March 26, 2004



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Spring 2004

Equity Valuation Project

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Project Description

I chose to value Electronics Art (EA) for my final project. EA, headquartered in Redwood City, California is the #1 video game publisher in the US, with over a hundred popular video game titles. It develops its games for PCs and console systems such as Sony's PlayStation 2, Nintendo's GameCube, and Microsoft's Xbox. The company also offers both free and subscription games online and operates the games channel on America Online. Founded in 1982, Electronic Arts posted revenues of \$2.5 billion for fiscal 2003, has no long-term debt and pays has paid no dividends.

Step 1: Discounted Cashflow Valuation

Selection of the Model

Based on company specific information analyzed through "Choosing The Right Model" (from the Damodaran website), I chose to use the Free Cashflows to Equity (FCFE) valuation Model, which suggested that I use the following:

- Discounted Cashflow model,
- Current Earnings,
- FCFE (Value Equity),
- 10 or more years of growth, and
- 3-stage growth pattern.

Actual output from "Choosing The Right Model" can be found in Attachment #1.

FCFE Valuation

Attachment #2 depicts the actual output from the FCFE model and the basic assumptions used. Due to inconsistency in the raw data compiled by in different analyst reports, annual reports, Bloomberg, etc., I chose to rely on specific company data as compiled in the Damodaran website. Damodaran's R&D model was used to capitalize R&D expenses and make related adjustments to EBIT (Attachment #3). Additionally, capital expenditures include 2003 acquisitions for \$12.9 million. The following is output from the FCFE model:

Present Value of FCFE in high growth phase =	\$16.75
Present Value of FCFE in transition phase =	\$7.87
Present Value of Terminal Price =	\$17.39
Value of the stock =	\$42.01

I tested the sensitivity of my valuation by tweaking some of my basic assumptions. These assumptions included:

- Whether or not to include acquisitions in Cap Ex,
- Changing the length of the high growth period, and
- Using different growth rates.

Of the three assumptions, the valuation appears to be more sensitive to the various growth rates. Growth, along with no long term debt, and strong brand equity has been the key drivers of value in the company. In fact a good portion of the company's historical growth has come through cash purchases for key acquisitions. The company has no immediate plans for future large-scale acquisitions. This has been factored into the valuation. Outputs from my sensitivity analysis are summed as follows:

With or Without Acquisitions in Cap Ex!	With Acquisition	Excluding Acquisition	Delta	% Delta
Present Value of FCFE in high growth phase =	16.75	17.17	0.42	3%
Present Value of FCFE in transition phase =	7.87	8.08	0.21	3%
Present Value of Terminal Price =	<u>17.39</u>	<u>17.39</u>	<u>0.00</u>	<u>0%</u>
Value of the stock =	\$42.01	\$42.63	\$0.63	1%
Change in Transition Longth	3 Year			

Change in Transition Length!	3 Year Transition Period	5 Year Transition Period	Delta	% Delta
Present Value of FCFE in high growth phase =	16.75	11.09	-5.66	-34%
Present Value of FCFE in transition phase =	7.87	11.69	3.82	49%
Present Value of Terminal Price =	<u>17.39</u>	<u>14.47</u>	-2.92	<u>-17%</u>
Value of the stock =	\$42.01	\$37.25	(\$4.76)	-11%

Use of Different Growth Rates!	<u>100% Outside</u>	100% <u>Fundamentals</u>	% Delta vs. <u>Outside</u>	100% <u>Historical</u>	% Delta vs. <u>Outside</u>
Present Value of FCFE in high growth phase =	16.75	22.82	36%	26.32	57%
Present Value of FCFE in transition phase =	7.87	13.32	69%	16.86	114%
Present Value of Terminal Price =	<u>17.39</u>	<u>29.41</u>	<u>69%</u>	<u>37.20</u>	<u>114%</u>
Value of the stock =	\$42.01	\$65.56	56%	\$80.38	91%

Attachments #4, 5, and 6 contain the actual valuation outputs based on the changes to the transition period length and different assumptions for growth.

Step 2: Develop a Value Enhancement Strategy

EA currently reinvests 100% of its earnings into the firm and has no long-term debt. Given this, I believe the following strategies can potentially enhance the value of the company:

- Decrease/minimize capital spending. Since 1999 EA has averaged \$93 million per year in capital spending (not including acquisitions). For example, elimination of 2003 capital expenditure of \$12.8 million would increase in the stock price buy \$0.63 per share or \$181.6 million in equity considering 288.3 million common share holders.
- Increase the length of the high growth period of the firm. Given the characteristics of the video game software industry, I have currently assumed a high growth period of seven years for the company. Considering this, while keeping other factors constant, would result in an increase in the share price by \$4.89, or an increase in the value of equity by \$1.4 billion:

Step 3: Value Relative to Comparables

The following table of multiples was prepared based on the most recent data for comparable firms in Europe, Japan and the US as compiled on the Damodaran internet site. Upon my review of these multiples, I chose to use the Price/Sales (PS) ratio to compare the value of EA to other firms in the sector. I believe the PS ratio to "more cleanly" facilitate the comparison of equity values among different firms since it is based on revenues. It also contains the most available data for comparison across countries. Despite having a leading PS ratio in the industry, EA on average leads its competitors for the majority of different multiples.

Company Name	Current DE	DEC Datia		DC Datia	EVENT		Value/	EV/Color	Standard
Euro	CUITEIILFE	<u>PEG Kaud</u>	<u>P D V Nauu</u>	<u>r s nauu</u>		EVEDITUA	<u>BV UI Capitai</u>	<u>E V/Jdits</u>	DEVIAUUII
JOWOOD AG	NA	NA	5.70	1.83	NA	19,11	2,99	2.23	49.04%
DIGITAL ILLUSIONS CE AB-CL A	53.43	NA	4.85	3.26	27.42	14.54	4.85	3.12	40.63%
INFOGRAMES ENTERTAINMENT	NA	NA	6.69	0.77	NA	41.83	1.77	1.48	37.05%
UBI SOFT ENTERTAINMENT	50.97	NA	1.39	0.89	23.62	6.48	1.22	1.33	44.04%
EIDOS PLC	19.23	NA	2.71	1.35	15.00	12.10	2.71	0.97	42.62%
SCI ENTERTAINMENT GROUP PLC	16.77	NA	4.02	1.34	16.55	13.06	3.88	1.35	42.68%
Japan									
KOEI CO LTD	20.19	NA	2.83	4.68	11.11	10.57	2.83	4.44	39.04%
KONAMI CORP	NA	NA	4.24	1.51	NA	10.15	2.79	1.51	57.62%
SQUARE ENIX CO LTD	124.55	NA	6.07	13.70	56.80	52.40	6.07	11.89	45.91%
CAPCOM CO LTD	NA	NA	1.79	1.25	14.15	10.64	1.37	1.54	57.45%
TOSE CO LTD	20.59	NA	1.62	2.10	9.61	8.14	1.62	1.70	48.11%
US									
Acclaim Entertainment	NA	NA	3.56	0.26	3.21	1.79	2.80	0.29	241.25%
Atari Inc	NA	NA	NA	0.66	79.13	42.55	4.41	1.21	0.00%
Activision Inc.	24.93	2.17	2.76	1.91	11.68	10.51	6.44	1.44	54.42%
Midway Games Inc	NA	NA	1.22	0.89	NA	NA	1.17	0.63	90.07%
THQ Inc.	22.84	1.90	1.61	1.37	10.64	9.30	2.13	0.99	56.29%
Take-Two Interactive	17.02	0.77	3.45	1.55	8.31	7.62	4.52	1.41	82.14%
Average of US Firms	21.59	1.61	2.52	1.11	22.59	14.35	3.58	0.99	87.36%
Average of All Competing Firms	37.05	1.61	3.41	2.31	22.09	16.92	3.15	2.21	60.49%
Electronic Arts	38.19	1.41	7.86	5.65	19.78	17.27	63.50	5.01	33.70%
EA over or (under) valued vs. US competing firms	16.60	(0.20)	5.34	4.55	(2.81)	2.91	59.92	4.02	
EA over or (under) valued vs. all competing firms	1.14	(0.20)	4.46	3.34	(2.31)	0.34	60.35	2.81	

Step 4: Value Relative to the Market

The following was computed based on the latest regression posted on the Damodaran website.

PS= 0.04 g +0.011	Payout + (0.549 Beta + 0.234 Net Margin (R ² = 71.0%)
Growth =	27.00	
Payout =	-	
Beta =	1.10	
Net Margin =	14.81	
Regression PS =	5.15	
Actual PS =	5.65	
Delta =	(0.50)	Overvalued!

The actual PS ratio would result in an equity value of \$14,023 million while the Regression PS ratio would result in an equity value of \$12,782 million resulting in a current overvaluation of \$1,241 million (10%).

Step 5: Final Value Estimate and Recommendation

The following summarizes my estimates of value:

Valuation at:		
Regression PS =	\$ 12,781	million
Actual PS =	\$ 14,034	million
FCFE =	\$ 12,111	million

Based on my analysis, EA's stock appears to be overvalued. I attribute the majority of the overvaluation to differing opinions and/or estimates of the high growth faze for the company. EA has experienced rapid growth, a good portion of which can be attributed to acquisitions over the past five years. The company has spent \$234.5 million in acquisitions during that time period. Believing that much of the company's big time spending for acquisitions is behind them, I made a rather conservative estimate of 5% annual growth during the terminal years. However, growth within the video game software industry can be quite volatile and there is a possibility that the terminal growth rate could be higher. But by how much, I'm not sure. In my opinion, EA's bubble is about to burst and I would sell their stock. Morningstar analysts seem to echo my opinion.

CHOOSING THE RIGHT VALUATION MODEL

This pro	gram is	designed to help ir use for any occas	n choosing the rightsion.	nt model to
		Inputs to the mode	I	
Level of Earnings		(in currency)		
Are your earnings positive ? Yes		(Yes or No)		
If the earnings are positive and normal, plea	se enter th	e following:	_	
What is the expected inflation rate in the e	conomy?	3.00%	(in percent)	
What is the expected real growth rate in th		2.00%	(in percent)	
What is the expected growth rate in earning	gs (revenue	s) for this firm in the near	uture? 12.50%	(in percent)
Does this firm have a significant and sustair	able advan	tage over competitors?	Yes	(Yes or No)
If the earnings are negative, please enter th	e following.	:		-
Are the earnings negative because the firm	is in a cycli	cal business ?		(Yes or No)
Are the earnings negative because of a one	-time or ter	mporary occurrence?		(Yes or No)
Are the earnings negative because the firm	has too mu	ich debt?		(Yes or No)
If yes, is there a strong likelih	ood of ban	kruptcy?		(Yes or No)
Are the earnings negative because the firm	is just star	ting up?		(Yes or No)
Financial Leverage				-
What is the current debt ratio (in market va	alue terms)	?		(in percent)
Is this debt ratio expected to change signifi	cantly ?		No	(Yes or No)
Dividend Policy				_
What did the firm pay out as dividends in th	ie current y	ear?		(in currency)
Can you estimate capital expenditures and	working cap	ital requirements?	Yes	(Yes or No)
Enter the following inputs (from the current	: year) for c	computing FCFE	_	
Net Income (NI)		\$367.50		
Depreciation and Amortization		\$91.60		
Capital Spending (Including acquisitions)		\$72.00	Includes 2003 Capital S	pending
? Non-cash Working Capital (?WC)		\$307.20		

OUTPUT FROM THE MODEL

Based upon the inputs you have entered, the right valuation model for this firm is:

Type of Model (DCF Model, Option Pricing Model):	Discounted CF Model
Level of Earnings to use in model (Current, Normalized):	Current Earnings
Cashflows that should be discounted (Dividends, FCFE, FCFF) :	FCFE (Value equity)
Length of Growth Period (10 or more, 5 to 10, less than 5)	10 or more years
Appropriate Growth Pattern (Stable, 2 stage, 3 stage):	Three-stage Growth

Attachment #2 (Valued Using Outside Growth Rate!)

Initial High Growth Phase		-
Cost of Equity =	18.30%	
Current Earnings per share=	\$1.53	
Proportion of Debt: Capital Spending (DR)=		
Proportion of Debt: Working Capital (DR)=		
Current Earnings per share=		\$1.53
(Capital Spending - Depreciation)*(1-DR)		(\$0.07)
Change in Working Capital * (1-DR)		\$1.07
Current FCFE		\$0.53

Output from the program

Growth Rate in Earnings per share - Initial High Growth phase

	Growth Rate	Weight
Historical Growth =	39.49%	
Outside Estimates =	27.00%	100.00%
Fundamental Growth =	35.51%	
Weighted Average	27.00%	

Growth Rate in capital spending, depreciation and working capital

Growth rate in depreciation =

Growth rate in revenues =

High Growth	Transition period	Stable Growth
27.00%	Earnings g	5.00%
27.00%	Earnings g	5.00%
27.00%	Earnings g	5.00%

Working Capital as percent of revenues =

-10.01%	(in percent)
	,

Year	1	2	3	4	5	6	7
Earnings	\$1.94	\$2.47	\$3.14	\$3.98	\$5.06	\$6.43	\$8.16
(CapEx-Depreciation)*(1-DR)	(\$0.09)	(\$0.11)	(\$0.14)	(\$0.18)	(\$0.23)	(\$0.29)	(\$0.36)
Chg. Working Capital *(1-DR)	(\$0.23)	(\$0.30)	(\$0.38)	(\$0.48)	(\$0.61)	(\$0.77)	(\$0.98)
FCFE	\$2.26	\$2.88	\$3.65	\$4.64	\$5.89	\$7.48	\$9.50
Present Value	\$1.91	\$2.05	\$2.21	\$2.37	\$2.54	\$2.73	\$2.93

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Transition period (upto ten years)

Year	8	9	10	Terminal Year
Growth Rate	19.67%	12.33%	5.00%	
Cumulated Growth	19.67%	34.43%	41.15%	
Earnings	\$9.77	\$10.97	\$11.52	\$12.09
(CapEx-Depreciation)*(1-DR)	(\$0.44)	(\$0.49)	(\$0.51)	
Chg. Working Capital *(1-DR)	(\$0.90)	(\$0.68)	(\$0.31)	(\$0.32)
FCFE	\$11.11	\$12.14	\$12.34	\$12.42
Beta	1.1	1.1	1.1	
Cost of Equity	18.30%	18.30%	18.30%	
Present Value	\$2.89	\$2.67	\$2.30	
End-of-Life Index			1	

E

Growth Rate in Stable Phase =	5.00%	
FCFE in terminal year =	\$12.42	
Cost of Equity in Stable Phase =	18.30%	
Price at the end of growth phase =	\$93.37	

Present Value of FCFE in high growth phase =	\$16.75
Present Value of FCFE in transition phase =	\$7.87
Present Value of Terminal Price =	\$17.39
Value of the stock =	\$42.01

R & D Converter

This spreadsheet converts R&D expenses from operating to capital expenses. It makes the appropriate adjustments to income, the book value of assets and the book value of equity.

Inputs

Over how many years do you want to amortize R&D expenses ! If in doubt, use the lookup table below \$400,990,000,00 maximum allowed is ten years Enter the current year's R&D expense = Enter R& D expenses for past years: the number of years that you will need to enter will be determined by the amortia

Do not input numbers in the first column (Year). It will get automatically updated based on the input above. R& D Expenses Year

ear -1 is the year prior to the current year ear -2 is the two years prior to the current year

-	<u>\$ 387,736,000.</u>	UWG
-2	\$ 388,928,000.	0Ø6
-3	\$ 260,759,000.	00
0	\$ 202,080,000.	00
0	\$147,700,000.	00
0		
0		
0		
0		
0		

Output

Output				
Year	R&D Expense	Unamortized portion A		Amortization this year
Current	400990000.0	0 1.00	400990000.0	0
-1	387736000.0	0 0.67	258490666.6	7\$ 129,245,333.33
-2	388928000.0	0 0.33	129642666.6	7\$ 129,642,666.67
-3	260759000.0	0.00	0.00	\$ 86,919,666.67
0	202080000.0	0.00	0.00	\$-
0	147700000.0	0 0.00	0.00	\$ -
0	0.00	0.00	0.00	\$ -
0	0.00	0.00	0.00	\$-
0	0.00	0.00	0.00	\$-
0	0.00	0.00	0.00	\$ -
0	0.00	0.00	0.00	\$ -
Value of Research Ass	et =		\$789,123,333	.\$3345,807,666.67

Amortization of asset for current year =

Adjustment to Operating Income = Tax Effect of R&D Expensing

\$345	,807,666.67
\$55. \$1	<u>182,333</u> .33

(1) ! A positive number indicates an increase in operating income (add to reported EBIT)

(1)

Attachment #4 (Valued Using Historical Growth Rate!)

Output from the program

Initial High Growth Phase		•
Cost of Equity =	18.30%	
Current Earnings per share=	\$1.53	
Proportion of Debt: Capital Spending (DR)=		0.00%
Proportion of Debt: Working Capital (DR)=		0.00%
Current Earnings per share=		\$1.53
(Capital Spending - Depreciation)*(1-DR)		(\$0.07)
Change in Working Capital * (1-DR)		\$1.07
Current FCFE		\$0.53

Growth Rate in Earnings per share - Initial High Growth phase

	Growth Rate	Weight
Historical Growth =	39.49%	100.00%
Outside Estimates =	27.00%	0.00%
Fundamental Growth =	35.51%	0.00%
Weighted Average	39.49%	

Growth Rate in capital spending, depreciation and working capital

	High Growth	Transition period	Stable Growth
Growth rate in capital spending =	39.49%	Earnings g	5.00%
Growth rate in depreciation =	39.49%	Earnings g	5.00%
Growth rate in revenues =	39.49%	Earnings g	5.00%

Working Capital as percent of revenues =

-10.01% (in percent)

Year	1	2	3	4	5	6	7
Earnings	\$2.14	\$2.98	\$4.16	\$5.80	\$8.09	\$11.28	\$15.73
(CapEx-Depreciation)*(1-DR)	(\$0.10)	(\$0.13)	(\$0.19)	(\$0.26)	(\$0.36)	(\$0.50)	(\$0.70)
Chg. Working Capital *(1-DR)	(\$0.34)	(\$0.47)	(\$0.66)	(\$0.92)	(\$1.29)	(\$1.80)	(\$2.51)
FCFE	\$2.57	\$3.59	\$5.00	\$6.98	\$9.74	\$13.58	\$18.94
Present Value	\$2.17	\$2.56	\$3.02	\$3.56	\$4.20	\$4.95	\$5.84

Transition period (upto ten years)

Year	8	9	10	Terminal Year
Growth Rate	27.99%	16.50%	5.00%	
Cumulated Growth	27.99%	49.11%	56.56%	
Earnings	\$20.14	\$23.46	\$24.63	\$25.87
(CapEx-Depreciation)*(1-DR)	(\$0.90)	(\$1.05)	(\$1.10)	\$0.00
Chg. Working Capital *(1-DR)	(\$2.48)	(\$1.87)	(\$0.66)	(\$0.69)
FCFE	\$23.52	\$26.38	\$26.40	\$26.56
Beta	1.1	1.1	1.1	0
Cost of Equity	18.30%	18.30%	18.30%	0.00%
Present Value	\$6.13	\$5.81	\$4.92	
End-of-Life Index	0	0	1	

Growth Rate in Stable Phase =	5.00%	
FCFE in terminal year =	\$26.56	
Cost of Equity in Stable Phase =	18.30%	
Price at the end of growth phase =	\$199.69	

Present Value of FCFE in high growth phase =	\$26.32
Present Value of FCFE in transition phase =	\$16.86
Present Value of Terminal Price =	\$37.20
Value of the stock =	\$80.38

Attachment #5 (Valued at Fundamental Growth Rate!)

	r			
18.30%				
\$1.53				
	0.00%			
Proportion of Debt: Working Capital (DR)=				
	\$1.53			
(Capital Spending - Depreciation)*(1-DR)				
Change in Working Capital * (1-DR)				
	\$0.53			
	18.30% \$1.53			

Output from the program

Growth Rate in Earnings per share - Initial High Growth phase

	Growth Rate	Weight
Historical Growth =	39.49%	0.00%
Outside Estimates =	27.00%	0.00%
Fundamental Growth =	35.51%	100.00%
Weighted Average	35.51%	

Growth Rate in capital spending, depreciation and working capital

Growth rate in capital	spending =
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Growth	rate	in	de	preciation	=
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Growth rate in revenues =

High Growth	Transition period	Stable Growth	
35.51%	Earnings g	5.00%	
35.51%	Earnings g	5.00%	
35.51%	Earnings g	5.00%	

Working Capital as percent of revenues =

-10.01%	(in percent)
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1	2	3	4	5	6	7
\$2.08	\$2.81	\$3.81	\$5.16	\$7.00	\$9.48	\$12.85
(\$0.09)	(\$0.13)	(\$0.17)	(\$0.23)	(\$0.31)	(\$0.42)	(\$0.57)
(\$0.31)	(\$0.41)	(\$0.56)	(\$0.76)	(\$1.03)	(\$1.40)	(\$1.90)
\$2.47	\$3.35	\$4.54	\$6.16	\$8.34	\$11.30	\$15.32
\$2.09	\$2.40	\$2.74	\$3.14	\$3.60	\$4.12	\$4.72
	1 \$2.08 (\$0.09) (\$0.31) \$2.47 \$2.09	1 2 \$2.08 \$2.81 (\$0.09) (\$0.13) (\$0.31) (\$0.41) \$2.47 \$3.35 \$2.09 \$2.40	1 2 3 \$2.08 \$2.81 \$3.81 (\$0.09) (\$0.13) (\$0.17) (\$0.31) (\$0.41) (\$0.56) \$2.47 \$3.35 \$4.54 \$2.09 \$2.40 \$2.74	1 2 3 4 \$2.08 \$2.81 \$3.81 \$5.16 (\$0.09) (\$0.13) (\$0.17) (\$0.23) (\$0.31) (\$0.41) (\$0.56) (\$0.76) \$2.47 \$3.35 \$4.54 \$6.16 \$2.09 \$2.40 \$2.74 \$3.14	1 2 3 4 5 \$2.08 \$2.81 \$3.81 \$5.16 \$7.00 (\$0.09) (\$0.13) (\$0.17) (\$0.23) (\$0.31) (\$0.31) (\$0.41) (\$0.56) (\$0.76) (\$1.03) \$2.47 \$3.35 \$4.54 \$6.16 \$8.34 \$2.09 \$2.40 \$2.74 \$3.14 \$3.60	1 2 3 4 5 6 \$2.08 \$2.81 \$3.81 \$5.16 \$7.00 \$9.48 (\$0.09) (\$0.13) (\$0.17) (\$0.23) (\$0.31) (\$0.42) (\$0.31) (\$0.41) (\$0.56) (\$0.76) (\$1.03) (\$1.40) \$2.47 \$3.35 \$4.54 \$6.16 \$8.34 \$11.30 \$2.09 \$2.40 \$2.74 \$3.14 \$3.60 \$4.12

Transition period (upto ten years)

Year	8	9	10	Terminal Year
Growth Rate	25.34%	15.17%	5.00%	
Cumulated Growth	25.34%	44.35%	51.57%	
Earnings	\$16.11	\$18.55	\$19.48	\$20.45
(CapEx-Depreciation)*(1-DR)	(\$0.72)	(\$0.83)	(\$0.87)	\$0.00
Chg. Working Capital *(1-DR)	(\$1.83)	(\$1.38)	(\$0.52)	(\$0.55)
FCFE	\$18.66	\$20.75	\$20.87	\$21.00
Beta	1.1	1.1	1.1	
Cost of Equity	18.30%	18.30%	18.30%	0.00%
Present Value	\$4.86	\$4.57	\$3.89	
End-of-Life Index	0	0	1	

Growth Rate in Stable Phase =	5.00%
FCFE in terminal year =	\$21.00
Cost of Equity in Stable Phase =	18.30%
Price at the end of growth phase =	\$157.89

Present Value of FCFE in high growth phase =	\$22.82
Present Value of FCFE in transition phase =	\$13.32
Present Value of Terminal Price =	\$29.41
Value of the stock =	\$65.56

Attachment #6 (Valued With a Change in Transition Period from 3 to 5 Years!)

Output from the program

Initial High Growth Phase		-
Cost of Equity =	18.30%	
Current Earnings per share=	\$1.53	
Proportion of Debt: Capital Spending (DR)=		0.00%
Proportion of Debt: Working Capital (DR)=		0.00%
Current Earnings per share=		\$1.53
(Capital Spending - Depreciation)*(1-DR)		(\$0.07)
Change in Working Capital * (1-DR)		\$1.07
Current FCFE		\$0.53

Growth Rate in Earnings per share - Initial High Growth phase

	Growth Rate	Weight
Historical Growth =	39.49%	0.00%
Outside Estimates =	27.00%	100.00%
Fundamental Growth =	35.51%	0.00%
Weighted Average	27.00%	

Growth Rate in capital spending, depreciation and working capital

	High Growth	Transition period	Stable Growth
Growth rate in capital spending =	27.00%	Earnings g	5.00%
Growth rate in depreciation =	27.00%	Earnings g	5.00%
Growth rate in revenues =	27.00%	Earnings g	5.00%

Working Capital as percent of revenues =

-10.01%	(in percent)
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Year	1	2	3	4	5	
Earnings	\$1.94	\$2.47	\$3.14	\$3.98	\$5.06	
(CapEx-Depreciation)*(1-DR)	(\$0.09)	(\$0.11)	(\$0.14)	(\$0.18)	(\$0.23)	
Chg. Working Capital *(1-DR)	(\$0.23)	(\$0.30)	(\$0.38)	(\$0.48)	(\$0.61)	
FCFE	\$2.26	\$2.88	\$3.65	\$4.64	\$5.89	
Present Value	\$1.91	\$2.05	\$2.21	\$2.37	\$2.54	
Transition period (upto ten years)						
Year	6	7	8	9	10	Terminal Year
Growth Rate	22.60%	18.20%	13.80%	9.40%	5.00%	
Cumulated Growth	22.60%	44.91%	64.91%	80.41%	89.43%	
Earnings	\$6.20	\$7.33	\$8.34	\$9.13	\$9.58	\$10.06
(CapEx-Depreciation)*(1-DR)	(\$0.28)	(\$0.33)	(\$0.37)	(\$0.41)	(\$0.43)	\$0.00
Chg. Working Capital *(1-DR)	(\$0.64)	(\$0.64)	(\$0.57)	(\$0.44)	(\$0.26)	(\$0.27)
FCFE	\$7.12	\$8.29	\$9.29	\$9.98	\$10.27	\$10.33
Beta	1.1	1.1	1.1	1.1	1.1	0
Cost of Equity	18.30%	18.30%	18.30%	18.30%	18.30%	0.00%
Present Value	\$2.60	\$2.56	\$2.42	\$2.20	\$1.91	
End-of-Life Index	0	0	0	0	1	

Growth Rate in Stable Phase =	5.00%
FCFE in terminal year =	\$10.33
Cost of Equity in Stable Phase =	18.30%
Price at the end of growth phase =	\$77.69

Present Value of FCFE in high growth phase =	\$11.09
Present Value of FCFE in transition phase =	\$11.69
Present Value of Terminal Price =	\$14.47
Value of the stock =	\$37.25