

Investment Banking – SEO Intern Hard Skills Training



Anand Shah - OzCap

MATERIALS FOR DISCUSSION

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Table of Contents

- 1. Typical Responsibilities of a Summer Analyst**
 - 2. Valuation Analysis – The Core Methodologies of Investment Banks**
 - A. Introduction to Valuation
 - B. Comparable Company Analysis
 - C. Comparable Acquisition Analysis
 - D. Discounted Cash Flow Analysis
 - E. Leveraged Buyout Analysis
 - F. Interpreting and Presenting Valuation Results
 - 3. Other Important Analyses – Merger Consequences & Credit Comps**
- Appendix**
- A. What is Enterprise Value?
 - B. What is WACC?
 - C. How to Build Projections
 - D. Choosing the Right Range – Comps and CompAcqs

1. Typical Responsibilities of a Summer Analyst



Anand Shah OzCap

What Are the Typical Responsibilities of a Summer Analyst?

- ▶ Make the life of the associates or analysts you are working with easier
 - Let them know you are there to help
 - Earn their trust and gain responsibility
- ▶ The major items you can anticipate you will be expected to prepare are
 - Company Profiles
 - Company Overview
 - Product Overview
 - Financial Overview
 - Stock Price Performance
 - Recent Events
 - Research Analyst Views
 - Ownership Structure & Management and Board of Directors Biographies
 - Research for Companies and Industries
 - Compiling / Creating PIBs
 - Formatting Information / Processing comments from your deal teams
 - Comps/CompAcqs

**BE A GREAT LISTENER AND LEARNER!
ALWAYS DOUBLE CHECK YOUR WORK!**

Preparing Company Profiles

BE RESOURCEFUL!!

You will likely prepare many Company Profiles as a summer analyst. Each bank and each group may have a different standard format for doing profiles. Ask others for examples

The resources to use are FactSet, Bloomberg, Thomson Research, Company Website, Yahoo! Finance, Public Filings (10-Ks, 10-Qs, S-1s, Registrations, Prospectuses, Proxies, Annual Reports, 20Fs, Interim Reports and press releases/news), and Google

Here are some specific items you may expect to include in a Company Profile

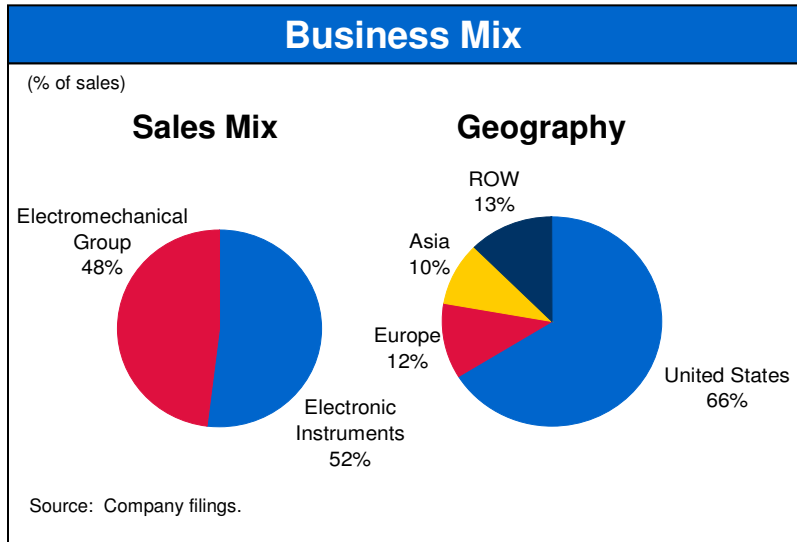
- ▶ A quick overview of the Company's operations:
 - What is their business? What do they do? Who do they serve?
 - State where the company is **headquartered** and the **number of employees**
 - What is their market position – leading, second, third, etc.?
- ▶ **Products and services:** What are they?
 - If your team wants product illustration, create a separate page or box with pictures and brief descriptions
 - List the Company's major brands
- ▶ **Target customers and markets:** How big are the markets they are in? Who are the key customers?
 - Look at the segment results in the 10-K and Research
- ▶ Manufacturing capabilities and facilities: **Number, location and type of facilities**
- ▶ **LTM or historical/projected financials:** Revenues, EBIT and EBITDA with growth and margins
- ▶ Section for **recent news**, including important situations, acquisitions, etc.
- ▶ **Ownership and Management/Board** – Breakdown of Ownership / Senior Management/Board

Sample Company Profile

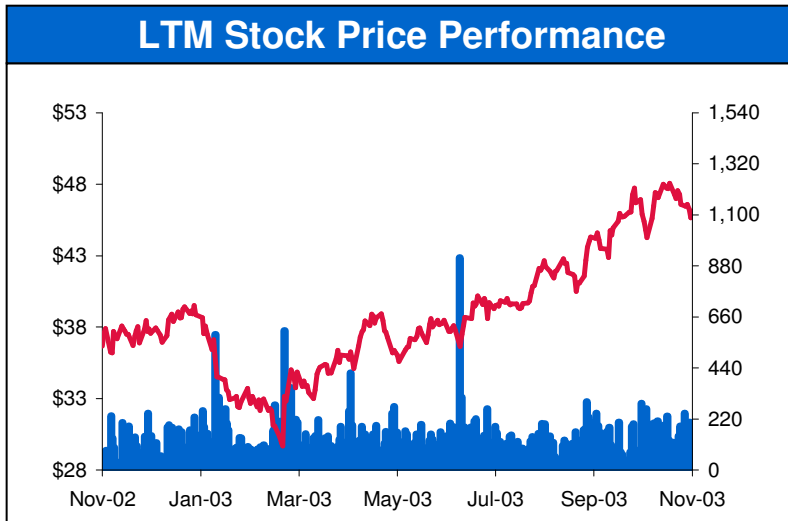
Business Description	
<p>The Company is a manufacturer of electronic instruments and electric motors with operations in North America, Europe, Asia and South America. The Company is organized into two operating groups:</p>	
<ul style="list-style-type: none"> ▶ Electronic Instruments Group (“EIG”) (52% of Total Sales and EBIT) <ul style="list-style-type: none"> ▪ Produces advanced monitoring, testing, calibrating, measurement, and display instruments sold to the process, aerospace, power and industrial markets ▶ Electromechanical Group (“EMG”) (48% of Total Sales and EBIT) <ul style="list-style-type: none"> ▪ Manufacturer of air-moving electric motors for vacuum cleaners and other floor care products. Other products include brushless DC motors, motor-blowers and specialty metal products ▪ Products manufactured are small vacuum motors with fans that rotate at high speeds and require advanced technology ▪ Key end-markets include: <ul style="list-style-type: none"> – Floor care markets (39% of sales) - EMG has the leading share, through its sales of air-moving electric motors to most of the world's major floor care OEMs – Technical motors - Used in aerospace applications, business machines and computer equipment, military and mass transit vehicles, and medical equipment – Specialty motor markets (22% of sales) - EMG manufactures a specialty motors for outdoor power equipment, such as electric chain saws, leaf blowers and power washers; household appliances; fitness equipment, and sewing machines – Power and Switch Markets - The switch business produces solenoids, and other electromechanical devices for the motive and stationary power markets ▪ EMG holds a leading market share in North America and Western Europe and is focused on expanding to Asia ▪ Employs approximately 7,700 people 	

Operating Summary					
(\$ in millions, except per share data)					
FYE 12/31,	2000	2001	2002	2003E	2004E
Sales	\$1,024.6	\$1,019.3	\$1,040.5	\$1,055.5	\$1,140.6
% Growth	10.8%	(0.5%)	2.1%	1.4%	8.1%
EBITDA	\$179.1	\$178.0	\$181.7	\$192.0	\$208.2
% Margin	17.5%	17.5%	17.5%	18.2%	18.3%
EBIT	\$135.9	\$132.8	\$148.7	\$157.2	\$171.7
% Margin	13.3%	13.0%	14.3%	14.9%	15.1%
Capex	\$29.5	\$29.4	\$17.4	\$20.5	\$28.0
% Margin	2.9%	2.9%	1.7%	1.9%	2.5%
EPS	\$2.11	\$2.12	\$2.49	\$2.60	\$2.95
% Growth	14.1%	0.5%	17.5%	4.4%	13.5%

Source: Company filings.



Sample Company Profile (Cont'd)



Management and Directors

NAME	AGE	POSITION
Frank Hermance	53	CEO/Chairman of the Board
John Molinelli	55	Executive VP/CFO
Albert Neupaver	51	President Electromechanical Group
Robert Chlebek	58	President Electronic Instruments Group
Thomas Mangold, Jr.	56	President Electronic Instruments Group
Robert Mandos, Jr.	43	VP/Comptroller
Sheldon Gordon	66	Director; Chairman of Union Bancaire Private Holding
David Steinmann	60	Director; Managing Director of American Securities LLP
Helmut Friedlaendar	88	Director; Private Investor
James Malone	59	Director; Founder of Bridge Associates LLC
Elizabeth Varet	58	Director; Managing Director of American Securities LLP
Lewis Cole	71	Director; Partner, Stroock & Stroock & Lavan LLP
Charles Klein	63	Director; Managing Director of American Securities LLP

Source: Company filings.

Market Valuation

(\$ in millions, except per share data)

Current Stock Price:	\$46.05
52-Week High/Low:	\$48.41 / \$29.49
2003 YTD Price Change:	19.6%
% Discount to 52-Week High:	(4.9%)
Equity Value:	\$1,559.3
Enterprise Value:	\$2,005.5
Enterprise Value / EBITDA:	
2003E	10.4x
2004E	9.6x
P/E	
2003E	17.7x
2004E	15.6x

Ownership

NAME	SHARES	% HELD
Gabelli Asset Management	3,198,276	9.6%
J. L. Kaplan Associates LLC	1,837,364	5.5%
Columbia Wanger Asset Management LP	1,456,000	4.4%
Wellington Management Co. LLP	1,045,700	3.1%
Barclays Global Investors, N.A.	1,002,024	3.0%
Janus Capital Management LLC	947,990	2.8%
Dalton, Greiner, Hartman, Maher & Co.	840,910	2.5%
Franklin Advisers, Inc.	567,518	1.7%
Cramer Rosenthal McGlynn LLC	566,821	1.7%
J. & W. Seligman & Co., Inc.	530,539	1.6%
Top 10 Total	11,993,142	35.9%

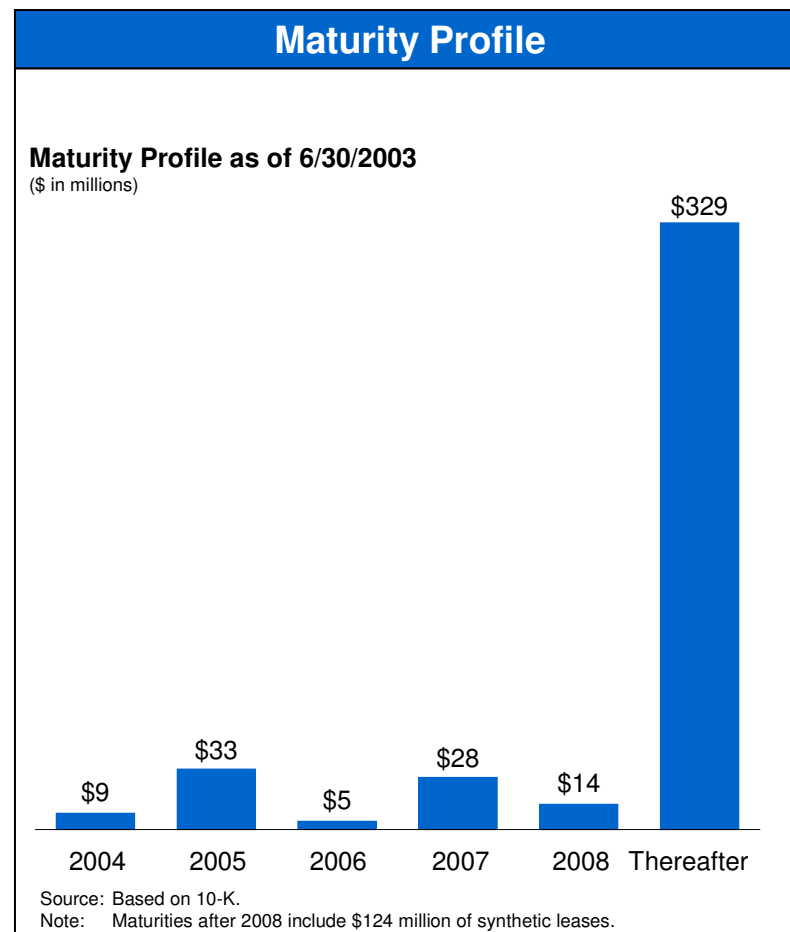
Source: Shareworld.

Sample Company Profile (Cont'd)

Current Capitalization and Maturity Profile

Capitalization Summary			
Capitalization Summary			
(\$ in million)			
		Actual	Estimated ⁽¹⁾
		6/30/2003	12/31/2003
Cash		\$1.3	\$4.8
Debt:	Rate:		
Unsecured Revolving Credit Lines	2.08%	\$14.0	–
Fixed Rate Secured Term Loans	8.81%	3.6	–
Fixed Rate Unsecured Term Loans	7.67%	273.8	258.7
Capitalized Leases	8.00%	1.8	1.8
Synthetic Leases		124.4	124.4
Total Debt		\$417.6	\$384.9
Shareholder's Equity		452.4	474.6
Total Capitalization		\$870.0	\$859.5
Summary Statistics:			
<i>Total Debt / Total Capitalization</i>		48.0%	44.8%
<i>Total Debt / 2003A EBITDA</i>		4.5x	4.2x
<i>Total Debt / 2004E EBITDA</i>		4.2x	3.8x

Source: Based on 10-K and 10Q.
 (1) Assumes \$33 million pay down of unsecured revolving credit lines, fixed rate secured term loans and fixed rate unsecured term loans since 6/30/2003.



Sample Company Profile (Cont'd)

Equity Analyst Commentary

	Wachovia Securities	Deutsche Bank	Prudential Financial	Banc of America Securities
Analyst	Jonathan Feeney	Marc Greenberg	Jeffrey G. Kanter	Bryan Spillane
Latest Report	2/5/04	2/2/04	1/30/04	1/29/04
Price	\$35.41	\$36.20	\$36.74	\$36.74
2004 EPS, P/E	\$1.95, 18.2x	\$2.08, 17.4x	\$1.97, 18.6x	\$2.00, 18.4x
2005 EPS, P/E	\$2.18, 16.2x	NA	\$2.30, 16.0x	\$2.20, 16.7x
12-month Price Target	\$33 - \$36	\$36	\$36	\$35
Rating	Market Perform	Hold	Neutral Weight	Neutral
Comments	<p>"For FQ2...both case volume and revenue grew, but California wine sales lagged due to grocery strikes."</p> <p>" []'s core business, [], continues to see declines in wholesale depletion and shipments. We expect [] to invest strongly in the brand and grow [] shipments."</p> <p>"Starting in FQ4, [] should be able to realize lower grape costs as wine produced at the beginning of the grape glut comes to market. This should benefit [] as its competitors likely will not be able to compete in price as grape prices increase."</p>	<p>"Pricing of (0.6%) came in better than our expectation of a 2.6% decline, largely due to the mix benefits associated with the shift of Opus sales into Q2 and Q3 and stronger than expected sales on RM Private Selection."</p> <p>"Both [] volume and pricing were much lower than we expected."</p> <p>"Continued grocery strikes in Southern California (about 5% of total [] business) are continuing to weigh on core [] volumes."</p> <p>"We worry that []'s focus on line extensions into an already saturated and highly competitive market is causing a key equity ([]) to be somewhat diluted...In short, challenges remain."</p>	<p>"Looking at consolidated results, sales improved 4% on a 3% improvement in volumes, implying a 1% price/mix benefit...this better mix was an improvement in []'s higher end wines, perhaps a true indication that on premise trends continue to improve."</p> <p>"The risks to our price target are that volumes continue to accelerate and management's attempt to improve mix will more than offset potential pricing pressures."</p> <p>"Although we continue to assert that the wine industry has some terrific growth prospects ahead, if [] has another weak quarter, []'s stock may sit a bit."</p>	<p>"We are pleased with management's commitment to improve []'s returns, as evidenced by the recent sale of its Chilean assets."</p> <p>"We believe management is taking the right actions to improve the company's margins, competitive position and return on capital...industry as whole is better positioned, especially relative to the past three years."</p> <p>" [], []'s largest brand, faced an aggressive industry pricing environment and represented a drag on the company's growth."</p>

2. Valuation Analysis – The Methodologies of Investment Banks



A. Introduction to Valuation



Why Does Valuation Matter?

- ▶ Valuation is at the core of our job. It is used for:
 - Buy-side advisory mandates
 - Sell-side advisory mandates
 - Hostile / defense mandates
 - Valuation / fairness opinions
 - Comparison of market prices to values obtained from appropriate valuation techniques
 - Merger valuations
 - IPO pricing / valuation
 - Financing decisions
- ▶ Correct valuation is critical for a number of reasons
 - Clients base their decisions on our advice
 - Sets precedent and is used as a datapoint for future valuation in specific industry
 - Delivering valuation advice exposes an investment bank to legal risks
 - The best way to mitigate such risk is to deliver flawless, reasonable, well-justified and thought through valuations
 - Ever seen a MD in a meeting when it turns out the numbers are wrong? Ever had one on the line following such a meeting?
 - Senior members of your various firms are asked to put their careers on the line based on the analysis analysts and associates create

What Is Value and Why Is Value Difficult to Judge?

Value of an asset may differ substantially for different holders and under different scenarios

- ▶ Value to seller vs. value to buyer or competitors
- ▶ Going concern value vs. liquidation value or replacement value
- ▶ Synergies / benefits of investment
 - Positive: *e.g.*, revenue and cost benefits of owning an asset
 - Negative: *e.g.*, strategic “cost” of holding the asset, management distraction, integration required etc.
- ▶ Tax position
 - Value of tax loss carry-forwards dependent on buyer’s ability to utilize
- ▶ Value of control, *i.e.*, value of operational influence on cash flows vs. value of passive dividend stream: minority vs. majority stakes
- ▶ “Strategic value”: unlocking development opportunities beyond the asset itself
 - Perceived “strategic” value may be proportional to desire to own
 - *“It is optimism that is the enemy of the rational buyer.”* – Warren Buffett
- ▶ *“Price is what you pay, value is what you get.”* – Warren Buffett

Value is in the eye of the beholder.

Valuation Concepts - Enterprise Value & EBITDA

What is Enterprise Value?

In order to calculate the market value of a Company's assets, an investor must consider the value of its debt and its equity

- ▶ Enterprise Value = Net Debt + Equity
 - Equity Value is based on current market value
 - Net Debt is based on historical cost

Market Value of Operating Assets

Enterprise Value = \$150

}

Enterprise Value

Liabilities and Shareholders' Equity

Net Debt = \$50

Equity Value = \$100

Net Debt = Debt - Cash

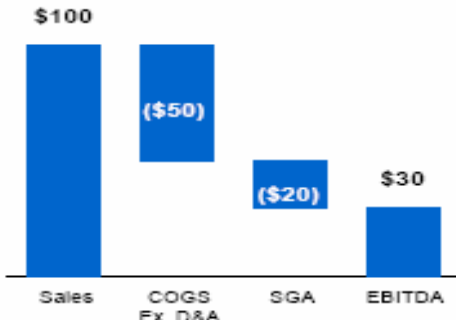
Equity Value = Shares * Current Trading Price

What is EBITDA?

EBITDA = Earnings Before Interest, Taxes, Depreciation and Amortization


- ▶ EBITDA is the appropriate metric to consider against Enterprise Value
 - EBITDA is value to the Enterprise
 - Net Income is value to shareholders
 - Interest is value to debt holders
- ▶ Should exclude non-recurring items

EBITDA = Sales - COGS - SG&A



Item	Value
Sales	\$100
COGS Ex. D&A	(\$50)
SG&A	(\$20)
EBITDA	\$30

EBITDA = Net Income + Taxes + Interest + D&A



Item	Value
Net Income	\$10
Taxes	\$5
Interest	\$5
D&A	\$10
EBITDA	\$30

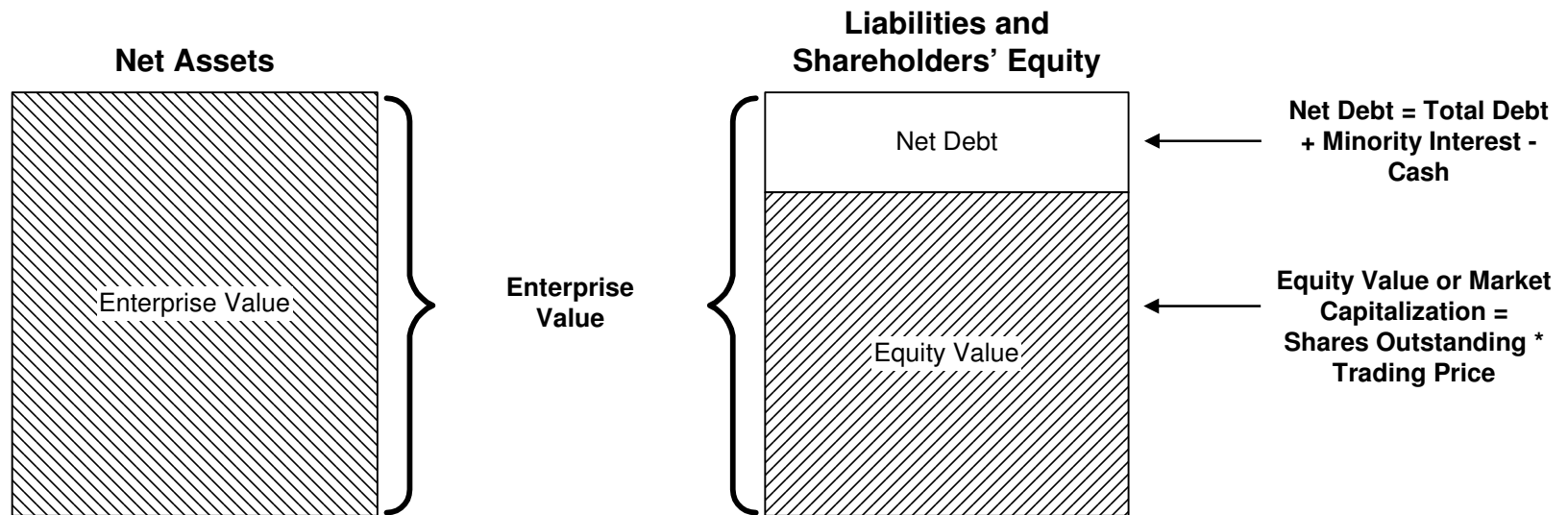
How Do You Calculate the Value of a Company?

Answer = Enterprise Value

Enterprise Value = Market Value of Operating Assets

Equity Value = Market Value of Shareholders' Equity

Equity Value = Enterprise Value – Net Debt⁽¹⁾



(1) For simplicity sake, Net Debt (Corporate Adjustments) is generally defined as total debt + minority interest + preferred stock + capitalized leases – excess cash and cash equivalents.

You will generally use the valuation techniques in this presentation to calculate the enterprise value of the firm, which then allows you to calculate its equity value.

Valuation Analysis – Four Main Methodologies

Investment banks have developed four main methodologies that are commonly used to generate the theoretical value of a company

Comparable Company Analysis

- ▶ Used to understand the value of a company by reference to current market trading multiples of other publicly-traded companies with similar operating, financial and business characteristics

Comparable Acquisition Analysis

- ▶ Used to understand the value of a company in an acquisition scenario, including premiums paid, by reference to other transactions of similar businesses

Discounted Cash Flow Analysis

- ▶ Used to determine the intrinsic value of a company based on a given financial plan excluding the impact of the capital structure of the company

Leveraged Buyout Analysis

- ▶ Used to determine the intrinsic value of a company based on a financial plan including the impact of the capital structure of the company

Today we will give you an overview of these analyses and discuss typical problems analysts have preparing each of them.

For a valuation analysis, investment banks will typically produce each of these analyses and develop a comprehensive range of values which will be shown to a client.

B. Comparable Company Analysis



Introduction to Comparable Company Analysis

Comparable Company Analysis is used to understand the value of a company by reference to market trading multiples of other publicly-traded companies with similar operating, financial and business characteristics

- ▶ Theory – Investors will attribute similar value to similar assets and will therefore value one unit of EBITDA, earnings, assets, accounts, etc. similarly; **thus, comparability is key**
- ▶ Also known as Compco Analysis, CSCs – Comparison of Selected Companies, Comps Analysis, Public Market Comps Analysis, etc.
- ▶ Most industry groups in corporate finance keep a standard set of comps for each given sector/industry
 - Industrial Groups – Capital Goods Comps, Automotive Supplier Comps, Paper and Forest Products Comps, Metals and Mining Comps, Industrial Conglomerate Comps, etc.
 - Media & Telecom Groups – Wireless Telecom Comps, Entertainment Comps, Newspaper Comps, Radio and Broadcasting Comps, Publishing Comps, Cable Comps, etc.
 - Financial Institutions Groups – Regional Bank Comps, Investment Bank Comps, Mutual Funds Comps, Insurance Comps
 - Energy Groups – Power & Utilities Comps, Oil & Natural Gas Comps, Chemicals Comps, Energy Distribution Comps
- ▶ When you join your specific group, you should ask an analyst in your group if there is a list of the “Standard Comps”
 - This list should also delegate who is responsible for maintaining them
- ▶ Comps are usually updated on a quarterly basis when new public financial statements are available (*i.e.*, 10-K, 10-Q, press release) and equity research is fresh
 - Unless a major corporate event has occurred which requires an immediate update

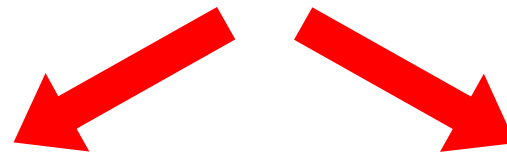
Comparable Company Analysis (Conceptual Overview)

Doing a compco analysis is a lot like shopping for cereals

- ▶ A simple comparison of prices does not work
- ▶ Cereals, just like companies, have different attributes. Some attributes include:
 - Weight / Size
 - Fat Content
 - Price
 - Caloric Content
 - Sugar Content
 - Brand Name
 - Nutritional Value



\$3.00 per box
20 ounces



How can you compare?

\$2.00 per box
25 ounces



- ▶ 15¢ per ounce
- ▶ Other
- ▶ Brand name
- ▶ 300 calories per serving
- ▶ 10 grams of sugar per serving
- ▶ 90% daily vitamins per serving



We can utilize ratios to compare different sized / priced objects on a like basis



- ▶ 8¢ per ounce
- ▶ Other
- ▶ Generic name
- ▶ 350 calories per serving
- ▶ 12 grams of sugar per serving
- ▶ 70% daily vitamins per serving

Comparable Company Analysis (Sample Output)

Similar to comparing the cereals, Comp analysis utilizes ratios to understand the relative value of various companies

- ▶ Enterprise Value / Sales, Enterprise Value / EBITDA, Equity Value / Net Income, Price / EPS
- ▶ Higher ratios generally imply a more positive outlook for the company relative to peers
- ▶ Cannot compare Enterprise Value / Net Income, Equity Value to EBITDA
 - EBITDA and EBIT provide value to the entire Enterprise; Net Income provides value to Equity Holders only

Sample Compco Output

(\$ in millions)

COMPANY	SHARE PRICE ⁽¹⁾	EQUITY VALUE	ENTERPRISE VALUE	ENTERPRISE VALUE AS A MULTIPLE OF:						P/E		2004E % MARGIN		% GROWTH LT EPS
				2004E			2005E			2004E	2005E	EBITDA	EBIT	
				SALES	EBITDA	EBIT	SALES	EBITDA	EBIT					
TL														
JB Hunt Transport	\$31.20	\$2,522	\$2,633	1.0x	6.9x	11.7x	0.9x	6.0x	9.5x	20.4x	16.0x	14.7%	8.7%	19.8%
Swift Transportation ⁽²⁾	15.26	1,281	1,681	0.6	4.6	8.5	0.6	3.5	5.7	11.7	8.7	13.3%	7.3%	17.6%
Werner Enterprises	18.50	1,494	1,392	0.9	5.0	10.3	0.8	4.3	8.2	17.5	14.2	17.6%	8.7%	14.6%
Heartland Express	23.16	1,158	956	2.1	8.2	10.6	1.8	7.0	9.4	19.3	17.2	25.1%	19.5%	13.0%
Knight Transportation	23.59	891	850	2.1	7.9	12.1	1.8	4.9	6.6	21.3	17.7	27.1%	17.7%	17.6%
Covenant Transportation	15.60	230	290	0.5	3.6	8.2	NA	NA	NA	13.0	11.3	13.1%	5.9%	13.2%
			Mean	1.2x	6.1x	10.2x	1.2x	5.1x	7.9x	17.2x	14.2x	18.5%	11.3%	16.0%
			Median	1.0x	6.0x	10.4x	0.9x	4.9x	8.2x	18.4x	15.1x	16.2%	8.7%	16.1%
LTL														
Yellow Roadway Corp	\$33.07	\$1,597	\$2,532	0.4x	5.3x	8.8x	0.3x	4.7x	7.6x	10.7x	8.3x	7.1%	4.2%	13.0%
CNF Inc	36.35	1,842	2,326	0.4	5.8	9.4	0.4	5.5	8.7	16.2	14.6	6.7%	4.1%	12.8%
US Freightways	31.33	870	999	0.4	4.4	8.3	0.4	3.9	6.9	14.6	11.4	9.3%	5.0%	9.9%
Overnite	23.70	664	781	0.5	5.4	9.6	0.4	4.6	8.0	15.1	12.7	9.2%	5.2%	12.7%
Arkansas Best	27.61	708	714	0.4	4.7	7.7	0.4	4.4	7.2	12.8	11.7	9.5%	5.9%	11.7%
Old Dominion	37.25	599	695	0.9	6.7	11.3	0.8	5.9	9.8	18.2	15.9	13.6%	8.1%	15.7%
SCS Transportation	20.92	323	447	0.5	4.7	10.2	0.5	4.4	8.9	16.6	13.7	10.2%	4.7%	18.8%
			Mean	0.5x	5.3x	9.3x	0.5x	4.8x	8.1x	14.9x	12.6x	9.4%	5.3%	13.5%
			Median	0.4x	5.3x	9.4x	0.4x	4.6x	8.0x	15.1x	12.7x	9.3%	5.0%	12.8%

Source: Wall Street Equity Research and Company Filings.

Note: Companies in bold and italics were used in the Dresdner document in 2002.

(1) As of 5/14/04.

(2) Pro forma for the acquisition of Merit from Wal-Mart.

(3) Reflects 5.75% convertible notes due 2005.

How to do a Comparable Company Analysis

If an analyst or associate asks you to do Comps for them, here is a general strategy to apply:

1. First, ask if there are any precedent Comps?
 - 2a. If you receive precedent Comps,
 - ▶ Supposing the Comps are outdated, use them as an example as to how to update the Comps
 - ▶ Supposing the Comps are current, ask the analyst/associate what you should update
 - Update with the correct information and make sure to check the Comps
 - 2b. If there are no precedent Comps, ask the associate if he knows which companies should be included in the analysis
 - ▶ If you are asked to determine what the Comps should be
 - Find the 10-K of the Company and search for names of competitors
 - Search any competitors 10-K's to find more peers
 - Find research for the company/industry and see if there is a Comp analysis shown
 - Use SIC codes and search for companies with a similar size (revenues/equity value)
 - Always read a business description of the companies you are considering to include in the analysis – select companies with similar products/customers/method of distribution
 - Prepare a proposed list of companies you think should be included in the Comp analysis including a reasoning for each company; Ask the associate/analyst whether the list you have selected is appropriate
 3. Check the comps
 - ▶ Compare against the previous version of the comps
 - ▶ Check against research
 - ▶ Check against the other companies in your comps – is it way off?
- ★ *Always prepare a list of questions for your associate/analyst and address anything weird you picked up when doing your Comps analysis*
- ★ *Please Ask Questions!!! If they are good questions, you will give people more comfort*

Typical Issues/Problems with Comparable Company Analysis

Here are some typical issues/problems experienced by analysts when preparing Comps:

- ▶ Output sheet is mis-linked to the input sheet
- ▶ Wrong calculation of Enterprise Value
 - Did not use most recent financial information available (10-K vs. 10-Q vs. Press Release)
 - Shares do not include in-the-money convertible debt, options and/or newly issued equity
 - Double count convertible debt (convert and include in debt calculation)
 - Improper adjustment for equity investments (on balance sheet – financing subsidiaries, off balance sheet – under 50% of shares) and minority interest
 - Forget to include contingent liabilities (asbestos, lawsuits, pension, etc.)
 - ★ *Please note that there are several ways to calculate Enterprise Value – as a result various firms, groups and even individuals have a specific method of treating contingent liabilities and equity investments*
- ▶ Excluded proper adjustments to income statement historicals/projections for non-recurring items
 - Need to back-out gains/losses, special charges, restructuring, discontinued ops – anything that cannot be expected in continuing operations
- ▶ Lack of consistency of historical and forward results
 - Make sure to understand how the research analysts are calculating forward operating results – your projections should use the same method used to calculate historical results
- ▶ Improper adjustments for acquisitions/divestitures
 - Where appropriate, one must adjust both Enterprise Value and Income Statement metrics on an annualized basis
- ▶ Improperly match ratios
 - Calculated EV/Net Income, Equity Value/EBITDA
 - Include equity investments in Enterprise Value, but do not adjust income statement
- ▶ Calendarization not done or done inaccurately

C. Comparable Acquisition Analysis



Introduction to Comparable Acquisition Analysis

Used to understand the value of a company in an acquisition scenario, including premiums paid, by reference to other transactions of similar businesses

- ▶ Also known as CompAcq, Deal Comps, Merger Comps, Transaction Comps, etc.
- ▶ Comparable acquisition analysis is very similar to Comps Analysis and uses ratios to show relative valuations in various announced acquisitions
 - Generally, more specific criteria in determining comparability than in a Comps Analysis
 - If you are acquiring a door company, a Comps Analysis may show building materials companies; whereas, a CompAcq Analysis will show acquisitions of previous door companies
 - In the best case scenario, you will find one or more recent CompAcqs of company with very similar products/customers and growth/margins
- ▶ Most industry groups in corporate finance keep a standard set of CompAcqs for a given industry/country/acquisition scenario
 - Because different acquisition scenarios can provide significantly different valuations for a given company, sometimes it is more important to match the acquisition scenario rather than the industry or country
 - Minority Stake Purchase, Controlling Stake Purchase, 100% Purchase, Buyout of public shareholders in a previously spun out company, etc.
- ▶ CompAcq multiples are typically higher than Comp multiples as they include the control premium required in an acquisition scenario
 - Acquiring companies are expected to pay a premium above the public market value because their shareholders benefit from synergies that the existing company's shareholders might not gain outside of an acquisition

Comparable Acquisition Analysis

When a company acquires another company, the acquiring company is typically required to pay a higher value, control premium, than the public market pays for the target

- ▶ In order to calculate the multiples implied in an acquisition scenario, you should look at the deal terms (*i.e.*, tender price) and apply them
- ▶ Determines the purchase price
 - As you can see in the press release below, any acquisition with a stock component will generally have a total value that changes until the transaction is closed
 - As a result, you should ask your analyst/associate whether to do CompAcqs on announcement terms or closing terms
 - Also, make sure to include the net debt of the target in the purchase price

**Sample
Press Release –**
*On an
announcement
basis you would use
\$48 for a per share
target price,
then you would
include the assumed
net debt of
\$140 million.*

July 8, 2003 -- Yellow Corporation and Roadway Corporation, two of the most widely recognized brand names in the transportation industry...have entered into a definitive agreement under which Yellow Corporation will acquire Roadway Corporation for approximately **\$966 million**, or **\$48 per share** (based on a fixed exchange ratio and a 60-day average price per share of \$24.95 for Yellow common stock in a half cash, half stock transaction). This represents a 49 percent premium for Roadway shares based on the 60-day average closing price of Roadway stock. Yellow Corporation will also assume an expected **\$140 million** in net Roadway indebtedness, bringing the enterprise value of the acquisition to approximately **\$1.1 billion**.

In general, upon the closing of the acquisition, each share of Roadway stock will be converted into **1.924 shares of Yellow common stock**. However, there is a cash election option and a collar of plus or minus 15 % from \$24.95 per Yellow share.

Comparable Acquisition Analysis (Sample Output)

Typically shows value as a multiple of most recently available or LTM (last twelve months) results. Some industries will show value as a multiple of 1-year forward expected results

- ▶ Enterprise Value (Transaction Value, Purchase Price) as a multiple of Revenues, EBITDA and EBIT
- ▶ Sometimes includes industry specific metrics, *i.e.* EV as a multiple of Reserves, Subscribers, Access Lines, etc.
- ▶ Due to limited public disclosure of announced deals, not all data will be available; thus, do not worry if there are NAs (not applicable)

Sample CompAcq Output

(\$ in millions, except per access line amounts)

DATE ANNOUNCED	TARGET NAME	ACQUIRER NAME	ACQUIRED ACCESS LINES	TRANSACTION VALUE	TRAILING EBITDA	TRANSACTION VALUE/			ACCESS LINES
						YEAR 1 EBITDA	TRAILING EBITDA	YEAR 1 EBITDA	
01/15/04	TXU Communications Ventures Co.	Consolidated Communications, Inc.	170,000	\$527	NA	NA	NA	NA	3,100
07/17/02 ⁽¹⁾	Illinois Consolidated Telecom. Co.	Homebase Acquisition Corp.	90,333	\$271	\$40.5	-	6.7x	-	3,000
02/14/02	Telecom Systems of NH	Telephone & Data Systems	7,500	-	-	-	-	-	-
11/21/01	Conestoga Enterprises	D&E Communications	84,000	273	\$21.3	-	12.8x	-	3,250
11/16/01	MCT Telecom	Telephone & Data Systems	18,800	-	-	-	-	-	-
09/21/01	Kerrville Communications	VALOR Telecommunications	26,936	135	17	-	8.0	-	5,019
11/27/00	Chorus Communications	Telephone & Data Systems	45,000	226	13	-	18.1	-	5,022
09/01/00 ⁽²⁾	GTE (AK)	Alaska Power & Telephone (AP&T)	20,564	-	6	6	-	-	-
07/31/00 ⁽²⁾	GTE (WI)	Century/Telephone USA	126,000	365	-	44	-	8.3	2,897
07/31/00 ⁽²⁾	GTE (AR)	Century Telephone	214,000	843	-	93	-	9.1	3,941
07/12/00	Global Crossing	Citizens Communications	1,100,000	3,500	387	-	9.0	-	3,182
06/30/00	GTE (IA)	Iowa Telecom	288,000	965	-	110	-	8.8	3,351
04/01/00	Peoples Mutual Telephone - VA	FairPoint Communications Inc.	7,879	35	4	4	9.8	9.1	4,480
04/01/00	GT Com	FairPoint Communications Inc.	52,018	211	18	19	11.5	11.4	4,056
01/03/00	FairPoint Communications Inc. (3)	Thomas H. Lee / Kelso	147,800	880	-	74	-	12.0	5,954
07/07/99	Alliant Communications Inc.	ALLTEL	285,000	942	110	-	8.6	-	3,304
05/27/99	GTE (AZ, CA, MN)	Citizens Communications	186,839	664	-	-	-	-	3,554
03/01/98	Taconic Telephone Co.	FairPoint Communications Inc.	24,832	77	9	11	9.1	7.1	3,113
06/01/00	Matanuska Telephone Assoc.	Alaska Communications Systems	57,500	188	-	-	-	-	3,261
		High	1,100,000	3,500			18.1x	12.0x	5,954
		Low	7,500	35			6.7	7.1	2,897
		Median	70,750	273			9.1	9.1	3,351
		Mean	154,611	638			10.4	9.4	3,826

(1) ILEC values are not adjusted for the value of non-ILEC operations.

(2) Access Lines exclude CLEC lines from 8-K dated 7/25/2001. Trailing EBITDA based on management presentation dated 9/19/01 and adjusted for the sale of its wireless business for \$60 million to VoiceStream. (wireless EBITDA assumed to be zero). The transaction value is adjusted for the sale of its wireless business, CLEC/LD business, cable/paging/fiber assets, and the value of the tower agreement.

(3) Date Closed.

How to do a Comparable Acquisition Analysis

If an associate asks you to do CompAcqs for them, here is a general strategy to apply:

1. Ask if there is an existing CompAcq Analysis/Database for the sector?
 - ▶ If there is, ask if there are specific acquisitions you should add to the existing database
 - Typically the Managing Director/Director/Vice President will know what acquisitions should be added to the existing analysis
 - Otherwise, search recent industry news or SDC to see if there are any substantial deals to add
2. If there is no existing CompAcq Analysis and you are starting from scratch
 - ▶ Do an SDC run to find recent (2-5 years) acquisitions within your sector (by SIC code) where the target company has financials available and is of similar size
 - For each potential CompAcq, make sure to read the description of the target company before you do the analysis
 - Make sure the acquisition structure is similar (full purchase vs. minority stake purchase)
3. Calculate the acquisition multiples
 - ▶ Ask what the standard methodology for doing CompAcqs is (*i.e.*, deal terms at announcement or deal terms at closing)
 - ▶ Make sure to understand what metrics are required for a full analysis
4. Check the CompAcqs – Very difficult
 - ▶ Sometimes research will show acquisition multiples
 - ▶ Are the multiples reasonable?
 - ▶ Ask yourself, how do your multiples compare to previous transactions?

Typical Issues/Problems with Comparable Acquisition Analysis

Here are some typical issues/problems experienced by analysts when preparing CompAcqs:

- ▶ The deal terms for an acquisition are not specified to the public
 - Often deal terms are not specified for small acquisitions or private to private acquisitions
 - See if SDC or Research has an acquisition value and/or multiples
 - Transactions involving private companies are very difficult to get acquisition multiples for
- ▶ The deal terms are available, but public financials are not available
 - Private to private – Financials are generally only available if the target Company has public debt outstanding
 - If the transaction value of the deal is greater than \$300MM, typically there is or will be public financials when the debt financing is sold to the public
 - Otherwise, transactions above \$100MM typically have some bank loans and your firm's corporate lending desk may have an Information Memorandum
 - Public – Sometimes a company will sell a business unit/subsidiary and if that business unit is small (not classified as a segment), financials will be unavailable; check press releases, investor presentations and research for this specific information
- ★ *Please note that sometimes the answer is, "that CompAcq cannot be done"*
- ▶ Improper calculation purchase price
 - Do not take the purchase price directly from SDC or press release
 - Sometimes SDC rank value does not include debt and uses wrong deal terms
 - You should check multiple sources
 - Does not properly incorporate contingent liabilities
 - Does not include value of investments/minority interest
 - Does not incorporate change of control
 - Should use outstanding rather than exercisable options and in-the-money convertible debt
- ▶ Excluded proper adjustments to income statement historicals/projections for non-recurring items

D. Discounted Cash Flow Analysis



Introduction to Discontinued Cash Flow Analysis

Used to determine the intrinsic value of a company based on a given financial plan excluding the impact from the capital structure of the company

- ▶ Theory – The intrinsic value of any productive asset is the present value of its cash flows
 - Typical analysis includes 5 years of Free Cash Flow and includes a terminal value to account for the remaining cash flows in perpetuity
- ▶ Discounted Cash Flow Analysis is also known as DCF analysis
- ▶ Why do a cash flow analysis? Theoretically, discounted cash flows and discounted earnings produce identical valuation results; however
 - Over the short to medium term, cash flow can differ substantially from accounting earnings due to:
 - Capex vs. depreciation
 - Various non-cash items included in earnings
 - Goodwill amortization and write-downs
 - Earnings are more easily manipulated than cash flow
 - Provisions / accruals
 - Accounting for capital expenditures: capitalized vs. expensed
 - Revenue recognition policies
 - Inventory accounting (LIFO vs. FIFO)
 - Off-balance sheet financing and special purpose vehicles

Introduction to Discontinued Cash Flow Analysis (cont'd)

- ▶ DCF analysis typically builds off after-tax EBIT to get to free cash flow

(\$ in millions)

	YEAR ENDED DECEMBER 31,					
	2004E	2005E	2006E	2007E	2008E	2009E
Revenue	\$481.3	\$507.8	\$535.7	\$565.2	\$596.3	\$629.1
% Margin		5.5%	5.5%	5.5%	5.5%	5.5%
EBIT	\$73.1	\$99.8	\$109.2	\$121.1	\$133.2	\$152.6
% Growth		36.6%	9.4%	10.9%	10.0%	14.6%
% Margin	15.2%	19.6%	20.4%	21.4%	22.3%	24.3%
Cash Tax Calculation						
EBIT	\$73.1	\$99.8	\$109.2	\$121.1	\$133.2	\$152.6
Cash Tax Rate	36.5%	36.5%	36.5%	36.5%	36.5%	36.5%
Cash Taxes	\$26.7	\$36.4	\$39.9	\$44.2	\$48.6	\$55.7
Unlevered Free Cash Flow						
Tax Adjusted EBIT	\$46.4	\$63.4	\$69.3	\$76.9	\$84.6	\$96.9
Plus: Depreciation & Amortization	27.2	27.5	28.9	30.4	32.1	33.8
Less: Capital Expenditures	(25.0)	(25.0)	(25.0)	(25.0)	(25.0)	(25.0)
Plus: Asset Disposals	-	-	-	-	-	-
Plus: Change in Working Capital	18.5	34.9	6.4	1.3	14.3	19.5
Unlevered Free Cash Flow	\$67.1	\$100.8	\$79.7	\$83.5	\$106.0	\$125.2
Discount Period	1.0	2.0	3.0	4.0	5.0	6.0
Discount Rate (WACC)	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Discounted Unlevered Free Cash Flow	\$61.0	\$83.3	\$59.9	\$57.1	\$65.8	\$70.7

Terminal Value Calculation:

2009E EBITDA	\$186.4
Exit Multiple Assumed	10.0x
Implied Terminal Value	\$1,864.3

Equity Value Calculation:

PV of Unlevered Free Cash Flow	\$397.6
PV of Terminal Value	1,052.4
Implied Ent. Value	\$1,450.0
Net Debt @ 12/31/03A	380.1
Implied Equity Value	\$1,069.9
FD Shares Outstanding	15.9
Implied Price Share	\$67.32

**Terminal multiple
and WACC is based
on the Comps**

- ▶ Present value of cash flow stream = Sum of present values of individual cash flows

$$\sum_{n=1}^{\infty} \frac{CF_n}{(1+r)^n} = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \frac{CF_3}{(1+r)^3} + \dots$$

- ▶ In the formula and analysis above (based on the NPV formula in Excel), assume that cash flows are received on the last day of each forecast year (“end-year cash flows”)
 - In reality, cash flows are typically spread out across the year and you may come across similar analysis done using mid-year cash flows

Discontinued Cash Flow Analysis (Sample Output)

DCF outputs typically show a range of values to offer the viewer a better understanding of how much value is impacted by the Terminal Value and WACC

DCF Matrix

(\$ in millions)

Same as previous page

DISCOUNT RATE	2009E TERMINAL VALUE EBITDA MULTIPLE				
	8.5x	9.0x	9.5x	10.0x	
10.0%	\$397.6	\$397.6	\$397.6	\$397.6	Present Value of Free Cash Flow
	894.5	947.1	999.7	1,052.4	Present Value of Terminal Value
	\$1,292.1	\$1,344.8	\$1,397.4	\$1,450.0	Enterprise Value
	(380.1)	(380.1)	(380.1)	(380.1)	Net Debt as 12/31/2003
	\$912.0	\$964.7	\$1,017.3	\$1,069.9	Equity Value
	1.9%	2.4%	2.7%	3.1%	Implied Perpetuity Growth Rate
11.0%	\$385.3	\$385.3	\$385.3	\$385.3	Present Value of Free Cash Flow
	847.2	897.1	946.9	996.7	Present Value of Terminal Value
	\$1,232.5	\$1,282.4	\$1,332.2	\$1,382.1	Enterprise Value
	(380.1)	(380.1)	(380.1)	(380.1)	Net Debt as 12/31/2003
	\$852.4	\$902.3	\$952.1	\$1,002.0	Equity Value
	2.9%	3.3%	3.7%	4.0%	Implied Perpetuity Growth Rate
12.0%	\$373.6	\$373.6	\$373.6	\$373.6	Present Value of Free Cash Flow
	802.8	850.1	897.3	944.5	Present Value of Terminal Value
	\$1,176.4	\$1,223.6	\$1,270.9	\$1,318.1	Enterprise Value
	(380.1)	(380.1)	(380.1)	(380.1)	Net Debt as 12/31/2003
	\$796.3	\$843.5	\$890.8	\$938.0	Equity Value
	3.8%	4.2%	4.6%	5.0%	Implied Perpetuity Growth Rate

Used to test the whether the terminal multiple is reasonable

How to do a Discounted Cash Flow Analysis

If an associate asks you to do a DCF for them, here is a general strategy to apply:

1. Are there projections available from Management?
 - ▶ Typically the target company will issue the investment bank a financial summary that offers a long range plan
 - Sometimes this plan will be less than five years. You should make some basic assumptions and stretch the plan into a long range plan
2. If there are no projections available from Management, you should build a model
 - ▶ You start with equity research which will typically give you a 2-3 year outlook for the company. You should make some basic assumptions and stretch the plan into a long range plan
 - ▶ Forward growth, margins and working capital should be consistent with historical changes
3. Select a terminal multiple based on the comps
 - ▶ Create your basic DCF model down to Unlevered Free Cash Flow
4. How flexible does the model need to be?
 - ▶ You should ask your team whether it makes sense to build a model that is extremely flexible
 - General Sales Level – Your model should allow you to change the overall sales growth, gross margin, EBITDA margin, Capex levels, and working capital changes
 - Segment/Product/Customer – Sometimes it is necessary that your model be able to run at a deeper level to discriminate between the growth and margins of various products or customers; this is not necessary for the typical DCF Analysis
5. Check your DCF – Use a calculator to make sure your formulas are correct
 - ▶ Do you match management and/or research for the available years?
 - ▶ Do the projections make sense relative to historical results? Is the valuation reasonable?
 - ▶ Write-up a summary of the assumptions you used to create the projections, your team will ask

Typical Issues/Problems with DCF Analysis

Here are some typical issues/problems experienced by analysts when preparing a DCF:

- ▶ Miscalculation of Unlevered Free Cash Flow
 - Income Statement Items – should not include interest, discontinued operations, extraordinary charges; tax rate should be based on some statutory rate and taken on EBIT
 - Other Cash flow items – an increase in working capital is a decrease in free cash flow; all non-cash equity income and minority interest should be excluded from calculation
- ▶ Bad representation of financials
 - Growth and margin improvement is too high
 - D&A significantly eclipses Capex (not realistic/practical as D&A should trend towards Capex)
 - Cannot have long term growth without asset growth – working capital and Capex generate sales growth
- ▶ Incorrect derivation of the discount rate/WACC
 - Use the target's WACC (not acquirer), understand all cash flows are not equally risky, realize that inflation impacts cost of capital
- ▶ Miscalculation of net debt and corporate adjustments
 - Net debt and/or corporate adjustments should include minority interest and reflect any equity investments where the value of these investments is not captured in free cash flow
- ▶ Improper matching of free cash flow and net debt
 - If net debt is as of 9/30/2004 (FYE 12/31/04), the cash flow for the initial period should only reflect 3 months to properly match against the net debt when calculating Equity Value
- ▶ Calculation of equity value per share
 - Equity value per share should reflect any dilution from exercisable options as dependent on the share price (circular calculation)
- ▶ Terminal value is too-high and reflects unrealistic growth assumptions

E. Leveraged Buyout Analysis



Introduction to Leveraged Buyout Analysis Overview

Used to determine the intrinsic value of a company based on a given financial plan including the impact of the capital structure of the company

- ▶ Also known as LBO analysis
 - Similar to the DCF analysis, the intrinsic value of any productive asset is the present value of its cash flows
- ▶ The LBO analysis is conceptually different from the DCF analysis
 - Different companies can handle different levels of debt; thus, the value of a company should incorporate the capital structure of a company and the implied levels of interest paid
 - The ability to take on leverage (debt) will greatly impact value to an investor
 - The value of a company should be based on the required return of investors, generally 20% -25%
- ▶ The LBO analysis takes an investment by a 3rd party (usually at a premium to the current market value) and calculates the implied return if the 3rd party sold that investment after a given time period (paying down debt in the interim)
 - An increase in equity value over time is generated by debt paydown, multiple expansion and EBITDA growth
- ▶ The LBO analysis is often used to show a company what their base valuation is. This method generates a base valuation because the return concept limits the amount the company can be acquired for

Leveraged Buyout Analysis (Sample Analysis)

The analysis below shows a simple LBO where a Sponsor has invested \$150 million in equity and raised \$400 million of debt to purchase a Company at 5.5x EBITDA of \$100 million

- ▶ By year 2008, the Company has paid down \$220 million of debt and has seen EBITDA grow to \$120 million
- ▶ As long as the company can enter into the deal at less than 6.0x EBITDA it will generate a return to investors of around 20% or more (provided there is no major multiple contraction)

LBO Analysis

(\$ in millions)

Free Cash Flow	2003A	2004E	2005E	2006E	2007E	2008E
EBITDA		\$100	\$105	\$110	\$116	\$122
- Interest		(23)	(21)	(18)	(15)	(13)
- Taxes		(22)	(24)	(26)	(29)	(32)
- Change in WC		-	(5)	(5)	(6)	(6)
Cash from Ops.		\$55	\$55	\$60	\$66	\$71
- CAPEX		(17)	(17)	(18)	(19)	(20)
Cash to Pay Debt		\$39	\$38	\$42	\$47	\$51
Debt Balance	\$400	\$361	\$323	\$281	\$234	\$183

Sale Value

		IRR Analysis		Entry Multiple			
2008 EBITDA	\$122	Exit Multiple	4.5x	5.0x	5.5x	6.0x	
Multiple	5.5x		4.5x	49%	30%	19%	13%
Sale Price	\$669		5.0x	53%	34%	23%	16%
2008E Debt	(183)		5.5x	58%	37%	26%	19%
2008E Equity	\$486		6.0x	61%	40%	30%	22%

Returns Calculation

Equity Investment	\$150	12/31/2003
Closing Equity	\$486	12/31/2008
IRR over 5 years	26.5%	

Sources and Uses

(\$ in millions)

Sources	Amount	Cum. Mult. of LTM EBITDA
Debt Raised (8.0%)	\$400.0	4.0x
Equity Investment	\$150.0	5.5x
Total Sources	\$550.0	5.5x
Uses	Amount	Cum. Mult. of LTM EBITDA
Total Purchase Price	\$550.0	5.5x
Total Uses	\$550.0	5.5x

Purchase Price Calculation

LTM EBITDA	\$100.0
Purchase Multiple	5.5x
Total Purchase Price	\$550.0

How to do an LBO Analysis

If an associate asks you to do a LBO Analysis for them, here is a general strategy to apply:

1. Find out if there are projections available from Management, otherwise use research?
 - ▶ Your plan should extend to the proposed exit date for the target company
 - ▶ Build your operating model that forecasts operating income and the relevant balance sheet accounts
2. What is the expected purchase price and leverage that can be put on the target company?
 - ▶ The purchase price should be at a premium to the existing share price in the case of a public LBO and mirror previous comparable acquisitions in the case of a private to private transaction
 - ▶ Leverage should be based on previous deals or guidance from capital markets
 - Standard Leverage is 2.0-3.0x bank debt and 1.0-2.0x bond (bank is generally preferred over bond)
3. After you determine a proposed capital structure for the company, figure out the interest rate on the various tranches of debt
 - ▶ How should you treat the target's old tranches of debt – is it a full refinancing or will old debt stay in place?
4. Build your LBO or input these items into your firm's standard LBO/M&A shell
 - ▶ You should ask your team whether it makes sense for the operating model to be extremely flexible
 - Income Statement Assumptions – Ability to run various cases
 - Capital Structure Assumptions – Do you already have a set capital structure?
5. Check your LBO
 - ▶ Does the balance sheet in your model balance?
 - ▶ Does your income statement match management and/or research for the available years?
 - ▶ Is your debt paydown reasonable?

Typical Issues/Problems with LBO Analysis

Here are some typical issues/problems experienced by analysts when preparing an LBO:

- ▶ Balance sheet does not balance
 - Go through each balance sheet account, make sure that there is a corresponding entry on the cash flow statement
 - If the equity is purchased above book value, the assets must increase (either asset write-up or goodwill)
 - No negative assets – you cannot amortize PP&E greater than its book value (D&A too high)
- ▶ Bad representation of financials
 - Growth and margin improvement is too high
 - Including non-cash items in cash flow (income from equity investments)
 - D&A significantly eclipses Capex (not realistic/practical as D&A should trend towards Capex)
 - Cannot have long term growth without asset growth – working capital and Capex generate sales growth
- ▶ Miscalculation of equity purchase price/exit value
 - Should reflect any equity investments where the value of these investments is not captured in free cash flow, include minority interest
 - Equity value should reflect change of control (outstanding options; in-the-money convertible debt)
- ▶ Improper matching of free cash flow and net debt
 - If net debt is as of 9/30/2004 (FYE 12/31/04), the cash flow for the initial period should only reflect 3 months to properly match against the net debt when calculating Equity Value

E. Interpreting and Presenting Valuation Results

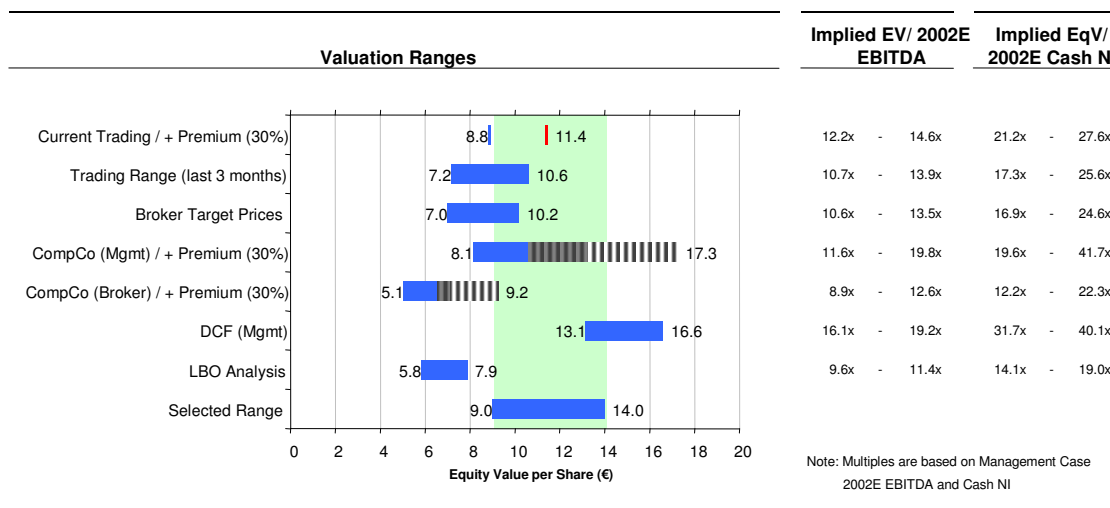


Valuation Methodologies –Strengths/Weaknesses

	Strengths	Weaknesses
Main Valuation Methods		
▶ Comparable Company Analysis	▶ Reflects current public market view of company/sector	▶ Public market does not have full info ▶ Market environment and business cyclicality ▶ Quality of Comparables ▶ Consistency of accounting
▶ Comparable Acquisition Analysis	▶ Incorporates acquisition/change of control premium ▶ Takes out some of the reliance on current market conditions	▶ Quality of comparables – Availability of information ▶ Consistency of accounting ▶ Deal specific issues – synergies / market conditions / cyclicality ▶ Historical analysis
▶ Discounted Cash Flow Analysis	▶ Incorporates target company full financial plan	▶ Quality of financial forecasts ▶ Developing meaningful sensitivities ▶ Discount rate ▶ Terminal value assumptions
▶ Leveraged Buyout Analysis	▶ Incorporates target company full financial plan ▶ Takes into account ability to leverage business ▶ Floor value of business	▶ Quality of financial forecasts ▶ High yield market appetite ▶ Timing of purchase relative to target Company's business cycle – Debt based on LTM EBITDA
Other Valuation Methods		
▶ Research Price Targets	▶ Takes into account short-term expectations of public market	▶ Public market does not have full info ▶ Short-term value
▶ Relative Contribution	▶ Takes into account comparison recent historical and projected results	▶ Does not include long-term prospects ▶ Relative timing in cycle ▶ Applies same multiple to businesses
▶ Sum-of-the-Parts / Break-Up	▶ Takes into account relative value of a Company with multiple businesses	▶ Availability of business unit level information (how deep?) ▶ Same as Comps/CompAcq/DCF
▶ Specific Asset/Replacement	▶ Takes into account current replacement value	▶ Availability of information ▶ Too low relative to going concern value (re-investment)
▶ Dividend Discount	▶ Takes in account actual cash flows to investors from going concern corporation	▶ Return on capital reinvested ▶ Theoretically, same as DCF value

Presenting Valuation Results

- ▶ Cross check results of different valuation methods
 - Typically, Comp Analysis values are below CompAcq Analysis values due to the control premia inherent in CompAcq multiples
 - DCF Analysis values can be argued to imply control premium since modeling of cash flows typically implies access to such cash flows; therefore, DCF Analysis values are typically closer to CompAcq Analysis values
- ▶ Cross check results against other sources of value insight
 - Trading range, if listed company
 - Broker valuations
 - Company statements
- ▶ Select valuation range based on reasoning, not on average
- ▶ Graphically present results of all valuation methods



Note: 30% premium used for illustrative purposes only. Premium applied needs to be based on premia paid in comparable transactions.

Note: Multiples are based on Management Case 2002E EBITDA and Cash NI

3. Other Important Analyses – Merger Consequences & Credit Comps



Preparing Merger Consequences

You may be asked to prepare merger consequences for two or more companies.

Here is a quick overview of merger consequences analysis:

- ▶ A merger consequences (aka mergercon) analysis determines the value of various pro forma metrics when a Company buys another by Company
- ▶ Inputs: Generally, a standard mergercon analysis will be built off two companies forward EPS
 - $\text{Forward EPS} * \text{Existing Fully Diluted Shares} = \text{Forward Net Income}$
 - Share price for Acquirer and Share Price for Target
 - Target Enterprise Value and Target Book Value
 - Proportion of acquisition financing in stock vs. cash
 - Estimate of tax rate, interest rate on acquisition financing, portion of asset write-up and years to depreciate asset write-up, estimate of fees, synergies
 - For credit statistics, you would also need acquirer total debt and target total debt

Quick and Dirty Merger Consequences

50% Cash / 50% Stock Deal

Company A Net Income	\$1,240
Company B Net Income	\$4,010
Synergies After-Tax	282
Depreciation (on Asset Write-up) After-Tax	(159)
Interest on Acquisition Financing After-Tax	(499)
Financing Fees Amortization After-Tax	(19)
PF Net Income	\$4,855
PF Shares (Includes Share Increase)	2,002
PF EPS	\$2.43
Old EPS	\$2.30
Accretion / (Dilution)	5.6%

(\$ in millions)

Pro forma Company A 2005 Full Income Statement Calculations

	Comp. A	Comp. B	Adjustments	PF Comp. A
Revenues	\$28,788	\$16,111		\$44,899
EBITDA	6,671	2,668	400	9,739
D&A	(1,257)	(521)	(226)	(2,004)
EBIT	\$5,414	\$2,147	\$174	\$7,735
Interest Exp.	(112)	(77)	(707)	(896)
Other	386	–	(27)	359
EBT	\$5,688	\$2,071	(\$560)	\$7,199
Taxes	(1,678)	(648)	165	(2,160)
Tax Rate	29.5%	31.3%	29.5%	30.0%
NI before Min	\$4,010	\$1,423	(\$395)	\$5,038
Min. Interest	–	(183)		(183)
NI	\$4,010	\$1,240	(\$395)	\$4,855
Shares	1,746.5	127.0	255.6	2,002.1
EPS	\$2.30	\$9.77	(\$1.54)	\$2.43

Preparing Merger Consequences (cont'd)

Sample Output

Here is a sample output page for Merger Consequences.

Company A Acquires Company B – Analysis at Various Prices

50% Stock \ 50% Cash

(US\$ in millions, unless otherwise stated)

Premium	0.0%	20.0%	30.0%	40.0%	50.0%
Acquisition of Company B at Various Premia⁽¹⁾					
Share Price €	€141.00	€169.20	€183.30	€197.40	€211.50
Share Price US\$	\$168.56	\$202.27	\$219.13	\$235.98	\$252.84
Fully Diluted Shares ⁽²⁾	127.1	127.7	128.0	131.4	131.6
Equity Value US\$	\$21,429	\$25,839	\$28,047	\$31,002	\$33,263
Total Debt ⁽²⁾	6,020	6,020	6,020	5,274	5,274
Minority Interest	842	842	842	842	842
Cash ⁽³⁾	(2,647)	(2,647)	(2,647)	(2,647)	(2,647)
Investments ⁽⁴⁾	(998)	(998)	(998)	(998)	(998)
Enterprise Value	\$24,646	\$29,056	\$31,264	\$33,473	\$35,734
Implied Multiples:					
EV / 2004E EBITDA	9.24x	10.89x	11.72x	12.55x	13.39x
EV / 2005E EBITDA	8.56x	10.09x	10.86x	11.62x	12.41x
Company A (includes \$400 million of synergies)					
2004E Standalone EPS	\$2.30				
2004E PF EPS ⁽⁵⁾	\$2.60	\$2.48	\$2.43	\$2.35	\$2.29
Accretion / (Dilution) \$	\$0.31	\$0.19	\$0.13	\$0.05	(\$0.00)
Accretion / (Dilution) %	13.3%	8.1%	5.6%	2.3%	(0.1%)
2005E Standalone EPS	\$2.53				
2005E PF EPS ⁽⁵⁾	\$2.86	\$2.74	\$2.68	\$2.60	\$2.54
Accretion / (Dilution) \$	\$0.34	\$0.21	\$0.15	\$0.07	\$0.01
Accretion / (Dilution) %	13.3%	8.4%	6.0%	2.9%	0.6%
PF Ownership	89.9%	88.1%	87.2%	86.1%	85.2%
PF Net Debt / 2004E EBITDA ⁽⁶⁾	1.43x	1.65x	1.76x	1.91x	2.03x

Note: Share prices and exchange rate as of []. US\$ / EUR exchange rate of 1.195 used for Company B share price and financials.

- (1) Company B balance sheet information based on 20-F converted to US\$ at current exchange rates.
- (2) If necessary, diluted shares and total debt adjusted for in-money-convertible debt.
- (3) Includes marketable securities, cash and cash equivalents. Excludes short-term loan assets of \$155 million.
- (4) Includes market value of investments in unconsolidated affiliates.
- (5) Acquisition assumptions include:
Company B results adjusted for US GAAP to exclude amortization of goodwill and non-recurring items.
Assumes writeup of 25% of excess of equity purchase price over book value depreciated over 25 years.
Assumes acquisition fees based on 85 bps of the total purchase price.
Assumes acquisition financing raised at pre-tax cost of 6.0%.
- (6) Assumes Company A uses cash on Company B's balance to acquire Company B's outstanding shares.
Assumes acquisition financing fees based on 115 bps, amortized over 5 years.
Includes synergies of \$400 million.

Preparing Credit Comps

You may be asked to prepare Credit Comparable Companies Analysis (Credit Comps).

Credit comps are very similar to general equity Comps

- ▶ The major differences are:
 - Breakout of debt – Typically you will breakout debt to show bank debt, senior secured debt, senior debt and subordinated debt
 - Inclusion of capitalized operating leases and back out of rent – Typically for a credit comp, you will capitalize operating leases and back out rent for comparability purposes
 - Inclusion of credit ratings and credit ratios on output sheet

(\$ in millions)	Owens-Illinois	Ball Corporation	Berry Plastics	Crown Cork & Seal Co.	Constar International
Issue	Sr. Sec. Notes	Senior Notes	Sr. Sub. Notes	Senior Notes	Sr. Sub. Notes
Amount	\$625 ⁽¹⁾	\$300	\$250	\$300	\$175
Issue Date	11/5/02	12/5/02	7/17/02	1/18/95	11/15/02
Maturity	11/15/12	12/15/02	7/15/12	1/15/05	12/1/12
Coupon	8.750%	6.875%	10.750%	8.375%	11.000%
Rating (Moody's/S&P)	B2/BB	Ba3/BB	B3/B-	Ca/CCC	B3/B-
Price (1/9/03)	103.750	101.750	107.500	94.000	100.000
Yield to Worst	8.09%	6.59%	9.34%	11.83%	10.99%
Spread (bps)	434	319	566	996	723
LTM Data					
LTM Date	9/30/02	9/30/02	9/30/02	9/30/02 ⁽³⁾	9/30/02
Revenues	\$5,733.6	\$4,826.9	\$478.4	\$6,914.0	\$711.1
EBITDA	1,338.8 ⁽²⁾	628.3 ⁽²⁾	113.6 ⁽²⁾	842.0	82.9
Margin	23.4%	13.0%	23.7%	12.2%	11.7%
Capital Expenditures	\$531.0	\$139.8	\$31.7	\$123.0	\$24.6
Balance Sheet Data					
Cash	\$177.1	\$58.2	\$13.2	\$246.0	\$2.9
Total Debt	5,417.6	1,978.3	608.8	4,584.0	365.1
Total Interest	363.2	136.1	49.4	367.0	29.2
LTM Credit Statistics					
Debt/EBITDA	4.0x	3.1x	5.4x	5.4x	4.4x
Net Debt/EBITDA	3.9x	3.1x	5.2x	5.2x	4.4x
EBITDA/Interest	3.7x	4.6x	2.3x	2.3x	2.8x
(EBITDA-Capex)/Interest	2.2x	3.6x	1.7x	2.0x	2.0x

Source: CSFB Research and prospectus filings.

(1) Includes \$175 million tack-on priced at 100.549% on 12/11/02.

(2) Represents adjusted EBITDA, excluding unusual gains, losses and charges.

(3) Financials are not yet adjusted to exclude Constar spinoff.

Appendix



A. What is Enterprise Value?

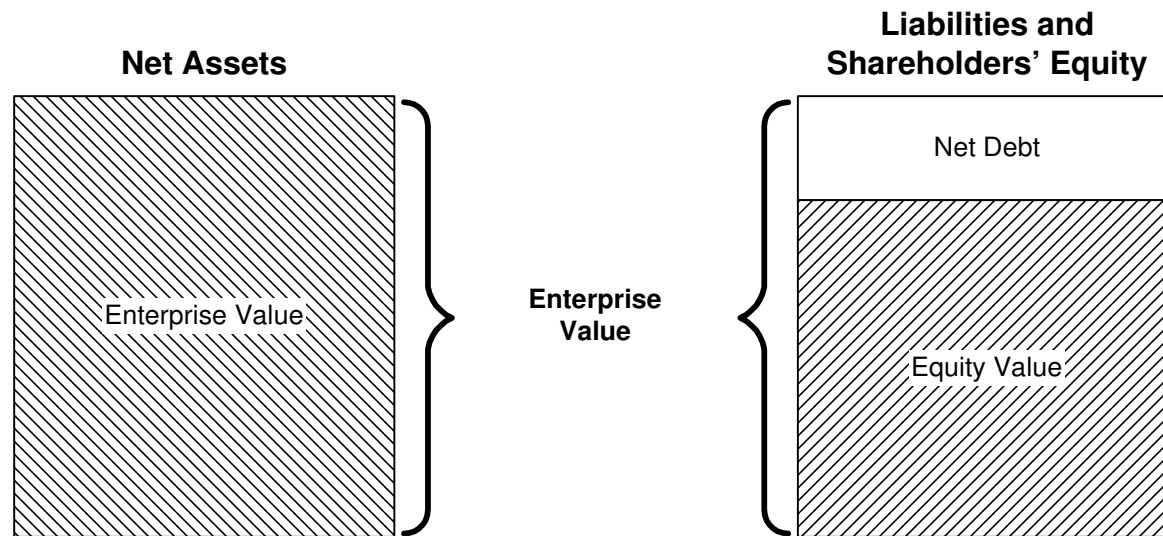


Simple Answer: Enterprise Value Versus Equity Value

Enterprise Value = market value of operating assets

Equity Value = market value of shareholders' equity

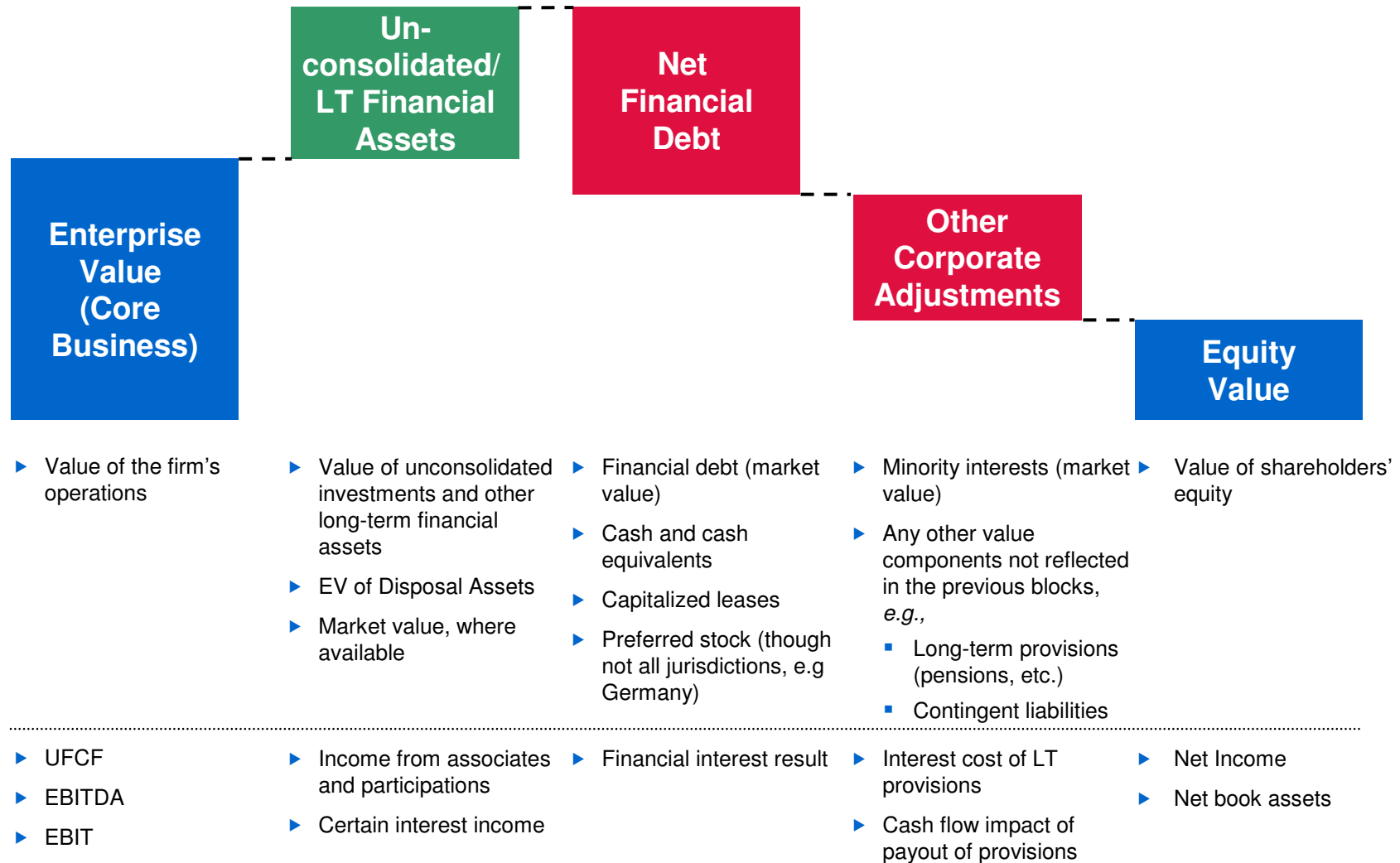
Equity Value = Enterprise Value – Net Debt⁽¹⁾



(1) For simplicity sake, Net Debt (Corporate Adjustments) is generally defined as total debt + minority interest + preferred stock + capitalized leases – excess cash and cash equivalents.

You will generally use the valuation techniques previously spoken about to calculate the enterprise value of the firm, which then allows you to calculate its equity value.

Less Simple Answer: Enterprise Value Versus Equity Value



Thinking about Corporate Adjustments?

Core Business Enterprise Value needs to be adjusted for all value components not captured in the Unlevered Free Cash Flow (DCF Analysis) or EBITDA (Comps Analysis). If possible, such adjustments should be made at market values:

Assets

- ▶ Unconsolidated equity investments and other participations
 - Note that investment income is typically post-tax income (applying an EBITDA or EBIT multiple to such income for purposes of the TV calculation would be conceptually flawed)
- ▶ Other long-term financial assets
- ▶ Non-operating real estate and other non-operating assets
- ▶ Cash and securities
- ▶ Value of tax loss carry-forwards
 - Can be valued implicitly via the cash flows by inclusion in the financial model
 - Separate valuation appropriate if income of (prospective) holder of an asset can be offset against tax loss carry forwards at the level of the target asset (*i.e.*, more rapid utilization)

Liabilities

- ▶ Financial debt
 - Financial debt is typically interest bearing
 - Overriding consideration however is whether a liability has operating or financing nature
- ▶ Minority Interests
- ▶ On-balance sheet pension liabilities (exclude interest cost component from UFCF)
- ▶ Certain other (long-term) provisions, *e.g.*, nuclear decommissioning, mining and other environmental clean-up, large-scale restructuring, asbestos, etc. (again, exclude interest component from UFCF)
 - Check cash flow impact (“ever-green” vs. cash-drain)

B. What is WACC?



WACC – Discount Rate Overview

- ▶ The WACC should be thought of as the opportunity cost of capital, the long-term return an investor expects to earn in an alternative investment of equivalent risk
- ▶ The WACC to be used in a DCF analysis is specific to the business or asset being valued. It does not necessarily depend on the buyer's or seller's overall cost of capital
- ▶ WACC is used by firms as the hurdle rate for a project or division, as a performance benchmark for return on capital calculations, to determine desirability of stock repurchases or issuance, or for valuation purposes
- ▶ Mathematically, WACC is expressed as:

$$\begin{aligned}
 \text{WACC}^{(1)} &= \left[\begin{array}{c} \text{After-tax} \\ \text{Cost of Debt} \end{array} \right] \times \left[\begin{array}{c} \text{Proportion of Debt} \\ \text{in Capital Structure} \end{array} \right] + \left(\begin{array}{c} \text{Cost of} \\ \text{Equity} \end{array} \right) \times \left(\begin{array}{c} \text{Proportion of Equity} \\ \text{in Capital Structure} \end{array} \right); \\
 \text{Cost of} \\
 \text{Equity}^{(2)} &= \left[\begin{array}{c} \text{Risk-Free} \\ \text{Rate} \end{array} \right] + \left[\begin{array}{c} \text{Levered} \\ \text{Beta} \end{array} \right] \times \left[\begin{array}{c} \text{Equity Market Risk Premium} \end{array} \right] + \left[\begin{array}{c} \text{Size Premium} \end{array} \right] \\
 \text{Levered} \\
 \text{Beta}^{(3)} &= \left[\begin{array}{c} \text{Unlevered} \\ \text{Beta} \end{array} \right] \times \left[\begin{array}{c} 1 + (1 - \text{Tax Rate}) \times (\text{Debt/Equity Ratio}) \end{array} \right]
 \end{aligned}$$

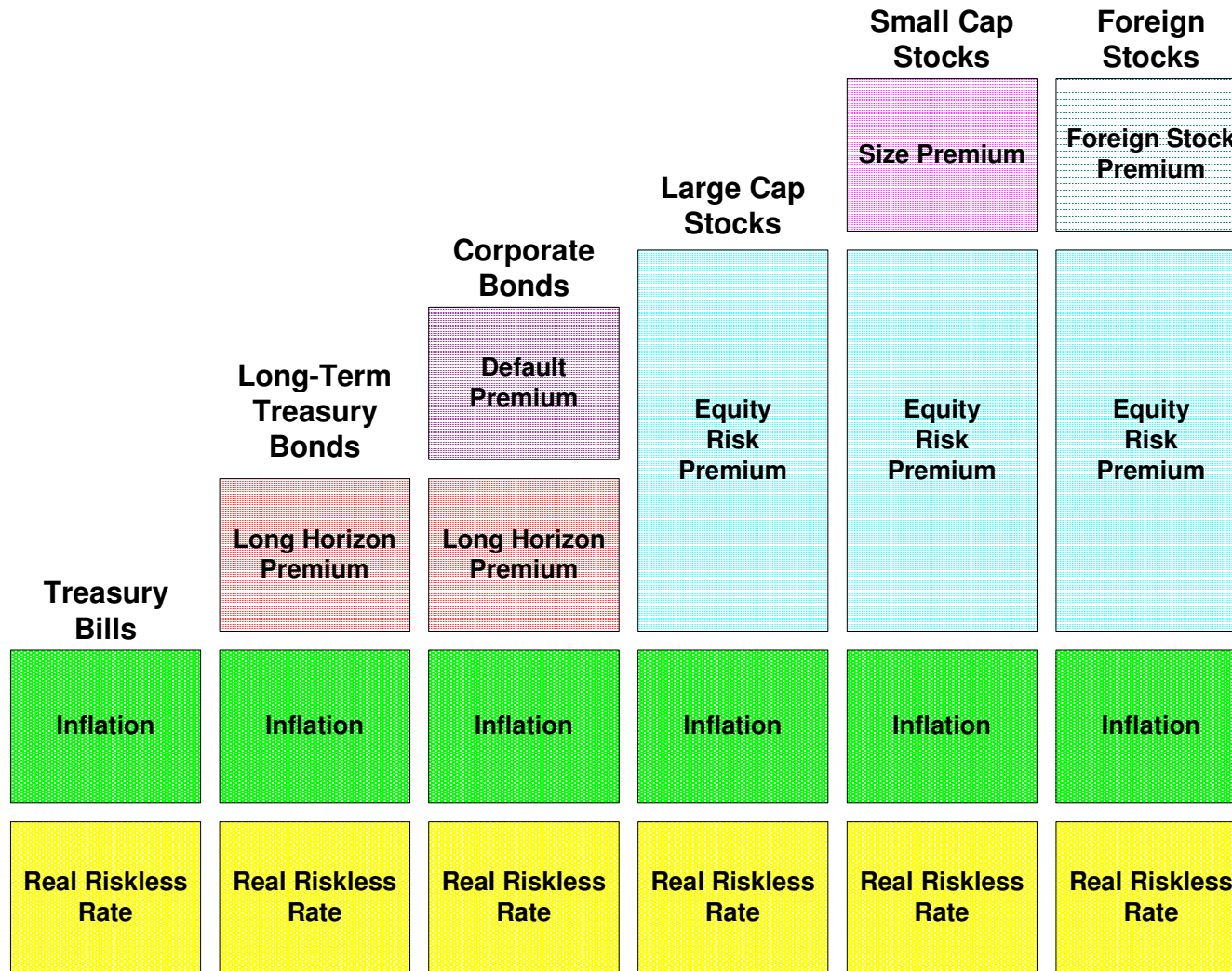
(1) Assumes capital structure is only debt and equity. Other sources of capital, such as preferred stock, would need to be included if present.

(2) Based on the Capital Asset Pricing Model.

(3) Assumes company's debt is risk-free. In certain limited situations, an adjustment can be made to this formula to account for the riskiness of the company's debt.

The Weighted Average Cost Capital (“WACC”) is the recommended discount rate to be used in the unlevered discounted cash flow valuation of an asset.

WACC – Cost of Capital Build-Up



C. How to Build Projections



Building Projections – Key Considerations

General Principle

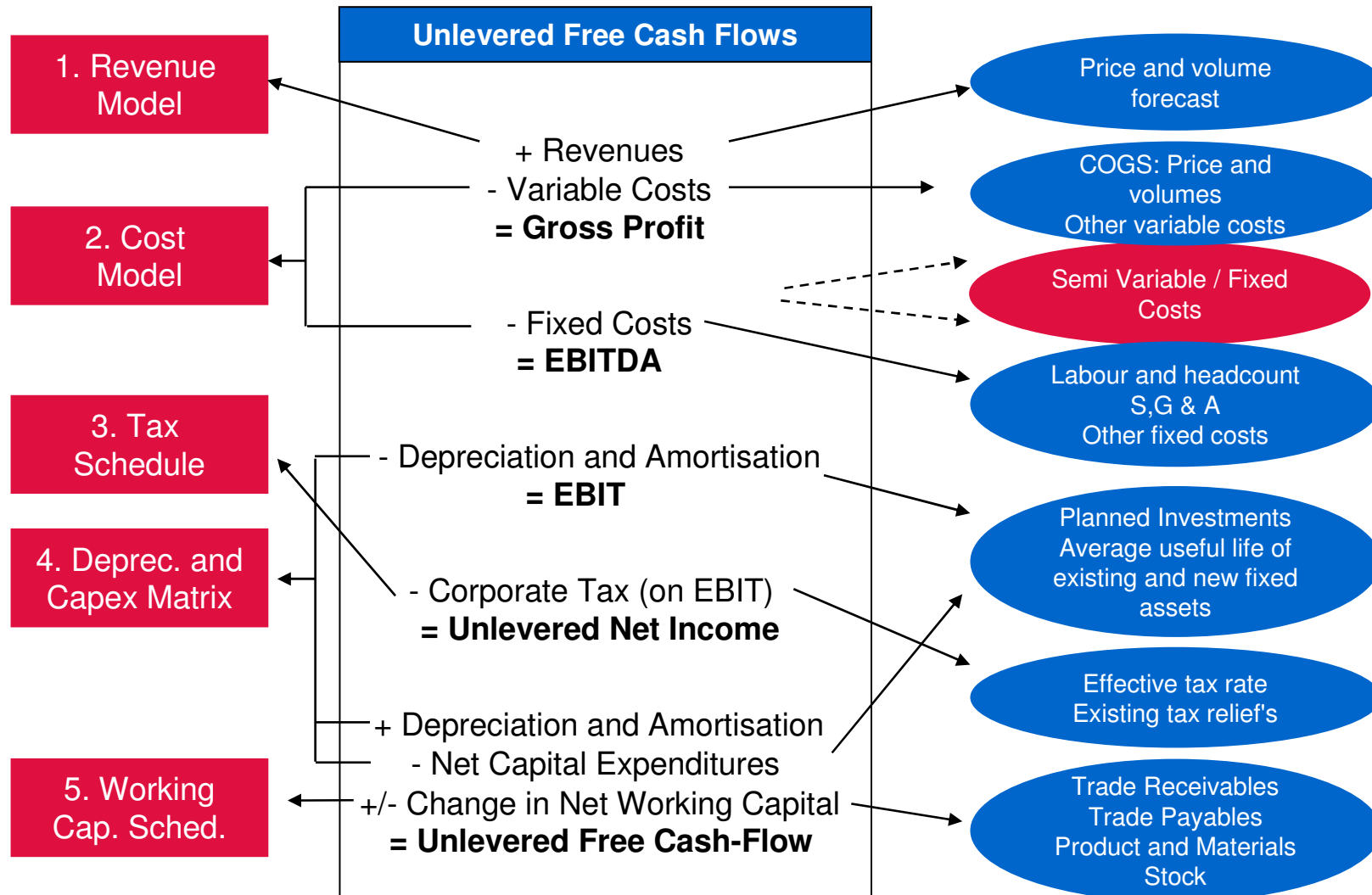
- ▶ Projections should be based on:
 - Analysis of historical performance
 - Company projections
 - Equity research analyst estimates
 - Industry data: benchmark growth and margin development against comparables
 - Should reflect company's continuing operating results free and clear of extraordinary items, discontinued operations, etc.
 - For a DCF, it will also exclude the effects of financial leverage
- ▶ Scenarios / sensitivity analyses for key variables

Specifics

- ▶ **Planning Horizon:** forecast period should be long enough to capture time required for business to reach “steady state”, *i.e.*, achieve normalization of annual growth, margins and reinvestment
 - Most banks will typically use 5 years, however individual case may suggest otherwise (*e.g.*, finite asset life, non-normalizing cash flow patterns)
- ▶ **Nominal vs. Real:** Projections are typically prepared in nominal terms, not real terms
 - Managers think in nominal terms
 - Interest rates quoted in nominal terms
 - Financial statements typically stated in nominal terms (particularly relevant for depreciation)

Building Projections – Helpful Framework

Corporate – Indicative Structure for Unlevered Free Cash Flow Calculation



Building Projections – Think About Your Work

General

- ▶ Understand the industry / understand the business
- ▶ Start with a sound analysis of historical financials (3 years is good, 5 years better)
 - Growth rates
 - Margin development
 - One-off items
 - Cost reduction programs
 - Working capital development

Sanity Checks

- ▶ Check margin development and growth rates vs. benchmarking of peers
- ▶ Try to drive projections on EBITDA margin, not EBIT margin
- ▶ Unusual changes in margins and growth rates must have specific explanations (no hockey sticks!)
- ▶ Ratio of capital expenditures / depreciation should converge to approx. 1 in the long term
- ▶ Make sure asset growth is in line with projected revenue growth (look at *e.g.*, fixed asset turn)
- ▶ Consider supply and demand dynamics and the implications of your assumptions for the supply and end markets
 - Consider the implied market share of your projections

D. Choosing the Right Range – Comps and CompAcqs



Comparability / Reliability is Critical

General

- ▶ **Quality** of comparables definitely outweighs **quantity** of comparables
- ▶ Check for comparability of business / operations, *e.g.*,
 - Product mix
 - Revenue / operating income split
 - Size
 - Geography
- ▶ Check for financial standing: (perceived) bankruptcy risk impacts meaning of multiples
- ▶ Check for comparability of accounting

Comparable Traded Companies

- ▶ Check for comparability of trading characteristics
 - Quality of exchange
 - Small stock exchanges often trade at discounts to their international peers
 - Adjustment for systematic market P/E differential may be required
 - Free float / liquidity / size
 - Prices of illiquid stock are often more volatile and often trade at discounts to their peers
 - Market prices may even systematically deviate from rational valuation
 - Absence of extraordinary influences: take-over speculation, transaction rumours, creative accounting worries, etc.

Comparability / Reliability (*cont'd*)

Comparable Acquisitions

- ▶ Check for comparability of transaction characteristics
 - Stake sold: minority vs. majority
 - Premium transaction vs. MoE
 - Circumstances of sale: forced sale vs. truly competitive auction
 - Transaction timing: typically more recent transactions are better comparables
 - Time in the cycle
 - Market constitution
 - Any other transaction-specific factors
- ▶ Check for other (non-monetary) price/value components, *e.g.*,
 - Put / call options
 - Long-term procurement or supply contracts
 - Earn-outs
- ▶ Check for non-commercial value influences
 - (Political) pressure / sweetheart deals

Comparability / Reliability (*cont'd*)

Exercise: What is a good vs. bad comp?

** Please consider the make-up of the below company's businesses prior to making your choice*

Example 1: Valuing Schindler (Elevator and Escalator company)

- ▶ Which is the better Comp?
 - United Technologies (Otis Elevators)
 - York International (Air conditioning, heating, refrigeration ventilation)

Example 2: Valuing Varta (Consumer and automotive battery manufacturer)

- ▶ Which is the better Comp?
 - Gillette (Duracell)
 - WD-40 Company (multi-purpose lubricants, cleaning products, etc.)

Understand the Factors that Drive Differences in Multiples

What makes one Company or Transaction more comparable than another?

- ▶ Market position / Scale Are they of a **similar size** and position relative to peers?
- ▶ Competitive Position – Are their competitive positions similar based on the following criteria?
 - **Geography** – Are their major operations and markets similar?
 - **Products** – Are their products of a similar level of technology, brand recognition, and are there a lot of substitutes?
 - Customer base – Are they at similar stage of the value chain?
 - Cyclicity – Are they subject to a similar business cycle? Are they at the same point in the cycle
 - **EBITDA Margin** – Do they have similar cost and pricing leverage with customers?
 - ROA, Capital Turns – Do they have similar levels of working capital and Capex requirements?
 - **Earnings Sustainability / Long-Term Prospects** – Do they have a similar growth projected? Do their target markets exhibit similar rates of growth?
 - Reputation – Do they have similar recognition for quality and performance?
 - Management – Does their management team have a similar reputation?
 - Earnings stability / predictability
 - Risk – An increase in cost of capital leads to lower multiples?
 - Accounting and Tax environment

Sanity check the results: Is the multiple not representative

- ▶ Negligible margins – High EBITDA multiple; Low Sales Multiple
- ▶ Large equity income (not picked up in EBITDA or Sales) – Is this adjusted for in Enterprise Value?
- ▶ Non-debt contingent liability (asbestos) – Is this adjusted for in Enterprise Value?

USE THIS AS A GUIDE!!!

**THANKS FOR YOUR
ATTENTION!!**

**WE WISH YOU GOOD LUCK IN
THE COMING WEEKS!!**