Leveraged Buyout (LBO) Modeling

CASE STUDY: BMC
Leveraged buyout (LBO)

• Acquisition where a significant part of the purchase price is funded with debt

• The remaining portion is funded with equity by the financial sponsors (private equity “PE” investors).

• Company undergoes a recapitalization to a now highly leveraged financial structure

• Company becomes a new company – from oldco to newco

• Companies acquired by PE can be either private or public
# LBO analysis on a cocktail napkin

## The offer
- In February 2013, Michael Dell and Silver Lake ("the sponsors") offered Dell shareholders $13.88 per share
- There were 1.69b shares outstanding
- Dell Inc. has $1.4b in debt, which would be refinanced in the deal
- LTM EBITDA was $3.5b

## The financing
- The sponsors were able to secure $11.5b in debt financing
- There was also $7.7b in cash on Dell Inc.'s balance sheet. They planned to use all of it to help fund the deal
- The remainder would be funded with equity

## The exit assumptions
- Exit is assumed 5 years post-LBO
- Assume the same LTM EBITDA at exit as the current EBITDA
- Assume exit at the same EV/LTM EBITDA multiple as the current multiple
- Assume debt is fully paid down
- Assume no cash on the balance sheet
What is the basic intuition underlying an LBO?

• Sponsors hope to monetize their profits by:
  1. Selling the target to a strategic or another PE firm
  2. Selling to the public via IPO

• Alternatively, sponsors can monetize without a complete exit by giving themselves dividends financed via newly borrowed debt (dividend recap)
Deal environment

• PE deal volume of $183b in 1H14 was the highest since the crisis

• Global PE exits climbed to an all-time high of $260b in 1H14

  • $192.5b to strategics

  • $67.7b to secondary buyouts
Deal environment

- EBITDA multiples came back (and eclipsed) to pre-crisis levels
- This is especially true for public-to-private deals
- Smaller middle market deals (<$250m) averaged 7.0x EBITDA through 2013
Go-privates

• Despite rise in LBO volume, public-to-private deals continue to be low post-crisis

• High valuations and re-emergence of strategic buyers often prices sponsors out
The private equity landscape

• PE firms and other investors have a lot of cash waiting to be deployed ("dry powder")

Source: Preqin
The private equity landscape

- Pressure to put capital to work contributes to higher valuations/multiples
- Increases in exits has relieved pressure on older vintages
How PE funds work

LIMITED PARTNERS (LPs)

- Insurance, universities, wealthy individuals, other, 48%
- Sovereign funds, 9%
- Pension funds, 43%

LPs commit capital and pay an annual management fee of 1.5-2.0% of committed capital

PRIVATE EQUITY FIRM
General partners (GPs)
- GPs manage each fund
- 15-20% of the fund’s returns are kept by the GPs (carried interest, or “promote”)
- The remaining 80% are distributed to LPs
- Separately, GPs also charge portfolio companies fees (usually shared with LPs)

2014 vintage fund

- Investment 1
- Investment 2
- Investment 3
- Investment 4
- Investment 5
- Investment 6
- Investment 7
- Investment 8
- Investment 9
- Investment 10

2014 vintage fund (limited partnership)

Some rules of thumb
Number of investments in fund: ~10
Life of fund: ~5-7 years

Fund returns come in the form of exits via IPO, sales, dividend recaps and fees
# Distribution waterfall exercise

**Distribution waterfall exercise**

## PE WATERFALL ("whole fund structure")

<table>
<thead>
<tr>
<th>Fund details</th>
<th>Fee structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investor capital contribution</td>
<td>Carried interest (carry or promote):</td>
</tr>
<tr>
<td>Preferred return (8%/yr)</td>
<td>20.0%</td>
</tr>
<tr>
<td>Duration of fund (years)</td>
<td>Management fees (annual)</td>
</tr>
<tr>
<td></td>
<td>2.0%</td>
</tr>
<tr>
<td></td>
<td>Fees paid by investors to manager</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Worst case</th>
<th>Weak case</th>
<th>Base case</th>
<th>Strong case</th>
<th>Best case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross proceeds</td>
<td>11,000</td>
<td>16,000</td>
<td>21,000</td>
<td>26,000</td>
<td>31,000</td>
</tr>
<tr>
<td>Capital invested</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Total fund profits</td>
<td>1,000</td>
<td>6,000</td>
<td>11,000</td>
<td>16,000</td>
<td>21,000</td>
</tr>
</tbody>
</table>

1. Return of capital and mgmt. fees to investors ($)
2. Preferred return to investors ($)

### Remaining distribution ($)

3. Manager catch-up

### Remaining distribution ($)

- Return to manager ($)
- Return to investors ($)

### Total distributions to investors ($)

- % of gross proceeds
- Cash-on-cash return to investors
- Investor IRR

### Total distributions to manager ($)

- % of gross proceeds
- % of profits
- Manager total return (inc. fees)
Capital structure

• LBO capital structure is cyclical, but has also seen a structural shift from equity/debt ratios of 10% / 90% in the 1980s to around 35% / 65% more recently
Capital structure - equity

**Sponsors**: Represent the largest source of LBO equity

**Rollover**: In some cases, oldco mgmt roll over their existing equity into the newco and even contribute new capital alongside the sponsors

**Option pool**: In addition, since most LBOs have oldco mgmt stay on to run the newco, sponsors reserve anywhere from 3%-20% of total equity for them

**Warrants**: Certain lenders may receive equity as a sweetener for providing financing (mezzanine lenders)

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1 Management rollover has historically ranges from 2 to 5% of the total equity in LBO
LBO debt

- Leveraged loans: Revolver & term loans A/B/C/D
- Bonds: High-yield ("speculative-grade" or "junk") bonds
- Mezzanine finance

**Loans vs. bonds – confusing terminology**

Leveraged loans (also called “bank debt” or “senior debt.” It makes up the majority of LBO debt and is syndicated to banks (“pro rata”) and institutional investors. Loans represent senior tranche(s) in LBOs.

It is quite distinct from the HY bonds ("bonds" or “junior debt”) which make up the lower tranches. Unlike bonds, it is usually:

- Secured (1st or 2nd lien)
- Priced as a floating rate (LIBOR + spread)
- Structured with shorter maturity
- More restrictive (covenants)
- Free of SEC registration

**Leveraged finance volume — bank debt and bonds**

Source: S&P Leveraged Commentary and Data
Leveraged loans – term loans and revolver

- Priced at LIBOR + spread
- Scheduled principal amortization (TLs)
- No call protection (borrower can repay anytime)
- Most common LBO package is an institutional (nonbank) term loan B/C/D and a revolver
High yield bonds (HYB)

- HYD (credit rating BBB- or worse) enables sponsors to increase leverage to levels that bank debt (leveraged loans) won’t support

High yield debt investors

- Pension funds: 28%
- Insurance companies: 29%
- Mutual funds: 13%
- Other: 30%

Source: S&P CIQ, LCD

"Other" includes ETFs, HNW individuals, commercial banks, hedge funds
High yield bonds (HYB)

- Fixed coupon paid semiannually, maturity 7-10 years, no principal pay-down until maturity (bullet)

Bonds issued in Bain’s $6.7b LBO of BMC

- BMC’s 2013 LBO included a $1.625b bond, 8.125% coupon, priced at par, matures July 15, 2021. Not callable for first 3 years.
- Senior tranches were comprised of a $2.88b (L+4%, 1% LIBOR floor) and a $670m (L+4%) secured 7 year term loans and a $350m unfunded revolver (L+4%),
High yield bonds (HYB)

- HYBs are usually (but not always) unsecured

US High Yield Bond Issuance

Source: S&P Capital IQ/LCD
**Full sources of funds in Dell’s $25b LBO**

### Loans
- $1.5b TLC @ L + 300 w/1% LIBOR floor, covenant-lite, 5yr
- $2.0b asset-backed revolver ($750 drawn initially), 5yr
- $4.0b TLB @ L+375 w/1% LIBOR floor, covenant-lite, 6.5yr

### High yield bonds
- $2b 1st lien bonds, 7yr
- $1.25b 2nd lien bonds, 8yr

**Microsoft loan:** $2b sub. note at 7.25% (~50% PIK), 10yr

**Rollover Equity:** $3.4b from Michael Dell

**Equity:** $0.8b from Michael Dell, remainder from Silver Lake

**Existing cash on B/S:** $7.7b
## Expanded LBO analysis on a cocktail napkin

### Use of funds

<table>
<thead>
<tr>
<th>Use of funds</th>
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<tbody>
<tr>
<td>Buyout of equity</td>
</tr>
<tr>
<td>Offer price/share</td>
</tr>
<tr>
<td>Diluted shares outstanding</td>
</tr>
<tr>
<td>Oldco debt refinanced</td>
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<tr>
<td><strong>Total uses</strong></td>
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### Source of funds

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<tbody>
<tr>
<td>Loans</td>
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<tr>
<td>Revolver</td>
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<tr>
<td>Term Loan C</td>
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<tr>
<td>Term Loan B</td>
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<tr>
<td>High yield bonds</td>
</tr>
<tr>
<td>First-lien note</td>
</tr>
<tr>
<td>Second-lien note</td>
</tr>
<tr>
<td>Microsoft loan</td>
</tr>
<tr>
<td>Equity</td>
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<tr>
<td>Rollover Michael Dell</td>
</tr>
<tr>
<td>New equity Michael Dell</td>
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<tr>
<td>New equity Silver Lake</td>
</tr>
<tr>
<td>Existing cash on B/S</td>
</tr>
<tr>
<td><strong>Total sources of funds</strong></td>
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### Current valuation

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>EBITDA</td>
</tr>
<tr>
<td>EV</td>
</tr>
<tr>
<td>EV/EBITDA</td>
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### Exit (5 yrs later)

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<tbody>
<tr>
<td>EV/EBITDA</td>
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<tr>
<td>EBITDA</td>
</tr>
<tr>
<td>Enterprise value</td>
</tr>
<tr>
<td>Debt</td>
</tr>
<tr>
<td>Cash</td>
</tr>
<tr>
<td>Equity value</td>
</tr>
<tr>
<td>Equity %</td>
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<tr>
<td>Michael Dell</td>
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<td>Other sponsors</td>
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### Equity IRR

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*Wall Street Prep*