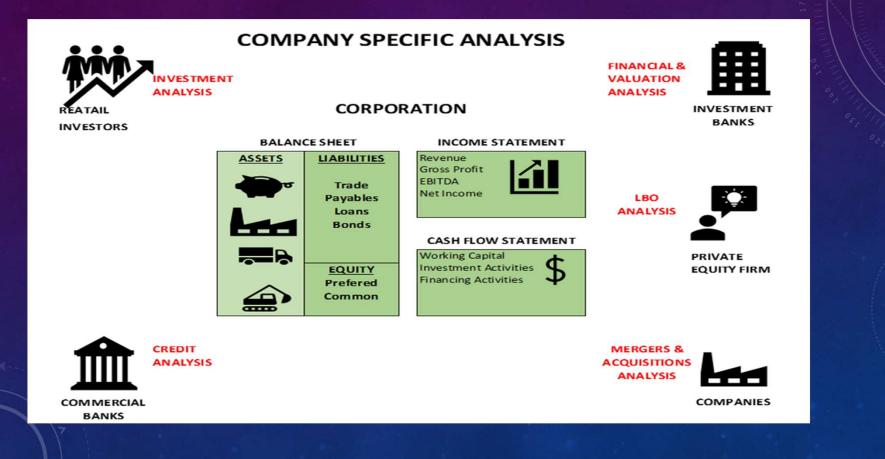
CAREER IN FINANCE

PROFESSOR CHRIS DROUSSIOTIS

COMPANY SPECIFIC ANALYSIS – A 30,000 FEET VIEW



SPECTRUM OF CAREER OPPORTUNITIES IN FINANCE

CORPORATE FINANCE



Corporations

- Treasury (Budget & Planning)
- Controller / Accounting

CREDIT ANALYSIS



Merchant Banking (CLOs, BDCs)

- Credit Analysis (Bonds/Loans)
- **Portfolio Management**



Investment Banking

- Broker/Dealer Sales & Trade •
- Advice (M&A, Capital Markets, Economics)
- Research ٠
- **Portfolio Management** •
- Wealth Management

Private Equity

- **Equity Analysis**
- Portfolio Management (Equity)

 Portfolio Management Risk Management (Credit & Market)

Sales & Trade)

Commercial Banking

Operations – Compliance & KYC

• Credit Analysis (Corporate /

Project Finance / Asset Finance)

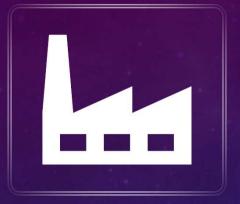
Loan Control/Treasury

Other Finance Careers

- **Rating Agencies for Bonds and Loans**
- Consulting Services (Capital Markets, M&A)
- **Specialized Finance Services**

- Advisory (Syndications, Distribution,

INVESTMENTS



Corporations

- Treasury (Budget & Planning)
- Controller / Accounting

Analysis:

- Understanding Financial Statements
- Running Financial Ratios to measure performance based on
 - Last year and years before (trend analysis)
 - Competitors, industry and market standards (Comparable Analysis)
 - Expectation (Vs budget)
 - Budgeting and Planning
- Budgeting & Planning
- Projects / Capital Raising

INCOME STATEMENT

- Measurement of Profit and Loss over a Period of Time
- Top Line to Bottom Line
- Revenue (Sales) Less Expenses = Profit or Loss

CASESTUDY

			00 2/2/00	
	Income Statement (000's)		2009	2010
50	Revenues by Geography			
51	U.S.		800,000	920,000
52	Europe		120,000	140,000
53	Asia		40,000	50,000
54 55	Total Revenue		960,000	1,110,000
56	Cost of Revenues by Geography			
57	U.S.		220,000	270,000
58	Europe		100,000	115,000
59	Asia		25,000	35,000
60	Total Cost of Revenue		345,000	420,000
62 63	Gross Profit		615,000	690,000
64	Operating Expenses			
65	Administrative & General		145,000	165,000
66	Marketing Expenses		75,000	80,000
67	Other Operating Expenses		10,000	12,000
68	Total Operating Expenses		230,000	257,000
70	EBITDA		385,000	433,000
72	Depreciation & Amortization		60,000	65,000
74	EBIT		325,000	368,000
76	Interest Expense		130,000	120,000
78	EBT	÷	195,000	248,000
80	Taxes	40%	78,000	99,200
82	Net Income		117,000	148,800

BALANCE SHEET STATEMENT

It shows us on a snap shot the Wealth of the Company

CASESTUDY

• The statement is set-up in Order of Liquidity

			2 1	VS	
	Balance Sheet (000's)	2009	2010	\$ Change	% Change
6	Current Assets				
7	Cash	45,000	65,800	20,800	46.2%
8	Accounts Receivable	45,000	60,000	15,000	33.3%
9	Inventories	35,000	40,000	5,000	14.3%
10	Prepaid Expenses	10,000	9,000	(1,000)	-10.0%
11	Total Current Assets	135,000	174,800	39,800	29.5%
13	Property and Equipment				
14	Land	2,500,000	2,500,000	-	0.0%
15	Building	450,000	550,000	100.000	22.2%
16	Furniture & Equipment	50,000	75,000	25,000	50.0%
17	Total Gross P&E	3,000,000	3,125,000	125,000	4.2%
18	Less Accumulated Depreciaition	(300,000)	(365,000)	(65,000)	21.7%
19	Net P&E	2,700,000	2,760,000	60,000	2.2%
21	Long-Term Investments	200,000	250,000	50,000	25.0%
23	Total Assets	3,035,000	3,184,800	149,800	4.9%
25	Liabilities and Owners Equity				
27	Current Liabilities				
28	Accounts Payable	35,000	40,000	5,000	14.3%
29	Accrued Income Taxes	12,000	10,000	(2,000)	-16.7%
30	Accrued Expenses	10,000	8,000	(2,000)	-20.0%
31	Current Portion of Long Term Debt	20,000	10,000	(10,000)	-50.0%
32	Total Current Liabilities	77,000	68,000	(9,000)	-11.7%
34	Long-Term Debt:	1,200,000	1,180,000	(20,000)	-1.7%
36	Deferred Income Taxes	12,000	17,000	5,000	41.7%
38	Total Liabilties	1,289,000	1,265,000	(24,000)	-1.9%
40	Owners' Equity				
41	Common Stock	1,000,000	1,000,000	-	0.0%
42	Paid-in-Capital	-	25,000	25,000	
43	Retained Earnings	746,000	894,800	148,800	19.9%
44	Total Owners' Equity	1,746,000	1,919,800	173,800	10.0%
46	Total Liabilities & Owner's Equity	3,035,000	3,184,800	149,800	4.9%

CASH FLOW STATEMENT

- It shows the Company's Cash Inflow and Outflow over a period of time
- Differences between Income Statement and Cash Flow Statement
 - Timing Differences (Working Capital Activities)
 - Capital Expenses Vs Operating Expenses (Investment Activities)
 - Financing Expenses not included in the Income Statement (Financing Activities)
- Represents the changes from last Year's Balance Sheet to this Year's Balance Sheet
 - Asset goes Up = Cash Negative
 - Asset goes down = Cash Positive
 - Liability goes up = Cash Positive
 - Liability goes down = Cash Negative
 - Owner's Equity goes up = Cash Positive
 - Owner's Equity goes down = Cash Negative

		2 2 - 100 m	
Balance Sheet (000's)	2009	2010	\$ Change
Current Assets			
Cash	45,000	65,800	20,800
Accounts Receivable	45,000	60,000	15,000
Inventories	35,000	40,000	5,000
Prepaid Expenses	10,000	9,000	(1,000)
Total Current Assets	135,000	174,800	39,800
Property and Equipment			
Land	2,500,000	2,500,000	-
Building	450,000	550,000	100,000
Furniture & Equipment	50,000	75,000	25,000
Total Gross P&E	3,000,000	3,125,000	125,000
Less Accumulated Depreciaition	(300,000)	(365,000)	(65,000)
Net P&E	2,700,000	2,760,000	60,000
Long-Term Investments	200,000	250,000	50,000
Total Assets	3,035,000	3,184,800	149,800
Liabilities and Owners Equity			
Current Llabilities			
Accounts Payable	35,000	40,000	5,000
Accrued Income Taxes	12,000	10,000	(2,000)
Accrued Expenses	10,000	8,000	(2,000)
Current Portion of Long Term Debt	20,000	10,000	(10,000)
Total Current Liabilities	77,000	68,000	(9,000)
Long-Term Debt:	1,200,000	1,180,000	(20,000)
Deferred Income Taxes	12,000	17,000	5,000
Total Liabilties	1,289,000	1,265,000	(24,000)
	1,209,000	1,205,000	(24,000)
Owners' Equity			
Common Stock	1,000,000	1,000,000	-
Paid-in-Capital	7.40.000	25,000	25,000
Retained Earnings	746,000	894,800	148,800
Total Owners' Equity	1,746,000	1,919,800	173,800
Total Liabilities & Owner's Equity	3,035,000	3,184,800	149,800

FINANCIAL ANALYSIS

Management Discussion and Analysis (MD&A)

Equity & Bond Research – Wall Street Analysts

- The Financial Statements could be used by analysts to project the Company's performance and valuation
- For an effective performance of the Company, you need to ask the three following questions:
 - 1. How is the Company doing versus Last Year
 - 2. How is the Company doing versus its competitors / piers/ market
 - 3. How is the Company doing versus expectations

FINANCIAL ANALYSIS

- Management Discussion and Analysis (MD&A)
- Equity & Bond Research Wall Street Analysts
- □ The Financial Statements could be used by analysts to project the Company's performance and valuation
- For an effective performance of the Company, you need to ask the three following questions:
 - 1. How is the Company doing versus Last Year
 - 2. How is the Company doing versus its competitors / piers/ market
 - 3. How is the Company doing versus expectations

FINANCIAL RATIO ANALYSIS

□ Trend Analysis

Lia	uiditv	Ratio

How well the Company manages Cash

	2010	D	efinition	
Trend Analysis Ratios				
U.S. Revenue Growth	15.0%	(R	ev 2010/Rev 2	009) -1
Europe Revenue Growth	16.7%			-
Asia Revenue Growth	25.0%			
Total Revenue Growth	15.6%			
EBITDA Growth	12.5%	(El	BITDA 2010/E	BITDA 2009) -1
	20	10	Definition	
	20	10	Demilion	
Liquidity Ratios				
Current Ratio	2.5	7x	CA/CL	
Quick ratio	1.8	5x	(Cash + A/	R) / CL
Accounts Receivable Turnover (ART)	21.1	4x	Revenue/A	vg AR
Accounts Receivable Days	17.2	26	365 / ART	-

FINANCIAL RATIO ANALYSIS

Solvency Ratio

How well the Company manages Debt

2010	Demilion
38.1%	LTD / (LTD + Equity)
3.61x	EBITDA / Interest
2.73x	LTD / EBITDA
	38.1% 3.61x

Definition

2010

□ Activity and Operating Ratios

It measures productivity and efficiency for running the business

	2010	Definition	
Activity Ratios / Operating Ratios			
Inventory Ratio (IR)	11.20x	Cost of Revenue	es/Avg Inventory
Inventory Ratio - Days	32.59	365 / IR	

Please note that there are a lot of ratios establish by specialization (i.e. for a Hotel company is Occupancy Rate or for a Cable company is revenue per subscriber)

FINANCIAL RATIO ANALYSIS

Profitability Ratio

How profitable is the company

	2010	Definition
Profitability Ratios		
Gross Margin	62.2%	Gross Margin / Revenues
EBITDA Margin	39.0%	EBITDA / Revenue
EBIT Margin	33.2%	EBIT / Revenue
Return on Assets (ROA)	4.8%	NI / Avg Assets
Gross Return on Assets	11.8%	EBIT / Avg Assets
Return on Equity (ROE)	8.1%	NI / Avg Equity

CREDIT ANALYSIS



Commercial Banking

- Credit Analysis (Corporate / Project Finance / Asset Finance)
- Advisory (Syndications, Distribution, Sales & Trade)
- Portfolio Management
- Risk Management (Credit & Market)
- Operations Compliance & KYC
- Loan Control/Treasury

FRONT OFFICE

- Customer facing services
 - Corporate Finance: Underwrite, Lending / Investing (Primary Market)
 - Sales & Trade (Secondary Market)
 - Advisory and Research

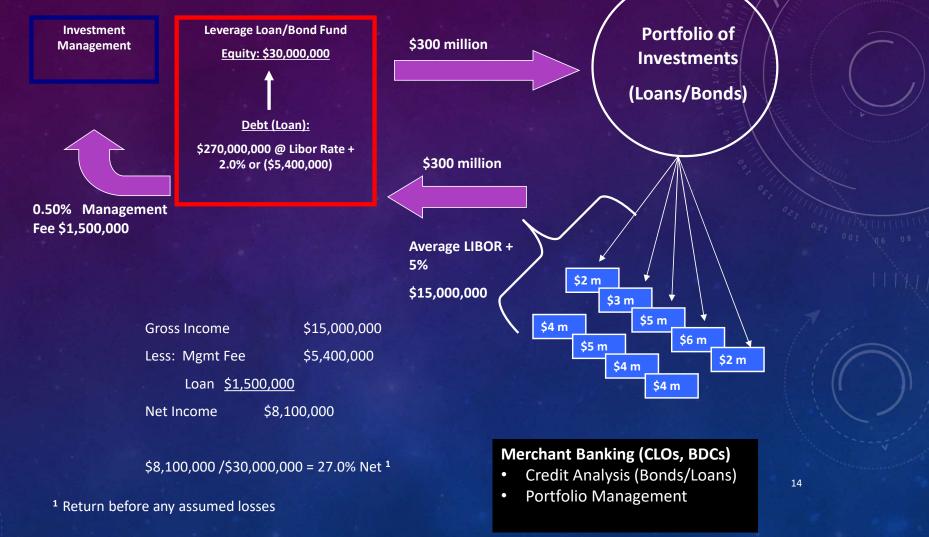
MIDDLE OFFICE

- Risk Management
 - Market Risk
 - Credit Risk
 - Operating Risk
 - Liquidity Risk
- **BACK OFFICE**

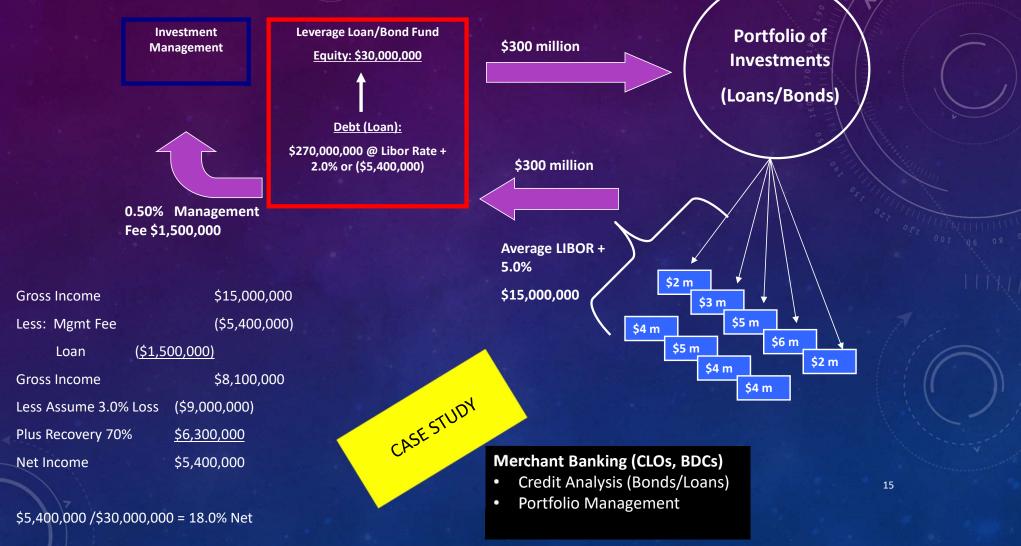
•

• Operations / IT (Technology) & Compliance

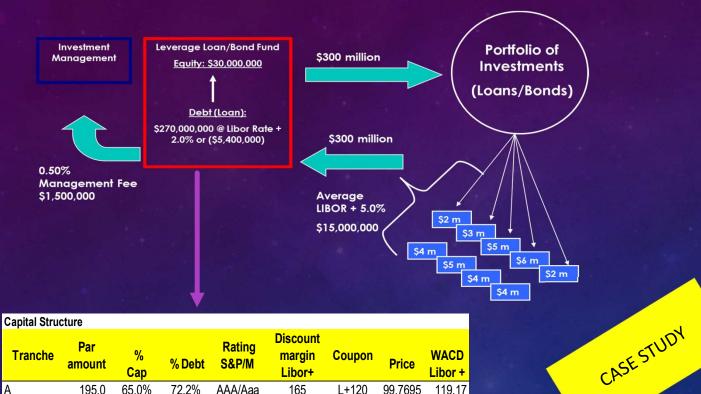




CREDIT ANALYSIS AND PORTFOLIO MANAGEMENT



CREDIT ANALYSIS AND PORTFOLIO MANAGEMENT



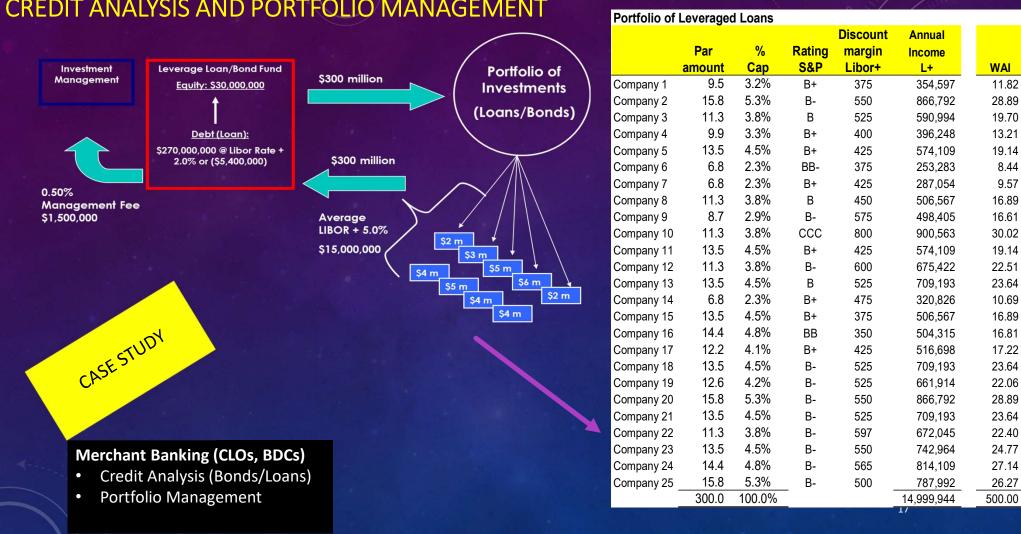
Capital Struc	cture							
Tranche	Par amount	% Cap	% Debt	Rating S&P/M	Discount margin Libor+	Coupon	Price	WACD Libor +
Α	195.0	65.0%	72.2%	AAA/Aaa	165	L+120	99.7695	119.17
В	27.0	9.0%	10.0%	AA/Aa2	200	L+185	97.3653	20.00
С	24.0	8.0%	8.9%	A/A2	295	L+285	94.8608	26.22
D	15.0	5.0%	5.6%	BBB/Baa2	371	L+375	90.0358	20.61
E	9.0	3.0%	3.3%	BB/Ba2	420	L+420	93.9848	14.00
Total Debt	270.0	90.0%	100.0%					
Equity	30.0	10.0%	_	NR				
	300.0	100.0%	_					200.0
							이 금속 도망한	

Merchant Banking (CLOs, BDCs)

Credit Analysis (Bonds/Loans)

16

Portfolio Management



CREDIT ANALYSIS AND PORTFOLIO MANAGEMENT

CREDIT ANALYS	SIS AND PORT	FOLIO M	ANAGEMENT	Portfolio	of Leverage			27 11	(Inini	anninanna)
							Deting	Discount	Annual	-
Merchant Banking (CL					Par amount	% Cap	Rating S&P	margin Libor+	Income L+	WAI
Credit Analysis (Bor	nds/Loans)	CASE STUDY		Company 1	9.5	3.2%	B+	375	354,597	11.82
Portfolio Managem	nent	SE STUD.		Company 2	15.8	5.3%	B-	550	866,792	28.89
		CASE		Company 3	11.3	3.8%	В	525	590,994	19.70
				Company 4	9.9	3.3%	B+	400	396,248	13.21
				Company 5	13.5	4.5%	B+	425	574,109	19.14
				Company 6	6.8	2.3%	BB-	375	253,283	8.44
				Company 7	6.8	2.3%	B+	425	287,054	9.57
				Company 8	11.3	3.8%	В	450	506,567	16.89
				Company 9	8.7	2.9%	B-	575	498,405	16.61
				Company 1	0 11.3	3.8%	CCC	800	900,563	30.02
				Company 1	1 13.5	4.5%	B+	425	574,109	19.14
Management	Loan/Bond Fund	million	/ Portfolio of \	Company 1	2 11.3	3.8%	B-	600	675,422	22.51
Equity	<u>y: \$30,000,000</u>		Investments	Company 1	3 13.5	4.5%	В	525	709,193	23.64
			(Loans/Bonds)	Company 1	4 6.8	2.3%	B+	475	320,826	10.69
				Company 1	5 13.5	4.5%	B+	375	506,567	16.89
	<u>ebt (Loan):</u>			Company 1		4.8%	BB	350	504,315	16.81
	000 @ Libor Rate + or (\$5,400,000) \$30	0 million		Company 1		4.1%	B+	425	516,698	17.22
				Company 1	8 13.5	4.5%	B-	525	709,193	23.64
0.50%				Company 1	9 12.6	4.2%	B-	525	661,914	22.06
Management Fee				Company 2		5.3%	B-	550	866,792	28.89
\$1,500,000		ige + 5.0%		Company 2		4.5%	B-	525	709,193	23.64
			<mark>\$2 m /</mark> / / /	Company 2		3.8%	B-	597	672,045	22.40
	\$15,00	00,000	\$3 m +	Company 2		4.5%	B-	550	742,964	24.77
		\$4 m	\$5 m +	Company 2		4.8%	B-	565	814,109	27.14
			\$5 m \$6 m \$2 m	Company 2		5.3%	B-	500	788,049	26.27
			24 m		300.0	100.0%		-	15,000,000	500.00
			\$4 m						18	

					100			1 1 1 1 1 1		
Capital Struct	ture								Cash Flow and Return	al Hitting and
Tranche	Par amount	Cap	Debt S	Rating S&P/M	Discount margin Libor+	Coupon	Price	WACD Libor +	Par Margin	Annual
A				AA/Aaa	165	L+120	99.7695	119.17	Tranches amount LIBOR +	Debt Svc
B C	27.0 24.0			AA/Aa2 A/A2	200 295	L+185 L+285	97.3653 94.8608	20.00 26.22	A 195.0 165.00	3,217,500
D	24.0 15.0			BB/Baa2	371	L+265 L+375	90.0358	20.22	B 27.0 200.00	540,000
F	9.0			BB/Ba2	420	L+420	93.9848	14.00		· ·
- Total Debt			0.0%	00.002	.20	2 .20			C 24.0 295.00	708,000
Equity		10.0%	0.070	NR					D 15.0 371.00	556,500
-1-2 .		100.0%						200.0	E 9.0 420.00	378,000
Deutfalia	61								-	5,400,000
Portfolio o	of Levera	ged Loans	5	П	iscount	Annual			-	-,,
	Par	%	Rat		nargin	Income			Equity CF Before Management Fees	9,600,000
	amour			&P I	_ibor+	L+		WAI		
Company 1	9.			3+	375	354,59		11.82	ROE	32.0%
Company 2	15.			B-	550	866,79		28.89		
Company 3 Company 4	11. 9.			B 3+	525 400	590,99 396,24		19.70 13.21	BASE CASE	
Company 4 Company 5	9. 13.			5+ 3+	400 425	574,10		19.14	Default Rate	3.00%
Company 6	6.			8B-	375	253,28		8.44		70.00%
Company 7	6.	8 2.3%	. Е	3+	425	287,05		9.57	Recovery	
Company 8	11.			В	450	506,56	67	16.89	LGD rate	0.900%
Company 9	8.			B-	575	498,40		16.61	LGD	2,700,000
Company 10			-	CC	800	900,56		30.02		
Company 1 [°] Company 12				3+ B-	425 600	574,10 675,42		19.14 22.51	RAROC	6,900,000
Company 13				Б- В	525	709,19		22.51		
Company 14	-			B 3+	475	320,82		10.69	RAROC %	23.00%
Company 1				3+	375	506,56		16.89		
Company 16				3B	350	504,3 ⁻		16.81	BREAK EVEN	
Company 17			_	3+	425	516,69		17.22	Default Rate	10.667%
Company 18				B-	525	709,19		23.64		
Company 19 Company 20				B- B-	525 550	661,9 ⁻ 866,79		22.06 28.89	Recovery	70.00%
Company 20 Company 2				в- В-	550 525	709,19		28.69	LGD rate	3.200%
Company 2				Б- В-	525 597	672,04		22.40	LGD	9,600,000
Company 2				- B-	550	742,96		24.77		
Company 24				B-	565	814,10		27.14		
Company 2				В-	500 _	788,04		26.27		
1	300.	0 100.0	%		_	15,000,00	00 !	500.00		

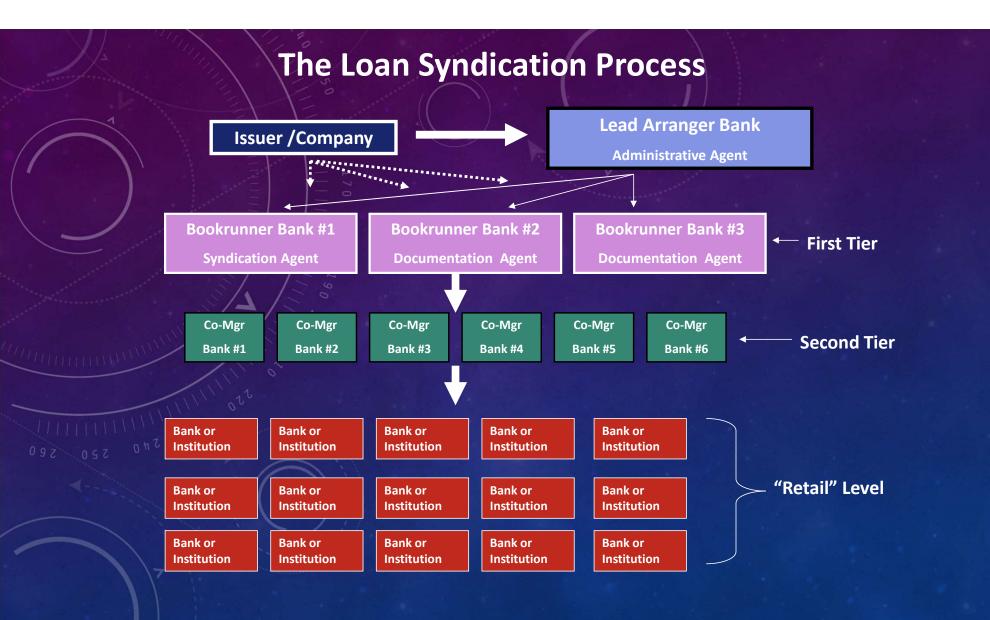


Investment Banking

Broker/Dealer Underwrite Initial Securities – Raising Capital Sales and Trade (Stock, Bonds and Derivatives)

Advice

Mergers & Acquisitions – Valuation Raising Capital Research / Recommendations



The Loan Syndication Process

- > The issuer or Company solicits bids from Arrangers.
- > Arrangers will outline their syndication strategy and their view on the way the loan will price in market.
- Issuer gives the mandate to one or more Arrangers (Co-Arrangers)
- > The arranger will prepare an information memo (IM) describing the terms of the transactions.
- > The IM typically will include:
 - Executive Summary
 - Investment Considerations
 - Summary of Terms and Conditions (Term Sheet)
 - Transaction Overview
 - Company
 - Management and Equity Sponsor Overview
 - Industry Overview
 - Financial Model
 - > Timing for commitments, closing, as well as fees on level of commitments
- Bank meeting is scheduled at which potential lenders hear the management and the Investor group.
- > A deadline is given for the banks to send their commitment levels subject to final documentation.
- > Each Bank analyzes the deal's credit and assess the pricing (RORA). Each Issuer is assigned an internal rating.
- > The Arranger collects all commitments different amounts from each Bank.
- > Allocations are given and Legal Documentation is sent for their final review.
 - If the Deal is Oversubscribed, the allocation of each bank will most likely be reduced
 - If the Deal is Undersubscribed, depending on the FLEX language, the pricing could be Flexed up.

> After Review of Legal Documentation by each lender and signatures are sent, the Deal closes and funds.

CONFIDENTIAL INFORMATION MEMORANDUM

FOR PUBLIC INVESTORS

HARRAH^{*}S

\$9,250,000,000 SENIOR SECURED CREDIT FACILITIES

JANUARY 2008

Special Notice regarding Publicity Available Information

THE COMPANY HAS REPRESENTED THAT THE INFORMATION CONTAINED IN THIS CONFIDENTIAL INFORMATION MEMORANDUM IS EITHER PUBLICLY AVAILABLE OR DOES NOT CONSTITUTE MATERIAL NON-PUBLIC INFORMATION WITH RESPECT TO THE COMPANY OR ITS SECURITIES. THE RECIPIENT OF THIS CONFIDENTIAL INFORMATION MEMORANDUM HAS STATED THAT IT DOES NOT WISH TO RECEIVE MATERIAL NON-PUBLIC INFORMATION WITH RESPECT TO THE COMPANY OR ITS SECURITIES AND ACKNOWLEDGES THAT OTHER LENDERS HAVE RECEIVED A CONFIDENTIAL INFORMATION MEMORANDUM THAT CONTAINS ADDITIONAL INFORMATION WITH RESPECT TO THE COMPANY OR ITS SECURITIES THAT MAY BE MATERIAL. NEITHER THE COMPANY NOR THE ARRANGERS TAKE ANY RESPONSIBILITY FOR THE RECIPIENT'S DECISION TO LIMIT. THE SCOPE OF THE INFORMATION IT HAS OBTAINED IN CONNECTION WITH ITS EVALUATION OF THE COMPANY AND THE FACILITY. NOTWITHSTANDING THE RECIPIENT'S DESIRE TO ADSTAIN FROM RECEIVING MATERIAL NON-PUBLIC INFORMATION WITH RESPECT TO THE COMPANY AND THE ABSENCE OF MATERIAL NON-PUBLIC INFORMATION IN THIS CONFIDENTIAL INFORMATION MEMORANDUM, THE RECIPIENT ACKNOWLEDGES THAT (1) ALL INDIVIDUALS LISTED AS CONTACTS IN THIS CONFIGENTIAL INFORMATION MEMORANOUN ARE ON THE PRIVATE SIDE OF THE INFORMATION WALL AND THAT IF THE RECIPIENT CHOOSES TO COMMUNICATE WITH ANY SUCH INDIVIDUAL THE RECIPIENT Assumes The Risk OF RECEIVING MATERIAL NON-PUBLIC INFORMATION CONCERNING THE COMPANY AND ITS RELATED PARTIES, OR THE SECURITIES THEREOF, (2) INFORMATION OBTAINED AS A RESULT OF BECOMING A LENDER MAY INCLUDE SUCH MATERIAL NON-PUBLIC INFORMATION, AND (3) THAT IT HAS DEVELOPED COMPLIANCE PROCEDURES REGARDING THE USE OF MATERIAL NON-PUBLIC INFORMATION. AND THAT IT WILL HANDLE SUCH MATERIAL NON-PUBLIC INFORMATION IN ACCORDANCE WITH APPLICABLE LAW, INCLUDING FEDERAL AND STATE SECURITIES LAWS.

Joint Lead Arrangers and Joint Bookrunning Managers

Bank of America

INVESTMENT **BANKING**

CONFIDENTIAL INFORMATION MEMORANDUM FOR PUBLIC INVESTORS

HARRAH'S ENTERTAINMENT

\$9,250,000,000 SENIOR SECURED CREDIT FACILITIES

JANUARY 2008

special Notice regarding Publicly Available Information

WILL HAND



STOCK REPORT EXAMPLE



Stock Analysis

Stock Reports recommending BUY/HOLD/SELL



Mergers & Acquisitions / IPO

- Corporate Valuation
- Sell / Buy Advice
- Financing Advice

MODES OF MERGERS & ACQUISITIONS



METHOD #1



METHOD #2

AK Steel Holding Corp. (AKS) CORPORATE VALUATIONS

METHOD #1 - Market Value / Using the Stock Price

Calculations	►	SP	SO	SP * SO = EQ	D	С	EQ + D - C = EV
Company Symbol Stock P		Stock Price	Stocks Outstanding (\$000)	Equity Value (\$000)	Debt (ST<) (\$000)	Cash (\$000)	Enterprise Value (\$000)
		11/29/2018	11/29/2018	11/29/2018	9/30/2018	9/30/2018	11/29/2018
AK Steel	AKS	\$ 3.10	315.540	978.174	2,030,000	47,300	2,960,874

AK Steel Holding Corp. (AKS) CORPORATE VALUATIONS

METHOD #4 -Average EBITDA Industry Trading Multiples

		SP	SO	SP * SO = EQ	D	С	2 + D - C = I	E	EV / E			
Company	Symbol	Stock Price	Stocks Outstanding (\$000)	Equity Value (\$000)	Debt (ST<) (\$000)	Cash (\$000)	Enterpris e Value (\$000)	EBITDA (\$mm)	EBITDA Multiple	Beta		
United Steel	х	\$ 22.93	177,270	4,064,801	2,500,000	1,340,000	5,224,801	1,360,000	3.84x	4.04x		
Steel Dynamics	STLD	\$ 35.12	229,550	8,061,796	2,370,000	999,320	9,432,476	1,860,000	5.07x	1.50x		
Reliance Steel Industries	RS	\$ 79.99	70,430	5,633,696	2,070,000	112,100	7,591,596	1,180,000	6.43x	1.08x		
Schtzer Steel Industries	SCHN	\$ 26.66	25,690	684,895	107,380	4,700	787,575	195,020	4.04x	0.78x		
Olympic Steel	ZEUS	\$ 18.19	11,010	200,272	304,480	4,270	500,482	70,450	7.10x	2.52x		
			-									
AK Steel Holding Corp. (AKS)	AKS	\$ 3.10	315,540	978,174	2,030,000	47,300	2,960,874	470,000	6.30x	2.91x		
EBITDA * Average Multiple	470,000	5.30x						Average	5.30x	2.14x		
Enteprise Value	2,489,971											

METHOD #3



CORPORATE VALUATIONS													
METHOD #5 - Using Averge EBITDA Transaction Multiples (M&A Comparable Method)													
	Calculations		AP	SO	AF	• * SO = EQ		ND	EQ	+ ND = EV		E	EV / E
Target	Acquirer	on	quisiti Price Share	Shares Outstanding		Equity Value (\$000)		otal Net Debt (\$ 000)		nterprise alue (EV)		EBITDA (\$ 000)	EBITDA Multiple
ZS Steel	Archimedes PE	\$	47.50	24,000,000	\$	1,140,000	\$	1,500,000	\$	2,640,000	\$	350,000	7.54x
Celerity Steel Manufacturing	AZM Steel & Aliminum	\$	34.00	123,000,000	\$	4,182,000	\$	2,500,000	\$	6,682,000	\$	1,100,000	6.07x
Yes Steel & Aluminum Co.	Kingtom Steel	\$	45.00	13,500,000	\$	607,500	\$	450,000	\$	1,057,500	\$	190,000	5.57x
HI Steel Manufacturing Inc.	Excel Steel	\$	22.00	234,000,000	\$	5,148,000	\$	1,400,000	\$	6,548,000	\$	1,230,000	5.32x
Precision Steel	MW Inc.	\$	12.00	85,000,000	\$	1,020,000	\$	1,200,000	\$	2,220,000	\$	320,000	6.94x
Ross West Steel	Greenstone Capital	\$	8.00	45,000,000	\$	360,000	\$	240,000	\$	600,000	\$	98,000	6.12x
											A١	verage	6.26x
Enteprise Value	2,942,726					470,000		6.26x					

AK Steel Holding Corp. (AKS)

METHOD #4



AK Steel Holding Corp. (AKS) CORPORATE VALUATIONS

METHOD #6 - Discount Cash Flow Valuation Analysis

			year =	1	2	3	4	5	6
Discout Cash Flow Valuation Analysis	Historical	Projected	Input Actual					EXIT YEAR	
	Assumptions	Assumptions	9/30/2018	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Revenues			6,640,000	6,905,600	7,181,824	7,433,188	7,693,349	7,962,617	8,241,308
Revenue Growth				4.0%	4.0%	3.5%	3.5%	3.5%	3.5%
Cost of Revenues (CoGS)	87.7%	86.0%	(5,820,800)	(5,938,816)	(6,176,369)	(6,392,542)	(6,616,280)	(6,847,850)	(7,087,525)
Operating Expenses (Excl. Non-rec.)	9.1%	8.0%	(602,300)	(552,448)	(574,546)	(594,655)	(615,468)	(637,009)	(659,305)
EBIT			216,900	414,336	430,909	445,991	461,601	477,757	494,478
Less Taxes (tax rate x of EBIT)		36.0%	-	(149,161)	(155,127)	(160,557)	(166,176)	(171,993)	(178,012)
Plus Depreciation	3.8%	4.0%	253,100	276,224	287,273	297,328	307,734	318,505	329,652
Less Working Capital	0.0%	0.0%		-	-	-	-	-	-
Less Capex	2.5%	2.5%	(164,900)	(172,640)	(179,546)	(185,830)	(192,334)	(199,065)	(206,033)
Cash Flow			305,100	368,759	383,509	396,932	410,825	425,204	440,086
EBITDA			470,000	690,560	718,182	743,319	769,335	796,262	824,131
Debt (assuming 5% reduction of intial prin	cipal per year)		2,030,000	1,928,500	1,827,000	1,725,500	1,624,000	1,522,500	1,421,000
Terminal Value	Assumptions		Growth						†
EBITDA Multiple Method	5.30x			(EBITDA x EBIT	TDA Multiple)			4,218,443	
Perpetuity Method	13.56%			•	ash Flow / (Disco	unt Rate - Grov	wth)	4,168,004	
Average	1010070		010070			untilitie of or	,	4,193,224	
Less Debt Outstanding (at Exit)								(1,522,500)	
Plus Cash (at Exit)								-	
Plus Cash (at Exit) Equity Value at Terminal								- 2 670 724	
Plus Cash (at Exit) Equity Value at Terminal								2,670,724	
								2,670,724	
	32%	PV (for \$1)		368,759	383,509	396,932	410,825	2,670,724 3,095,927	
Equity Value at Terminal Equity Cash Flows	32% 1 PV (1) =	PV (for \$1) 0.7584376	\$279,681	368,759	383,509	396,932	410,825		
Equity Value at Terminal Equity Cash Flows			\$279,681 \$ \$220,605 -	•'	383,509	396,932	410,825		
Equity Value at Terminal Equity Cash Flows	1 PV (1) =	0.7584376		•	383,509	396,932	410,825		
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) =	0.7584376 0.5752276	\$220,605	•	383,509	396,932	410,825		
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) =	0.7584376 0.5752276 0.4362743	\$220,605 \$173,171		383,509	396,932	410,825		
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937		383,509		410,825	3,095,927	Interest LTM (8)
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 - \$173,171 - \$135,937 - \$776,945 -			Calc	410,825	3,095,927	Interest LTM (S (150,500
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 - \$173,171 - \$135,937 - \$776,945 -		Cost of Equity	Calc (5 year)		3,095,927	
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) = PV=	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937 \$776,945 \$1,586,338		Cost of Equity Risk Free Rate	Calc (5 year) d on MC =	2.75%	3,095,927	150,500
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) = PV= nterprise Value =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937 \$776,945 \$1,586,338 PV of Equity +		Cost of Equity Risk Free Rate Premium based	Calc (5 year) d on MC = =	2.75%	3,095,927	150,500
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) = PV= Pterprise Value = PV of Equity =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937 \$776,945 \$1,586,338 <u>PV of Equity +</u> \$1,586,338		Cost of Equity Risk Free Rate Premium base Company Beta	Calc (5 year) d on MC = =	2.75% 10.00% 2.91x	3,095,927	150,500
Equity Value at Terminal Equity Cash Flows <u>E</u>	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) = PV= Pterprise Value = PV of Equity = + PV of Debt =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937 \$776,945 \$1,586,338 <u>PV of Equity +</u> \$1,586,338 2,030,000		Cost of Equity Risk Free Rate Premium base Company Beta	Calc (5 year) d on MC = =	2.75% 10.00% 2.91x	3,095,927	150,500
Equity Value at Terminal Equity Cash Flows	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) = PV= Pterprise Value = PV of Equity = + PV of Debt =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937 \$776,945 \$1,586,338 <u>PV of Equity +</u> \$1,586,338 2,030,000 (47,300)		Cost of Equity Risk Free Rate Premium base Company Beta Expected Equi	Calc (5 year) d on MC = =	2.75% 10.00% 2.91x 31.9%	3,095,927	150,500 7.41% R
Equity Value at Terminal Equity Cash Flows <u>E</u>	1 PV (1) = 2 PV (2) = 3 PV (3) = 4 PV (4) = 5 PV (5) = PV= Pterprise Value = PV of Equity = + PV of Debt =	0.7584376 0.5752276 0.4362743 0.3308868	\$220,605 \$173,171 \$135,937 \$776,945 \$1,586,338 <u>PV of Equity +</u> \$1,586,338 2,030,000 (47,300)		Cost of Equity Risk Free Rate Premium base Company Beta Expected Equi WACC Calc:	Calc (5 year) d on MC = = ty Return =	2.75% 10.00% 2.91x 31.9%	3,095,927	150,500 7.41% R WACC

INVESTMENT ANALYSIS METHOD #5



AK Steel Holding Corp. (AKS) CORPORATE VALUATIONS

METHOD #7 - Leveraged Buyout (LBO) Analysis

						Shares	Total				
T			Current		Purchase Stock Price	Outstanding	Amount	% Total	EBITDA		
Transactions Uses			Stock Price	Premium	Stock Price	(millions)	(\$ 000's)	Uses	Multiple		
Purchase of 100% Shares			\$ 3.10	0%	\$ 3.10	315,540	978,174	31.42%	2.08x		
Refinance Short-Term & Long Term Debt			0 5000				2,030,000	65.20%	4.32x		
Transaction Fees & Expenses			3.50%			-	105,286	3.38%	0.22x		
Total Cost of Transaction (Uses)							3,113,460	100.00%	6.62x		
			EBITDA	Interest Rate	After Tax		Total				
			Multiple	/ Expected	Interest Rate	WACC	Amount				
Transactions Sources			(Capacity)	Return	Adjustments		(\$ 000's)	% Capital			
Bank Loan			2.00x	5.0%	3.20%	0.966%	940,000	30.19%			
Corporate Bonds			1.00x	8.0%	5.12%	0.773%	470,000	15.10%			
Total Debt			3.00x	1		-	1,410,000	45.29%			
Equity			3.62x	31.9%	31.9%	17.426%	1,703,460	54.71%			-
Total Sources			6.62x		/	19.165%	3,113,460	100.00%			1
				. /							0
Cost of Equity Calc											
Risk Free Rate (5 year)		2.75%									
Premium based on MC =		10.00%									
Beta =		2.91x									
Expected Equity Return =		31.9%									
				LTM							
Debt Schedule	Years	Rate	9/30/2018	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023	12/31/2024	12/31/2025
Bank Loan	7	5.0%									
Outstanding			940,000	940,000	921,200	883,600	809,904	668,528	466,052	265,494	-
Scheduled Principal Payments (P)				-	18,800	37,600	73,696	141,376	202,476	200,558	265,494
Interest Payments (I)				47,000	47,000	46,060	44,180	40,495	33,426	23,303	13,275
Total Payments (P+I)				47,000	65,800	83,660	117,876	181,871	235,902	223,861	278,768
	10	0.00/									<pre>/</pre>
Corporate Bonds	10	8.0%									
Outstanding			470,000	470,000	470,000	470,000	470,000	470,000	470,000	470,000	470,000
Scheduled Principal Payments (P)				-	-	-	-	-	-	-	
Interest Payments (I)				37,600	37,600	37,600	37,600	37,600	37,600	37,600	37,600
Total Payments (P+I)				37,600	37,600	37,600	37,600	37,600	37,600	37,600	37,600
				04.000	04.000	00.000	04 700	70.005	74.000	co ooo	50,875
Interest Payments				84,600	84,600	83,660	81,780	78,095	71,026	60,903	
Principal Payments				-	18,800	37,600	73,696	141,376	202,476	200,558	265,494
Total Debt Payments				84,600	103,400	121,260	155,476	219,471	273,502	261,461	316,368
Total Debt Outstanding				1,410,000	1,391,200	1,353,600	1,279,904	1,138,528	936,052	735,494	470,000

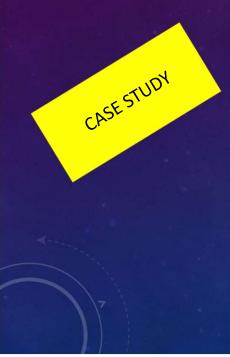
INVESTMENT ANALYSIS METHOD #5

AK Steel Holding Corp. (AKS) CORPORATE VALUATIONS



METHOD #7 - Leveraged Buyou	ıt (I BO) Analysis								
merrico an Estoragoa Bayot			year =	1	2	3	4	5	6
Discout Cash Flow Valuation Analysis	Historical	Projected	Input Actual	LTM				EXIT YEAR	
	Assumptions	Assumptions	9/30/2018	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	12/31/2023
Revenues			6,640,000	6,905,600	7,181,824	7,433,188	7,693,349	7,962,617	8,281,121
Revenue Growth				4.0%	4.0%	3.5%	3.5%	3.5%	4.0%
Cost of Revenues (CoGS)	87.7%	86.0%	(5,820,800)	(5,938,816)	(6,176,369)	(6,392,542)	(6,616,280)	(6,847,850)	(7,121,764)
Operating Expenses (Excl. Non-rec.)	9.1%	7.0%	(602,300)	(483,392)	(502,728)	(520,323)	(538,534)	(557,383)	(579,678)
EBIT			216,900	483,392	502,728	520,323	538,534	557,383	579,678
Less Interest				(84,600)	(84,600)	(83,660)	(81,780)	(78,095)	(71,026)
EBT			216,900	398,792	418,128	436,663	456,754	479,288	508,652
Less Taxes (tax rate x of EBIT)		36.0%	-	(143,565)	(150,526)	(157,199)	(164,432)	(172,544)	(183,115)
Net Income			216,900	255,227	267,602	279,464	292,323	306,744	325,537
Plus Depreciation	3.8%	3.8%	253,100	263,224	273,753	283,334	293,251	303,515	315,655
Plus Amortization		7 Years		15,041	15,041	15,041	15,041	45,123	
Less Working Capital	0.0%	0.0%		-	-	-	-	-	-
Less Capex	2.5%	2.5%	(164,900)	(171,496)	(178,356)	(184,598)	(191,059)	(197,746)	(205,656)
Cash Flow Before Principal Payment			305,100	361,996	378,040	393,241	409,556	457,635	435,537
Debt Principal Payment		•		-	(18,800)	(37,600)	(73,696)	(141,376)	(202,476)
Equity Cash Flows			305,100	361,996	359,240	355,641	335,860	316,259	233,061
····			,	,	, -	,-	,	,	,
EBITDA			470,000	746,616	776,481	803,657	831,785	860,898	895,334
Debt			2,030,000	1,410,000	1,391,200	1,353,600	1,279,904	1,138,528	936,052
Terminal Value	Assumptions		Growth						
EBITDA Multiple Method	5.30x	-		(EBITDA x EBITI	A Multinle)			4,560,874	
Perpetuity Method	19.17%			Next Year's Ca		unt Rate - Grov	wth)	2,871,977 -	
Average	10.117.0		4.0070	Next Tear 3 ea.	51110007 (Disco		weny	3,716,425	
Less Debt Outstanding (at Exit)								(1,138,528)	
Plus Cash (at Exit)								(1,130,320)	
Equity Value at Terminal								2,577,897	
								2,577,057	
Desired Equity Return =	35%								
Equity Cash Flows	31.9%			361,996	359,240	355,641	335,860	2,894,157	
	1 PV (1) =	1 1	\$268,145	→	000,240			2,004,107	
	2 PV (2) =		\$197,114	4					
	3 PV (3) =		\$144.548						
	4 PV (4) =		\$101,117						
	5 PV (5) =		\$645,436						
	PV=		\$1,356,359						
	FV-	I	\$1,550,555						
	Enterprise Value =		PV of Equity +	PV of Debt					
	PV of Equity =		\$1,356,359						
	+ PV of Debt =		2,030,000						
	+ PV of Cash =		(47,300)						
Enterprise Value			3,339,059						

SUMMARY VALUATION



AK Steel Holding Corp. (AKS) CORPORATE VALUATIONS

						_		4
ENTERPRISE VALUATION ANALYSIS								4
				Equity	Shares	S	Stock	4
	EV	Debt	Cash	Value	Outs	F	Price	4
Book Value Equity	2,079,800	2,030,000	47,300	97,100	315,540	\$	0.31	
METHOD #1 - Market Value / Using the Stock Price	2,960,874	2,030,000	47,300	978,174	315,540	\$	3.10	1
								1
METHOD #2- Intrinsic Value	2,939,970	2,030,000	47,300	957,270	315,540	\$	3.03	1
METHOD #3- Dividend Discount Model (DDM)	1,982,700	2,030,000	47,300	-	315,540	\$		1
METHOD #4 -Average EBITDA Industry Trading Multiples	2,489,971	2,030,000	47,300	507,271	315,540	\$	1.61	
METHOD #5 - Using Averge EBITDA Transaction Multiples	2,942,726	2,030,000	47,300	960,026	315,540	\$	3.04	1
METHOD #6 - Discount Cash Flow Valuation Analysis	3,569,038	2,030,000	47,300	1,586,338	315,540	\$	5.03	Pr
METHOD #7 - LBO Analysis	3,339,059	2,030,000	47,300	1,356,359	315,540	\$	4.30	
					,		· · · · ·	
Average of other methods	2,814,213	2,030,000	47,300	831,513	,	\$	2.55	1
-			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		,,		1

MARKET VALUE METHODS

