interest: Carried interest is a share of any profits generated by acquisitions made by the fund. Once all the partners have received an amount equal to their contributed capital any remaining profits are split between the general partner and the limited partners. Typically, the general partner's carried interest is $20 \%$ of any profits remaining once all the partners' capital has been returned, although some funds guarantee the limited partners a priority return of $8 \%$ on their committed capital before the general partner's carried interest begins to accrue.

Management Fees: LBO firms charge their limited partners a management fee to cover overhead and expenses associated with identifying, evaluating and executing
acquisitions by the fund. The management fee is intended to cover legal, accounting, and consulting fees associated with conducting due diligence on potential targets, as well as general overhead. Other fees, such as lenders' fees and investment banking fees are generally charged to any acquired company after the closing of a transaction. Management fees range from $0.75 \%$ to $3 \%$ of committed capital, although $2 \%$ is common. Management fees are often reduced after the end of the commitment period to reflect the lower costs of monitoring and harvesting investments.

Co-Investment: Executives and employees of the leveraged buyout firm may coinvest along with the partnership on any acquisition made by the fund, provided the terms of the investment are equal to those afforded to the partnership.

See exhibits 1 and 2 below for detailed examples and analyses of leveraged transactions.

## Valuation

The valuation of established companies that are the usual acquisition targets of LBO funds can be done using two primary methods:

- Market comparisons. These are metrics such as multiples of revenue, net earnings and EBITDA that can be compared among public and private companies. Usually a discount of $10 \%$ to $40 \%$ is applied to private companies due to the lack of liquidity of their shares.
- Discounted cash flow (DCF) analysis. This is based on the concept that the value of a company is based on the cash flows it can produce in the future. An appropriate discount rate is used to calculate a net present value of projected cash flows. ${ }^{6}$

[^2]
## Exhibit 1. Leveraged Buyout: A Simple Example

The following example is intended to demonstrate the effect of leverage when making an acquisition. Suppose you bought an apartment house on December 31, 2003 as an investment for $\$ 750,000$ with a down payment of $10 \%$, or $\$ 75,000$. The remaining $\$ 675,000$ of the purchase price was financed through a bank loan with an interest rate of $7.5 \%$. Your annual rental income from the house is $\$ 250,000$ and your annual expenses are $\$ 50,000$ in maintenance charges and $\$ 10,000$ in property taxes. For simplicity, assume there are no income taxes, all cash flows occur at the end of each year, and the value of the rental property remains fixed.

Your income for the next five years can be summarized as follows:


Assuming that all free cash flow each year is used to repay debt and the value of the property remains fixed, your equity ownership in the house should steadily increase over the period as you pay down your mortgage:


At the end of five years, your equity ownership as a percentage of total capitalization increases from $10 \%$ to $100 \%$.

## Return on Investment

Equity Value
\$884,544
Compund Annual Return on Equity
63.81\%

Taking into account the value of the apartment house at the end of 2008, your initial $\$ 75,000$ investment is worth nearly $\$ 900,000$, representing a compounded annual return of $64 \%$. Because you were able to take advantage of leverage in financing the purchase, you now own an asset of relatively significant equity value relative to the amount of your initial equity investment.

Financing the purchase of the apartment house with significant amounts of debt will dramatically influence your return on the investment. To further illustrate this, consider the effect of varying combinations of debt and equity to make the original purchase. Furthermore, assume that the real estate market takes a turn for the worse and that you can only rent the house for $\$ 125,000$ a year while still having to pay the same expenses in maintenance and property taxes.

Assuming that you are stuck with this investment for the next five years, your income stream can be summarized as:

| Income Statement <br> Year Ending December 31, | 2004 | 2005 | 2006 | 2007 | 2008 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rental Income | \$125,000 | \$125,000 | \$125,000 | \$125,000 | \$125,000 |
| Maintenace Charges | 50,000 | 50,000 | 50,000 | 50,000 | 50,000 |
| Property Taxes | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Rental Income | 65,000 | 65,000 | 65,000 | 65,000 | 65,000 |
| Interest Payments | 50,065 | 48,901 | 47,647 | 46,295 | 44,837 |
| Free Cash Flow Used to Repay Debt | 14,935 | 16,099 | 17,353 | 18,705 | 20,163 |

If you eventually sell the house in 2008 for $\$ 500,000, \$ 750,000$ or $\$ 1$ million, your compounded annual return on investment in each financing scenario can be summarized as:

Five- Year Internal Rates of Return Based on Varying Financing Combinations and Exit Prices

| Sale Price | 100\% Equity |  | 50\% Debt / 50\% Equity |  | 75\% Debt / 25\% Equity |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Proceeds to Equity Holders | Return to Equity Holders | Proceeds to Equity Holders | Return to Equity Holders | Proceeds to Equity Holders | Return to Equity Holders |
| \$500,000 | \$825,000 | 1.92\% | \$348,830 | (1.44\%) | \$75,971 | (16.53\%) |
| 750,000 | 1,075,000 | 7.47\% | 598,830 | 9.81\% | 325,971 | 11.70\% |
| 1,000,000 | 1,325,000 | 12.05\% | 848,830 | 17.75\% | 575,971 | 25.16\% |

The proceeds to you at exit include the repayment of the outstanding mortgage balance and the proceeds from your exiting sale price. Note how increasing financing leverage magnifies your IRR, either positively or negatively.

While this example is rather simple, we see that levering up to make an investment in any asset increases financial risk and significantly influences one's gain or loss on the investment.

## Exhibit 2. LBO Mechanics

To illustrate the mechanics of a leveraged buyout we will look at an LBO of ABC Company. The Leveraged Buyout Model shown in the following pages lays out transaction assumptions, analyses and pro forma financial statements for the Company. An explanation of each section of the model follows.

## Transaction Assumptions

This section includes basic transaction assumptions, including the expected closing date, the accounting method, amortization for transaction fees and relevant market interest rates. Within the model, the closing date drives the calculation of internal rates of returns to the equity investors. The accounting method for the transaction is either purchase or recapitalization accounting. In an acquisition, the Purchase Method treats the acquirer as having purchased the assets and assumed the liabilities of the target, which are then written up or down to their respective fair market values. The difference between the purchase price and the net assets acquired is attributed to goodwill. In a recapitalization, the target's capitalization is restructured without stepping up the basis of the target's assets for accounting purposes, and there is no transaction goodwill. For recapitalization accounting to be used in a transaction, the Securities and Exchange Commission requires that the target company be an existing entity that is not formed or altered, such as through reincorporation, to facilitate the transaction.

Transaction fees, such as lenders' fees, the equity sponsor's transaction costs and investment banking fees are generally charged to the acquired company after the closing of a transaction, capitalized on the company's balance sheet (since benefits from the transaction accrue to the company over multiple years) and typically amortized over a period of seven years. Market interest rates, primarily Treasury note rates and the London InterBank Offered rate (LIBOR), are used by lenders to price the debt lent in the transaction. Finally, the Transaction Summary shows the equity purchase price of the transaction, calculates the transaction value, and summarizes the relevant transaction multiples.

## Sources and Uses of Funds

This section is used to input the transaction structuring assumptions for debt and equity sources. The funds raised are then allocated accordingly, including the purchase of the Company's common equity, the refinancing of current debt and payment of transaction fees.

Capitalization: Most leveraged buyouts make use of multiple tranches of debt to finance the transaction. Looking at the sources and uses of funds of funds in Exhibit 2 it can be seen that the LBO of Target is financed with only two tranches
of debt, senior and junior. In reality, a large leveraged buyout will likely be financed with multiple tranches of debt that could include (in decreasing order of seniority) some or all of the following:

- Bank Debt is usually provided by one of more commercial banks lending to the transaction. It is usually comprised of two components: a revolving credit facility and term debt, which sit pari passu to each other. Bank lenders have the most senior claim against the cash flows of the business. As such, bank debt has the senior claim on the assets of the Company, with bank debt principal and interest payments taking precedence over other, junior sources of debt financing.
- A revolving credit facility ("bank revolver") is a source of funds that the bought-out firm can draw upon as its working capital needs dictate. A revolving credit facility is designed to offer the boughtout firm some flexibility with respect to its capital needs. It serves as a line of credit that allows the firm to make certain capital investments, deal with unforeseen costs, or cover increases in working capital without having to seek additional debt or equity financing. Credit facilities usually have maximum borrowing limits and conservative repayment terms. The model below assumes that the company uses excess cash flow to repay outstanding borrowings against its credit facility.
- Term debt, which is often secured by the assets of the bought-out firm, is also provided by banks and insurance companies in the form of private placement investments. Term debt is usually priced with a spread above treasury notes and has maturities of five to ten years. The amortization of term debt is negotiable and can be a straight-line amortization or interest-only payments during the first several years with full amortization payments thereafter.

Mezzanine Financing is so named because it exists in the middle of the capital structure and generally fills the gap between bank debt and the equity in a transaction. Mezzanine financing is junior to the bank debt incurred in financing the leveraged buyout and can take the form of subordinated notes from the private placement market or high-yield bonds from the public markets, depending on the size and attractiveness of the deal. Mezzanine financing is compensated for its lower priority and higher level of risk with higher interest rates, either cash, paid-in-kind (PIK) or both, and, at times, warrants to purchase typically $2 \%$ to $5 \%$ of the pro forma company's common equity.

Each tranche of debt financing will likely have different maturities and repayment terms. For example, some sources of financing require mandatory amortization of principal in addition to scheduled interest payments. There are a number of ways private equity firms can adjust the target's capital structure. The ability to be creative in structuring and financing a leveraged buyout allows private equity firms to adjust to changing market conditions.

In addition to the debt component of an LBO, there is also an equity component in financing the transaction.

- Private equity firms typically invest alongside management to ensure the alignment of management and shareholder interests. In large LBOs, private equity firms will sometimes team up to create a consortium of buyers, thereby reducing the amount of capital exposed to any one investment. As a general rule, private equity firms will own $70-90 \%$ of the common equity of the bought-out firm, with the remainder held by management and former shareholders.
- Another potential source of financing for leveraged buyouts is preferred equity. Preferred equity is often attractive because its dividend interest payments represent a minimum return on investment while its equity ownership component allows holders to participate in any equity upside. Preferred interest is often structured as PIK dividends, which means any interest is paid in the form of additional shares of preferred stock. LBO firms will often structure their equity investment in the form of preferred stock, with management, employees and warrant holders receiving common stock.


## Capitalization Information and Summary Coverage \& Leverage Statistics

Buyout funds pay close attention to the Company's ability to service the principal and interest payments following the transaction. This section estimates the Company's pro forma ability to service its debt and amount of leverage it takes on in the transaction.

## Balance Sheet Transaction Adjustments

This section depicts the changes in the Company's balance sheet as a result of the LBO. The "Actual" column shows the Company's most recent balance sheet before the transaction. The "Adjustments" columns adjust the balance sheet to take into account the capital raised, repayment of current Company debt, and purchase of the Company's common equity. This section also depicts the capitalization of
transaction goodwill and transaction costs. Finally, the "LBO Pro Forma" column shows the balance sheet after the transaction.

## Pro Forma Financial Statements

The model also describes the Company's revised financial projections post-LBO. Certain line items to take note of on the income statement and balance sheet include:

Transaction Fee Amortization: This line item reflects the amortization of capitalized financing, legal, and accounting fees associated with the transaction. Transaction fee amortization, like depreciation, is a tax-deductible non-cash expense. In most cases the allowable amortization period for such fees is five to seven years (although in some cases LBO firms may choose to expense all such fees in year one so as to present the "cleanest" set of numbers possible going forward).

Management Fees: In addition to transaction fees, LBO shops will often charge a transaction closing fee to the company, usually around $3 \%$ of the equity provided. Also, in many deals the LBO shop will charge an ongoing management fee of approximately $\$ 1$ to $\$ 4$ million annually, depending on the size of the company and the magnitude of the role of the LBO shop.

Interest Expense: Interest expense for each tranche of debt financing is calculated based upon the average yearly balance of each tranche. This method of calculating interest expense attempts to resemble the quarterly interest payments that are often made in reality.

Transaction Goodwill: When the purchase method of accounting is used, transaction goodwill, or the amount in excess of tangible book value the acquirer paid for the Company, is capitalized at closing and adjusted each year for any impairment.

Cash Sweep Assumption: For the purpose of simplicity, the model assumes a cash sweep, or Excess Cash Flow Recapture, on the bank revolver and senior term debt. A cash sweep is a provision of certain debt covenants that stipulates that a portion of excess cash (namely free cash flow available after mandatory amortization payments have been made) generated by the bought-out business will be used to pay down principal by tranche in the order of seniority. In reality, a cash sweep usually applies to the bank facility and senior term debt but not to mezzanine and high-yield financing. Note that term debt is not a credit line. Once paid down, term debt cannot be "reborrowed" by the company. Usually, subordinated debt holders charge a significant prepayment penalty, or "make-whole premium," for any
prepayments. Note that if a cash sweep was not mandated by banks and the Company was able to reinvest its available cash flow in projects whose internal rate of return was higher than the cost of debt, the overall return to the LBO investors would be higher.

## Equity Sponsor IRR Calculation

This section summarizes the returns the buyout fund should expect three to five years after closing the transaction assuming the company is acquired at a multiple of EBITDA. As a general rule, leveraged buyout firms seek to exit their investments in 5 to 7 years. Financial projections that rely solely on "multiple arbitrage" to build enterprise value are suspect, since the expansion or contraction of valuation multiples is dictated partly by the financial markets and partly by the sector focus and competitive strengths of the individual company. An exit usually involves either a sale of the portfolio company, an IPO, a recapitalization, or a sale to another LBO firm.
[See next page]
Center for Private Equity and Entrepreneurship

## Balance Sheet Transaction Adjustments

|  | Actual 06/29/03 | Adjustments |  | $\begin{gathered} \text { LBO } \\ \text { Pro Forma } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Sources | Uses |  |
| Assets |  |  |  |  |
| Cash and Cash Equivalents | \$148.6 | \$4,411.7 | (\$4,411.7) | \$148.6 |
| Accounts Receivable | 96.5 | 0.0 | 0.0 | 96.5 |
| Inventory | 49.8 | 0.0 | 0.0 | 49.8 |
| Other Current Assets | 21.8 | 0.0 | 0.0 | 21.8 |
| Total Current Assets | 316.6 | 4,411.7 | $(4,411.7)$ | 316.6 |
| Net Property, Plant \& Equipment | 1,948.3 | 0.0 | 0.0 | 1,948.3 |
| Transaction Goodwill | 0.0 | 0.0 | 0.0 | 0.0 |
| Transaction Costs | 0.0 | 0.0 | 86.2 | 86.2 |
| Goodwill | 279.5 | 0.0 | 0.0 | 279.5 |
| Intangibles | 47.1 | 0.0 | 0,0 | 47.1 |
| Other Assets | 193.3 | 0.0 | 0.0 | 193.3 |
| Total Assets | \$2,784.8 | \$4,411.7 | (\$4,325.5) | \$2,871.0 |
| Liabilities and Shareholders' Equity |  |  |  |  |
| Accounts Payable | 91.0 | 0.0 | 0.0 | 91.0 |
| Other Current Liabilities | 218.8 | 0.0 | 0.0 | 218.8 |
| Total Current Liabilities | 314.8 | 5.0 | (5.0) | 314.8 |
| Other Liabilities | 201.0 | 0.0 | 0.0 | 201.0 |
| Senior Debt | 689.5 | 2,205.8 | (689.5) | 2,205.8 |
| Subordinated Debt | 0.0 | 661.8 | 0.0 | 661.8 |
| Total Liabilities | 1,205.3 | 2,872.6 | (694.5) | 3,383.5 |
| Existing Preferred Stock | 0.0 | 0.0 | 0.0 | 0.0 |
| Acquisition PIK Preferred | 0.0 | 0.0 | 0.0 | 0.0 |
| Common Equity | 1,579.5 | 1,539.0 | $(3,631.0)$ | (512.5) |
| Total Liabilities and Equity | \$2,784.8 | \$4,411.7 | (\$4,325.5) | \$2,871.0 |
| Balance Sheet Check | 0.0000 | 0.0000 | 0.0000 | 0.0000 |

## Pro Forma Income Statement

| Fiscal Year End 12/31 | $\begin{gathered} \text { Estimated } \\ \hline 2003 \text { PF } \\ \hline \end{gathered}$ | Projected |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2004 | 2005 | 2006 | 2007 | 2008 |
| Sales | \$3,139.8 | \$3,532.3 | \$3,973.8 | \$4,410.9 | \$4,852.0 | \$5,288.7 |
| Cost of Goods Sold | 1,591.2 | 1,766.1 | 1,947.2 | 2,117.2 | 2,304.7 | 2,512.1 |
| Gross Profit | 1,548.6 | 1,766.1 | 2,026.6 | 2,293.7 | 2,547.3 | 2,776.6 |
| SG\&A | 273.4 | 282.6 | 317.9 | 352.9 | 388.2 | 423.1 |
| Other Operating Expenses | 664.5 | 706.5 | 755.0 | 838.1 | $\bigcirc 921.9$ | 1,004.9 |
| EBITDA | 610.7 | 777.1 | 953.7 | 1,102.7 | 1,237.3 | 1,348.6 |
| Depreciation | 309.9 | 398.2 | 497.6 | 607.8 | 729.1 | 782.9 |
| Amortization | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| EBIT | 294.9 | 373.0 | 450.2 | 489.0 | 502.2 | 559.8 |
| Amortization of Transaction Fees | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 | 12.3 |
| Management Fees | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Interest Expense (net) | 236.0 | 236.0 | 229.2 | 216.4 | 198.1 | 175.3 |
| Other (Income) / Expense | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 | 6.9 |
| Pre-Tax Income | 38.7 | 116.8 | 200.8 | 252.3 | 283.9 | 364.4 |
| Provision for Taxes | 14.2 | 42.9 | 73.8 | 92.7 | 104.3 | 133.9 |
| Net Income | 24.5 | 73.8 | 127.0 | 159.6 | 179.6 | 230.5 |
| Preferred Dividends | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net Income to Common | \$24.5 | \$73.8 | \$127.0 | \$159.6 | \$179.6 | \$230.5 |
| Margin \& Growth Rate Analysis |  |  |  |  |  |  |
| COGS as a \% of Sales | 50.7\% | 50.0\% | $49.0 \%$ | $48.0 \%$ | $47.5 \%$ | $47.5 \%$ |
| Gross Margin | 9.3\% | 50.0\% | 51.0\% | 52.0\% | 52.5\% | 52.5\% |
| $S G \& A$ as a \% of Sales | 8.7\% | 8.0\% | 8.0\% | 8.0\% | 8.0\% | 8.0\% |
| Other Op. Exp. as a \% of Sales | 21.2\% | 20.0\% | 19.0\% | 19.0\% | 19.0\% | 19.0\% |
| EBITDA Margin | 19.5\% | 22.0\% | 24.0\% | 25.0\% | 25.5\% | 25.5\% |
| EBIT Margin | 9.4\% | 10.6\% | 11.3\% | 11.1\% | 10.4\% | 10.6\% |
| Effective Tax Rate | 36.8\% | 36.8\% | 36.8\% | 36.8\% | 36.8\% | 36.8\% |
| Net Margin | 0.8\% | 2.1\% | 3.2\% | 3.6\% | 3.7\% | 4.4\% |
| Net Income Growth | -- | 202.0\% | 72.0\% | 25.6\% | 12.5\% | 28.3\% |

## Pro Forma Balance Sheet

## Assets <br> Cash and Cash Equivalents <br> Accounts Receivable <br> Inventory <br> Other Current Assets <br> Total Current Assets

Net Property, Plant \& Equipment
Transaction Goodwill
Transaction Costs
Goodwill
Intangibles
Other Assets
Total Assets

| Estimated | Projected |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| 2003 |  |  |  |  |

Liabilities and Shareholders' Equity
Bank Revolver

Accounts Payable
Other Current Liabilities
Total Current Liabilities


| Other Liabilities | 201.0 | 201.0 | 201.0 | 201.0 | 201.0 | 201.0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Senior Debt | 2,205.8 | 2,141.1 | 1,975.5 | 1,722.1 | 1,382.1 | 991.7 |
| Subordinated Debt | 661.8 | 668.4 | 675.1 | 681.9 | 688.8 | 695.7 |
| Total Liabilities | 3,383.5 | 3,353.5 | 3,235.3 | 3,028.4 | 2,736.2 | 2,394.6 |
| Existing Preferred Stock | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Acquisition PIK Preferred | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Common Equity | (512.5) | (438.6) | (311.6) | (152.0) | 27.6 | 258.0 |
| Total Liabilities and Equity | \$2,871.0 | \$2,914.8 | \$2,923.7 | \$2,876.4 | \$2,763.8 | \$2,652.6 |

Balance Sheet Check
0.0000
0.0000
0.0000

## Pro Forma Cash Flow Statement

## Cash Flow from Operations

Net Income
Depreciation
Amortization
Amortization of Deferred Financing Fees
Change in Working Capital
Change in Other Assets
Change in Other Liabilities
Cash Provided / (Used) by Operating Activities
Cash Flow From Investing Activities
Capital Expenditures
Cash Provided / (Used) by Investing Activities

Cash Flow From Financing Activities
Change in Revolver
Change in Senior Debt
Change in Subordinated Debt
Existing Preferred Stock
Plus: Non-cash Dividend
Less: Common Dividend Paid
Cash Provided / (Used) by Investing Activities

Beginning Cash Balance
Change in Cash
Ending Cash Balance

| Projected |  |  |  |
| :--- | :--- | :--- | :--- |
| 2004 | 2005 | 2006 | 2007 |


| $\$ 73.8$ | $\$ 127.0$ | $\$ 159.6$ | $\$ 179.6$ | $\$ 230.5$ |
| ---: | ---: | ---: | ---: | ---: |
| 398.2 | 497.6 | 607.8 | 729.1 | 782.9 |
| 5.9 | 5.9 | 5.9 | 5.9 | 5.9 |
| 12.3 | 12.3 | 12.3 | 12.3 | 12.3 |
| 21.0 | 19.5 | 19.1 | 19.6 | 19.9 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| $\$ 511.3$ | $\$ 662.3$ | $\$ 804.8$ | $\$ 946.6$ | $\$ 1,051.4$ |

$\frac{(\$ 441.5)}{(\$ 441.5)} \frac{(\$ 496.7)}{(\$ 496.7)} \frac{(\$ 551.4)}{(\$ 551.4)} \frac{(\$ 606.5)}{(\$ 606.5)} \frac{(\$ 661.1)}{(\$ 661.1)}$

## Pro Forma Debt Schedule

| Estimated | Projected |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $2003$ | 2004 | 2005 | 2006 | 2007 | 2008 |
| Cash Available to pay down Bank Revolver | \$69.8 | \$165.6 | \$253.4 | \$340.1 | \$390.4 |
| Bank Revolver |  |  |  |  |  |
| Beginning Balance | \$5.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| Borrowings / (Payments) | (5.0) | 0.0 | 0.0 | 0.0 | 0.0 |
| Ending Balance | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| Interest Expense @ 6.47\% | \$0.2 | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| Cash Available to pay down Existing Senior Debt | \$64.7 | \$165.6 | \$253.4 | \$340.1 | \$390.4 |
| Senior Debt |  |  |  |  |  |
| Beginning Balance | \$2,205.8 | \$2,141.1 | \$1,975.5 | \$1,722.1 | \$1,382.1 |
| Borrowings / (Payments) | (64.7) | (165.6) | (253.4) | (340.1) | (390.4) |
| Ending Balance | \$2,141.1 | \$1,975.5 | \$1,722.1 | \$1,382.1 | \$991.7 |
| Interest Expense @ 6.47\% | \$140.6 | \$133.2 | \$119.6 | \$100.4 | \$76.8 |
| Subordinated Debt |  |  |  |  |  |
| Beginning Balance | \$661.8 | \$668.4 | \$675.1 | \$681.9 | \$688.8 |
| Borrowings / (Payments) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Plus: PIK Accruals | 6.7 | 6.7 | 6.8 | 6.9 | 6.9 |
| Ending Balance | \$668.4 | \$675.1 | \$681.9 | \$688.8 | \$695.7 |
| Interest Expense @ 15.00\% | \$99.8 | \$100.8 | \$101.8 | \$102.8 | \$103.8 |
| PIK Accruals @ 1.00\% | \$6.7 | \$6.7 | \$6.8 | \$6.9 | \$6.9 |
| Cash and Cash Equivalents |  |  |  |  |  |
| Beginning Balance | \$148.6 | \$155.3 | \$162.0 | \$168.8 | \$175.6 |
| Borrowings / (Payments) | 6.7 | 6.7 | 6.8 | 6.9 | 6.9 |
| Ending Balance | \$155.3 | \$162.0 | \$168.8 | \$175.6 | \$182.5 |
| Interest Income @ 3.00\% | \$4.6 | \$4.8 | \$5.0 | \$5.2 | \$5.4 |
| Net Interest Expense |  |  |  |  |  |
| Bank Revolver | \$0.2 | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| Senior Debt | 140.6 | 133.2 | 119.6 | 100.4 | 76.8 |
| Subordinated Debt | 99.8 | 100.8 | 101.8 | 102.8 | 103.8 |
| Cash and Cash Equivalents | (4.6) | (4.8) | (5.0) | (5.2) | (5.4) |
| Total | \$236.0 | \$229.2 | \$216.4 | \$198.1 | \$175.3 |


[^0]:    ${ }^{1}$ Securities Data Corporation
    ${ }^{2}$ Venture Economics

[^1]:    ${ }^{3}$ S\&P / Portfolio Management Data
    ${ }^{4}$ Private Placement Newsletter, January 6, 2003.
    ${ }^{5}$ George P. Baker and George David Smith, The New Financial Capitalists: Kohlberg Kravis Roberts and the Creation of Corporate Value, (Cambridge: Cambridge University Press, 1998).

[^2]:    ${ }^{6}$ Since interest is tax deductible, a more refined DCF analysis can calculate the value of interest tax shields and the value of cash flows assuming the firm had no debt. The sum of the two values results in the value of the enterprise. This is a methodology known as Adjusted Present Value, or APV, and it shows explicitly the value contributed by debt. For further details see Corporate Finance, Ross, Westerfield and Jaffe, $5^{\text {th }}$ Edition, p. 455-459.

