

Equity Valuation Project

Group:

Mike Altman
Alison Birch
Erin Burns
Joe Faber
Santosh Lakhan
Josh Sullivan

Companies:

Affiliated Computer Services
Apple Computer
Biosite
Gundle Environmental Systems
Infosys
Nextel Partners

Affiliated Computer Services

1. Company Overview

Affiliated Computer Services, Inc. (ACS) is a global company delivering comprehensive business process outsourcing and information technology (IT) outsourcing solutions to commercial and government clients. The Company is organized into commercial, state and local government and the federal government segments. Within the commercial segment, ACS provides technology outsourcing, business process outsourcing and systems integration services to clients in such industries as insurance, utilities, manufacturing, financial institutions, telecommunications, healthcare, retail and transportation. In the state and local government segment, the Company is a business process outsourcing provider to state and local governments. In the federal government segment, ACS provides systems integration services, business process outsourcing and technology outsourcing to federal agencies.

Services company.

2. DCF Valuation

We implemented the two-stage FCFE discount model since it is best suited for firms with shifting leverage and growing at a moderate rate.

The assumptions used to build the DCF model are

	High Growth	Stable Growth
Length of growth period	5	Forever
Growth Rate	10.00%	3%
Debt Ratio	11.51%	16.00%
Beta	1.27	1
Riskfree Rate	4.3%	4.3%
Risk Premium	4.53%	4.53%
Cost of Debt	6.55%	6.55%
Tax Rate	35%	35%
Return on Capital	11.27%	8.83%
Reinvestment Rate	56.61%	37.04%
Cost of Equity	10.03%	8.83%
Cost of Capital	9.37%	8.10%

Based on these inputs the valuation was as follows

EBIT	\$539.23 million
Equity Value	\$6734.72 million
Firm Value	\$7640.96 million
Value/Share	\$48.75
Current Market Price	\$50.50

Sensitivity Analysis

The key drivers for ACS are the length of the growth period and stable growth rate

Stable Growth Rate	Growth Period	
	5	10
3	\$ 48.75	\$ 54.07
5	\$ 49.40	\$ 54.73
7	\$ 50.05	\$ 55.41

Since it is unlikely that ACS would have sustained growth greater than 3%, the assumptions made in the base case are very reasonable.

3. Relative Valuation

77 companies were used as comparables. Since ACS derives a majority of its revenue from the US, the comparables used were primarily US firms in the computer software and services sectors. The firms were further selected based on size and growth to best reflect ACS's value

Regressions were completed with both PE and PBV ratios. The regression vs. PBV produced the highest R-squared.

Regression Analysis: PBV versus ROE

The regression equation is

$$PBV = 0.608 + 15.9 * ROE$$

Predictor	Coef	SE Coef	T	P
Constant	0.608	0.2642	2.30	0.024
ROE	15.926	1.733	9.19	0

$$S = 1.309 \quad R-Sq = 52.6\% \quad R-Sq(adj) = 52.0\%$$

Based on this regression, ACS's predicted PBV is 3.283 resulting in a predicted stock price of \$ 59.87.

The average PBV for the comparables was 2.618 resulting in a predicted stock price of \$ 47.75.

4 Market Valuation

The market regression equation is

$$PEG = 0.159 ROE + 0.358 Beta + 0.117 Growth - 0.011 Payout Ratio (R^2 = 48\%)$$

Based on this equation the predicted PBV is 2.65, resulting in a stock price of \$ 48.36 clearly the market regression works well for ACS.

5. EVA

ROC	11.27%
WACC	9.37%
BV Capital	\$ 2923.88 million
EVA	\$ 55.61 million

ACS is creating value with any reinvestment of capital

6. Final Analysis

Current Price	\$ 50.50
DCF Base	\$ 48.75
DCF Hi	\$ 54.07
DCF Extreme Hi	\$ 54.73
Average PBV of comparables	2.618
Average PBV regression	3.283
Market PBV regression	2.54

I would place more weight on the DCF valuation than the average regression since there is some ambiguity associated with choosing comparables. Thus, I think the base case DCF valuation is most representative of ACS's current value.

I recommend to SELL ACS

Apple Computer

1. Company Overview

Apple Computer, Inc. designs, manufactures and markets personal computers (PCs) and related personal-computing solutions for sale primarily to education, creative, consumer and business customers. The Company's personal-computing products include desktop and notebook PCs, related devices and peripherals, networking and connectivity products, as well as various third-party hardware products. Apple software products and computer technologies include operating systems; professional application software; consumer-, education- and business-oriented application software; Internet products and technologies, and wireless connectivity and networking products. The Company also has its own retail stores.

2. DCF Valuation

We chose the 2 stage FCFE model because the company has historically had very little debt and given its new product introductions, it would appear that the company is embarking on a rather aggressive growth strategy over the near-term. In addition, R&D was capitalized for the firm as those expenditures are quite significant and last year's earnings were normalized.

The assumptions used to build the DCF model are:

	High Growth	Stable Growth
Length of growth period	10	Forever
Growth Rate	15%	4%
Debt Ratio	0	0
Beta	2.15	1.2
Riskfree Rate	4.4%	4.4%
Risk Premium	4.1%	4.1%
Tax Rate	35%	35%
Return on Equity	13%	15%
Reinvestment Rate	15%	30.77%
Cost of Equity	13.21%	9.31%

Based on these inputs the valuation was as follows:

Net Income (w/o interest)	\$252
Equity Value	\$5,400
Cash and Marketable Sec	\$4,545
Value/Share	\$27.06
Current Market Price	\$20.85

Sensitivity Analysis

The key drivers for Apple are the length of the growth rate and length of the growth period

Growth Rate	Growth Period	
	5	10
10	\$22.58	\$23.59
15	\$24.06	\$27.06
20	\$25.68	\$31.52

As you can see by valuing the inputs the value of Apple varies by almost 70%.

3. Relative Valuation

37 companies were used as comparables. The selection criteria was computer services firms with revenues greater than 100MM. These firms were selected because they should trade similar to Apple.

The multiple that was analyzed was the PE ratio. This produced the best R-squared of any of the earnings multiples (i.e. PE etc...). The Regression equation is shown below

Regression Analysis: PE versus Growth, Value Line Beta, Payout Ratio

The regression equation is

$$PE = - 56.2 - 107 \text{ Payout Ratio} + 62.0 \text{ Value Line Beta} + 270 \text{ Growth in EPS}$$

$$R\text{-Sq} = 29.7\%$$

Based on this regression, Apple's predicted PE is 31.45 resulting in a predicted stock price of \$24.53.

The average PE for the comparables was 61.64 resulting in a predicted stock price of \$48.31.

Using both simple and regression techniques it appears as if Apple is undervalued in relation to comparable firms.

4. Market Valuation

The market regression equation for PE is:

$$PE = 1.228(g) - .011(\text{payout}) + 11.75(\text{Beta})$$

Based on this equation the predicted PE is 23.4, resulting in a stock price of \$18.31. The market regression indicates that Apple is slightly overvalued

5. EVA

Book value of equity is approximately 2/3 of the invested capital; research asset is worth over \$1.1 billion and represents the other third. This leads to a current EVA of 58.12 which means that Apple is creating value by reinvesting.

6. Final Analysis

Current Price	\$20.85
DCF Base	\$27.06
DCF Lo	\$22.58
DCF Hi	\$31.52
Average PE of comparables	\$48.31
Average PE regression	\$24.53
Market PE regression	\$18.31

The data above indicates that Apple is undervalued by every metric except the Market PE regression. This is overwhelming evidence that Apple is undervalued.

I recommend to BUY Apple.

Biosite, Inc.

1. Company Overview

Biosite Incorporated is a provider of novel, rapid medical diagnostics that improve a physician's ability to diagnose critical diseases and health conditions. The Company focuses on disease categories that are in need of improved diagnosis and monitoring. Biosite has adopted a strategy that encompasses the diagnostic continuum from protein validation to point-of-care diagnostics.

High growth potential company.

2. DCF Valuation

The 3 stage FCFE discount model is best suited for firms with stable leverage and having high growth. For Biosite, the growth rate is a fundamental growth rate. Historical growth rates were not used because the company's earnings just recently became positive, and so the calculated rates were not very useful. Biosite, although fairly new, has several successful products in the market, some new launches this year, and a backlog of products being tested for FDA approval. This is why the analyst growth rate of 28% seemed reasonable. However, to keep our estimates as conservative as possible, this was replaced with the calculated 14.97% fundamental growth rate in the high growth phase. The high growth phase was limited to 5 years, after which the company's risk should transition to an average risk, and the growth will begin to mimic the growth of the economy. Because of the firm's high level of research and dependence on new products, it is assumed that capital spending will continue at a high rate. It should also be noted that, at the moment the company has a very low beta. This is due in part to the low industry beta of the Medical Supply industry, but even more to the high balance of cash and cash equivalents they are carrying. As this cash is used to fund new projects going forward, it is assumed that later in the company's life the beta will move towards 1.

The assumptions used to build the DCF model are:

	High Growth	Stable Growth
Length of growth period	5	Forever
Growth Rate	14.97%	4.5%
Debt/Equity	10.60%	6.93%
Beta	0.56	1
Riskfree Rate	4.21%	4.21%
Risk Premium	4.53%	4.53%
Tax Rate	38%	38%
Return on Capital	14.60%	7%
Reinvestment Rate	100%	20%
Cost of Equity	6.75%	8.74%

There is also a transition period built in, while the company moves from the High Growth values to the stable growth values. The transition period will also last approximately 5 years.

Based on these inputs the valuation was as follows

EPS, Year 1	0.91
Equity Value	\$ 487,960,000
Value/Share	\$ 32.76
Current Market Price	\$ 26.12

Sensitivity Analysis

The key driver for Biosite is the growth rate in the high growth period, as well as the length of that period.

High Growth Rate	High Growth Period	
	5	10
28%	\$65.52	\$161.80
20%	42.92	77.55
14.97%	32.76	48.50

Although Biosite has some unique products, it is in a very competitive and rapidly innovative industry, so assuming sustained high growth of over 5 years seems unreasonable. However, there is a consensus among analysts that they are poised for high growth so our value estimate may be low. This only underscores the Buy recommendation we have put on Biosite.

3. Relative Valuation

51 companies were used as comparables. Biosite is a US company operating in the Medical Supply industry, so Medical Supply firms were used as comparables.

Regressions were completed with VS (Value to Sales) ratios.

Regression Analysis: VS versus Growth in revenues, Operating Margin, and Debt/Capital

The regression equation is

$$\text{PEG} = -1.33 + 16.507 \text{ Growth} + 21.26 \text{ Operating Margin} - 3.031 \text{ Debt/Capital}$$

Predictor	Coef	SE Coef	T	P
Constant	- 1.331	1.07849	-1.23498	0.22311
Growth	16.507	5.575785	2.960603	0.004842
Operating Margin	21.26	3.905606	5.445124	1.95E-06
Debt/Capital	-3.031	2.484828	-1.21994	0.228706

$$S = 1.7066 \quad R\text{-Sq} = 56.2\% \quad R\text{-Sq(adj)} = 53.3\%$$

Based on this regression, Biosite's predicted VS is 3.294 resulting in a predicted stock price of \$22.50.

The average VS for the comparables was 3.314 resulting in a predicted stock price of \$22.64.

4. Market Valuation

The market regression equation is:

$$\text{VS} = 0.264 \text{ g(rev)} + 0.150 \text{ (Operating Margin)} - 0.009 \text{ (Reinvestment Rate)} - 0.048 \text{ (Debt/Capital)}$$

Based on this equation the predicted VS is 4.315, resulting in a stock price of \$29.68. This is much closer to our DCF valuation than the regression against comparables. I believe that the market comparison is actually more accurate in this case, as it seems that growth is being undervalued in the industry. You can see that the weighting put in growth is quite high in the market comparison, while in the comparables regression the greater weight is put on margins.

5. EVA

ROC	10.13%
WACC	6.69%
BV Capital	119,383
EVA	4,103

Biosite, Inc. had a very high EVA in the year ended December 31, 2002, mostly due to a new product which was just approved to enter the market in 2002. Sales of that product yielded an ROC in 2002 which was double that of 2001 and significantly higher than the firm's cost of capital. This brought the firm, historically had a negative EVA, over to a very positive EVA. I think this can be interpreted as years of investment and research finally paying off.

6. Final Analysis

Current Price	\$26.12
DCF Base	\$32.76
DCF Lo	\$32.76
DCF Hi	\$161.80
Average VS of comparables	\$22.64
Comparables VS regression	\$22.50
Market VS regression	\$29.68

I place the most weight on my DCF valuation, as I used the most conservative estimates to get this value, and it is still pointing to a higher actual value than the market is recognizing. Additionally, the DCF valuation takes in the most information regarding my specific company, including it's current high growth, high margins, potential for extended growth with an extended transition period, and high current reinvestment rate (100%).

I place a BUY recommendation on Biosite, Inc.

Gundle Environmental Systems

1. Company Overview

Gundle/SLT Environmental, Inc. manufactures, sells and installs geosynthetic lining products and services for environmental protection and other uses. It offers products such as flexible geomembrane liners, drainage nets, geosynthetic clay liners, concrete protection liners and geocomposite products made from specially formulated polyethylene and polypropylene resins.

2. DCF Valuation

We chose a FCFF with 3 stages because the firm is currently in a period of high growth. In an effort to taper the earnings down to terminal growth, we used 3 stages. An assumption was made that the D/E ratio would eventually reach the industry average, so FCFF was utilized.

The assumptions used to build the DCF model are

	High Growth	Stable Growth
Length of growth period	6	Forever
Growth Rate	10.0%	3%
Debt Ratio	7.67%	42.53%
Beta	0.55	1
Riskfree Rate	4.5%	4.5%
Risk Premium	4.5%	4.5%
Cost of Debt	5.5%	5.5%
Tax Rate	35%	35%
Return on Capital	11.73%	10.67%
Reinvestment Rate	80.0%	28.12%

Based on these inputs the valuation was as follows

EBIT	\$30,790
Equity Value	\$490,891
Firm Value	\$509,549
Value/Share	\$41.13
Current Market Price	\$19.73

Sensitivity Analysis

Two key drivers for Gundle are the growth rate and debt ratio used in the stable growth period

Growth Rate	Debt Ratio in Stable Growth		
	30	42	50
5	\$29.20	\$34.02	\$38.29
10	\$35.02	\$41.13	\$45.98
15	\$41.72	\$48.67	\$54.83

As you can see even with the huge variance between the predicted stock prices, even the most conservative estimate indicates that the firm is undervalued.

3. Relative Valuation

25 comparables were used for Gundle. The comparable firms were selected from the environmental industry. All firms with negative earnings were eliminated. This selection criteria

results in a set of firms that are similar to Gundle, ROE was used to control for differences. Only one variable was used in the regression due to the small sample size.

Regression Analysis: P/BV vs. ROE

The regression equation is

$$P/BV = 1.11 + 7.74 * ROE$$

$$R-Sq = 27.2\%$$

Based on this regression, Gundle's predicted P/BV is 2.271 which results in a predicted stock price of \$29.57.

The average P/BV for the comparables was 1.69 resulting in a predicted stock price of \$22.06.

Using both simple and regression techniques it appears as if Gundle is undervalued in relation to comparable firms.

4 Market Valuation

The market regression equation for PE is

$$P/BV = 0.159 ROE + .358 Beta + .117 g - .011 Payout$$

Based on this equation the predicted P/BV is 2.42, resulting in a stock price of \$31.49. The market regression indicates that Gundle is undervalued

5. EVA

ROC	11.73%
WACC	6.71%
BV Capital	169,193
EVA	\$8,493

Gundle is creating value with any reinvestment of capital

6. Final Analysis

Current Price	\$19.13
DCF Base	\$41.13
DCF Lo	\$29.20
DCF Hi	\$54.83
Average P/BV of comparables	\$22.06
Average P/BV regression	\$29.57
Market P/BV regression	\$31.49

The data above indicates that Gundle is undervalued by every metric. This is overwhelming evidence that Gundle is undervalued.

I recommend to BUY Gundle.

Infosys Technologies, LTD

1. Company Overview

Infosys Technologies Limited, along with its majority-owned and -controlled subsidiary, Progeon Limited, is a global information technology (IT) services company. The Company provides end-to-end business solutions that leverage technology, enabling its clients to enhance business performance. Its service offerings include custom application development, maintenance and production support, software re-engineering, package evaluation and implementation, IT consulting and other solutions, including testing services, engineering services, business process management, systems integration and IT outsourcing. In addition, the Company offers software products for the banking industry and business process management services. Its primary client markets are financial services, manufacturing, telecommunications and retail, as well as utilities and logistics.

International and services company.

2. DCF Valuation

Infosys has benefited significantly from the recent trend towards outsourcing IT implementation to India. This trend of high growth is likely to continue over the next 5 years and is reflected in analysts predictions of > 15% growth over the next 5 years. After the high growth phase is completed, Infosys off-shoring model will allow it to maintain a sustainable competitive cost advantage which will allow the firm to grow at a stable rate of 5% in perpetuity. Based on this information a 2-stage FCF model was used to calculate firm value.

The assumptions used to build the DCF model are

	High Growth	Stable Growth
Length of growth period	5	Forever
Growth Rate	17.23%	5%
Debt Ratio	0	5.5%
Beta	2.09	1.2
Riskfree Rate	5.5%	5.5%
Risk Premium	4%	4%
Cost of Debt	6.25%	6.25%
Tax Rate	35%	35%
Return on Capital	28.12%	15%
Reinvestment Rate	61.27%	33.3%
Cost of Equity	13.86%	10.3%
Cost of Capital	13.86%	9.96%

Based on these inputs the valuation was as follows:

EBIT	2,064 Rs crore
Equity Value	29,088 Rs crore
Firm Value	29,114 Rs crore
Value/Share	4,270
Current Market Price	4,912

Sensitivity Analysis

The key drivers for Infosys are the length of the growth period and stable growth rate

Stable Growth Rate	Growth Period	
	5	10
3	3651	4464
5	4270	5156
7	5682	6733

Since it is unlikely that Infosys would have sustained growth greater than 5%, the assumptions made in the base case are very reasonable.

3. Relative Valuation

50 companies were used as comparables. Since Infosys derives a majority of its revenue from the US, the comparables used were primarily US firms in the computer software and services sectors. The firms were further selected based on size and growth to best reflect Infosys value

Regressions were completed with both PE and PEG ratios. The regression vs. PEG produced the highest R-squared.

Regression Analysis: PEG versus LN Growth, Value Line Beta, Payout Ratio

The regression equation is

$$\text{PEG} = 5.03 - 1.60 \text{ LN Growth} + 1.29 \text{ Value Line Beta} + 0.52 \text{ Payout Ratio}$$

Predictor	Coef	SE Coef	T	P
Constant	5.035	1.223	4.12	0
LN Growth	-1.6009	0.364	-4.4	0
Value Line Beta	1.2863	0.5779	2.23	0.03
Payout R	0.517	1.257	0.41	0.683

$$S = 1.095 \quad R\text{-Sq} = 31.3\% \quad R\text{-Sq(adj)} = 27.3\%$$

Based on this regression, Infosys's predicted PEG is 1.303 resulting in a predicted stock price of 5,307 Rs.

The average PEG for the comparables was 2.22 resulting in a predicted stock price of 9,043 Rs.

4. Market Valuation

The market regression (using the ADR listing of Infosys) equation is

$$\text{PEG} = 12.393 + 1.474 \text{ Beta} - 0.015 \text{ Payout} - 4.55 \text{ ln}(g) \quad (R^2 = 41.8\%)$$

Based on this equation the predicted PEG is .34, resulting in a stock price of 16.82 Rs, clearly the market regression does not work well for Infosys.

5. Value of Control and Synergy

One common reason why a firm's stock price might be mismatched with its value is poor management. Poor management can lead to severe value loss. It is possible to estimate the value of control in a firm by calculating the value of the firm (under current management) and comparing it to the value of the firm if it were optimally managed. This is a particularly important concept in mergers and acquisitions.

Infosys Technologies is the perfect case of a firm that could benefit from a value-enhancing strategy. The firm currently has no debt and its value would increase substantially if it were to take on a small amount of leverage. The following table summarizes the DCF valuation of Infosys in its current state.

Year	FCFF	Terminal Value	PV	
1	747		656	
2	876		676	
3	1150		785	
4	1583		968	
5	1997	23531	24642	
Terminal	2096			
Firm Value	27727	\$ 6,027.61	million \$ @ 46 Rs/\$	

Note: The FCFF and PV values are in Indian Rs

If Infosys were to raise its debt ratio from 0 to 11.5% its beta would increase but its cost of capital would decrease. The impact of increasing the debt ratio on various valuation variables is highlighted below.

Variable	Old	New
Beta	2.09	2.25
Cost of Equity	13.86%	14.48%
Cost of Debt	4.06%	4.06%
WACC	13.86%	13.29%

The growth period was assumed to be 5 years after which the beta will drop to 1.2. Based on the new inputs the following DCF analysis was conducted.

Year	FCFF	Terminal Value	PV	
1	747		659	
2	875		682	
3	1150		797	
4	1583		991	
5	1997	29688	30834	
Terminal	2096			
Firm Value w/control change	33963	\$ 7,383.26	million \$ @ 46 Rs/\$	
Value of the Firm Status Quo		\$ 6,027.61		
Value of Control		\$ 1,355.65		

Thus, either incumbent or new management would be able to increase the value of Infosys by \$1.36 billion by altering the capital structure.

One potential merger partner is Affiliated Computer Services (ACS). ACS and Infosys both operate in similar lines of business and therefore there are a number of synergies that could be realized between the two firms. ACS could benefit substantially from Infosys's cost advantages in off-shoring IT activities. This would lead to an increased growth rate in the near term as well as a sustainable competitive advantage that would lead to an increase in the stable growth rate of the combined firm from 3% to 5%. It is possible to calculate the value of these operating synergies, by calculating the value of the 2 firms alone and then calculating the value of the combined firm with synergies.

The background data used in the calculation is as follows

	ACS	Infosys
Current EBIT	539.23	259.63
Current Revenues	3985.65	922.00
CapEx-Dep	15.07	23.91
Exp Growth (next 5 yrs)	10.0%	17.0%
Exp Growth (stable)	3.0%	5.0%
D/D+E	11.5%	11.5%
After Tax cost of Debt	4.26%	4.26%
Beta - next 5	1.27	2.25
Beta - stable	1.00	1.20
Working Cap/Rev	22%	5.10%

Based on the inputs shown above, ACS can be valued using a FCFF 2 stage model

Year	FCFF	Terminal Value	PV
1	181		165
2	199		166
3	234		179
4	286		202
5	334	4415	4634
Terminal	344		
Value of ACS	\$ 5,346.00		

The following operating synergies are assumed to take effect immediately. The combined firm will have a 5 year growth period of 15% (this is an increase for ACS and a slight decrease for Infosys), and a stable growth rate of 5% (again an increase for ACS). At the same time, by leveraging the off-shoring model of Infosys, ACS will be able to increase its ROC from 8% to 15%. By merging the 2 firms will also have a new beta and cost of capital.

	Infosys	ACS
Unlevered Beta	2.09	1.217
Firm Value	7.38	5.35
Unlevered Beta	1.72	
Combined Firm D/E	11.50%	
New Levered Beta	1.85	
Cost of Equity	11.41%	
WACC	10.58%	

Based on the inputs outlined above the combined firm can be valued with the operating synergies previously described.

Year	FCFF	Terminal Value	PV
1	349		315.5957
2	401		327.9109
3	481		355.6823
4	591		395.194
5	702	10262	10686.03
Terminal	948		
Value of Combined Firm	\$ 13,028		
Value of Infosys + ACS	\$ 12,729		
Total Value of Synergy	\$ 299		

From the calculations outlined above, the complete value of Infosys can be broken down as follows

Value of Infosys – Status Quo	= \$ 6,027 million
Value of Control	= \$ 1,355 million
Value of Infosys – Optimally managed	= \$ 7,383 million
Value of Synergy	= \$ 299 million
Total Value of Infosys	= \$ 7,682 million

In the potential merger outlined, how the increased value associated with combining the firms is divided between the firms would be subject to negotiation.

6. EVA

ROC	28.12%
WACC	13.86%
BV Capital	3383
EVA	482 Rs crore

Infosys is creating value with any reinvestment of capital

7. Final Analysis

Current Price	4912
DCF Base	4270
DCF Lo	3651
DCF Hi	6733
Average PEG of comparables	9043
Average PEG regression	5307
Market PEG regression	16

I would place more weight on the DCF valuation than the market regression since there is some ambiguity associated with choosing comparables across countries. Thus, I think the base case DCF valuation is most representative of Infosys's current value.

I recommend to SELL Infosys.

Nextel Partners, Inc

1. Company Overview

Nextel Partners: Nextel Partners, Inc. provides digital mobile communications services using the Nextel brand name in mid-sized and tertiary markets throughout the United States. The Company offers digital cellular services; Direct Connect (the long-range digital walkie-talkie service); wireless data services, including e-mail; text messaging and Nextel Online. Nextel Partners has constructed and operated a digital mobile network compatible with the digital mobile network established and operated by Nextel Communications Inc. (Nextel) in targeted portions of these markets in the United States.

Negative earnings company.

2. DCF Valuation

Since the firm has negative earnings, we used an n-stage FCFF model in arriving at the valuation. Target growth rates were estimated for a five year high growth phase using average analyst estimates. In addition, given the firm's high leverage, an option pricing model was used to determine the value of equity as a call option.

The assumptions used to build the DCF model are:

	High Growth	Stable Growth
Length of growth period	5	Forever
Growth Rate	Declining from 24% to 8%	4.75%
Debt Ratio	39%	39%
Beta	3.93	1.00
Riskfree Rate	4.4%	4.4%
Risk Premium	4.0%	4.0%
Cost of Debt	15.9%	7.6%
Tax Rate	0%	40%
Return on Capital	-19.71%	8.10%
Reinvestment Rate	100%	100%
Cost of Equity	20.12%	8.39%
Cost of Capital	18.57%	8.10%

Based on these inputs the valuation was as follows

Debt Value	1,706
Equity Value	1,026
Firm Value	2,525
Value/Share	\$11.08
Current Market Price	\$11.72

The key drivers for Nextel Partners are the length of the growth period, high and stable growth rate and capital spending, depreciation and working capital needs during the high growth period.

3. Relative Valuation

53 wireless networking companies were used as comparables. Four outlier companies were removed from the original sample to best reflect Nextel's value.

Regressions were completed with a Price/Sales, Enterprise Value/Sales, Price/Book Value of Capital and Value/Book Value Capital ratio. The regression of Value/Book Value Capital produced the highest R-squared.

Regression Analysis: Value/BV of Capital versus ROC, Market Debt to Capital

The regression equation is

$$\text{Value/BV of Capital} = 1.64 - 0.644 \text{ ROC} - 0.693 \text{ Market Debt to Capital}$$

Predictor	Coef	SE Coef	T	P
Constant	1.6417	0.2248	7.3	0
ROC	-0.6444	0.1809	-3.56	0.001
Market Debt/Capital	-0.6933	0.4983	-1.39	0.17

$$S = 1.167 \quad R\text{-Sq} = 25.2\% \quad R\text{-Sq}(\text{adj}) = 22.3\%$$

Based on this regression, Nextel's predicted Value/BV Capital is 1.36 resulting in a predicted stock price of \$8.82.

The average Value/BV Capital for the comparables was 1.80 resulting in a predicted stock price of \$11.65.

4. Market Valuation

The market regression equation is

$$\text{Value/Book Capital} = 1.89 + .10 \text{ g (rev)} + .061 \text{ (Return on Capital)} - .043 \text{ (Debt/Capital)}$$

Based on this equation the predicted V/BV Capital is 1.87, resulting in a stock price of \$12.15.

5. Option Pricing Model

Nextel Partners is a negative earnings firm with high leverage. Utilizing the option pricing model, with industry average standard deviations for stock and bond prices and an average debt life of 6.4 years, results in an option value of \$9.09.

Output

Stock Price=	\$9,823.00	T.Bond rate=	4.4%
Strike Price=	\$92,569.73	Variance=	0.468755
Expiration (in years) =	6.4	Annualized dividend yield=	0.0%
d1 =	-0.266884801		
N(d1) =	0.394778988		
d2 =	-1.998944408		
N(d2) =	0.022807115		
Value of equity as a call =	\$2,283.80	\$9.09 per share	
Value of outstanding debt =	\$7,539.20		
Appropriate interest rate for debt =	47.97%		

6. EVA

ROC	-19.71%
WACC	18.57%
BV Capital	1,632
EVA	-625

The wireless networking industry has average firm EVA of -5,742. Nextel Partners experienced a greater ROC-WACC differential on a smaller capital base than the wireless networking industry average. This lead to a less negative, and hence more favorable, EVA calculation compared to the industry mean.

7. Final Analysis

Current Price	\$11.72
DCF Base	\$11.08
Average Value/BV Capital of comparables	\$11.65
Average Value/BV Capital regression	\$8.82
Market Value/BV Capital regression	\$12.15

I would place more weight on the DCF valuation than the market regression since there is some ambiguity associated with choosing comparables across countries. Thus, I think the base case DCF valuation is most representative of Nextel's current value.

I recommend to SELL Nextel.