

The Free Cash flow to Equity Method- Assignment VII

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The Free Cash flows to Equity of a company refer to the cash flows left over for the common shareholders left over after meeting all prior financial obligations including debt payments, capital expenditure and working capital requirements. This paper discusses how much the company can afford to distribute to its shareholders and value of the company stock based on the same

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All data presented in this report is from secondary research on the internet. The analysis presented is original and not replicated from any other source

COMPANY STATISTICS

Sector: Technology

Industry: IT Outsourcing and Services

Current Market Price: \$5.75

GROWTH RATE ESTIMATION BASED ON REVENUES AND EARNINGS PER SHARE

Table 1

(All figures in \$Million)

Year	Revenues	% Change	Operating Income	% Change	Net Income	% Change	EPS (Basic)	% Change
2000	2,196.60		320.6		189.2		1.13	
2001	2,320.60	5.65%	276.6	-13.72%	138.8	-26.64%	0.82	-27.43%
2002	2,286.20	-1.48%	253.3	-8.42%	145.9	5.12%	0.9	9.76%
2003	2,288.80	0.11%	292.4	15.44%	171.6	17.61%	1.18	31.11%
2004	2,487.70	8.69%	185.5	-36.56%	111.5	-35.02%	0.79	-33.05%
2005	2,582.10	3.79%	223.6	20.54%	122.6	9.96%	0.88	11.39%
2006	2,789.80	8.04%	252.9	13.10%	166.2	35.56%	1.2	36.36%
2007	2,844.30	1.95%	244.8	-3.20%	169.5	1.99%	1.26	5.00%
AM		3.82%		-1.83%		1.22%		4.73%
GM		3.28%		-3.32%		-1.36%		1.37%
Std Deviation		3.88%		20.06%		24.60%		26.55%

Source: Annual Reports of the company (www.convergys.com)

LOG AND LOG LINEAR MODEL

Table 2:

Year	EPS (Basic)	% Change	LN(EPS)
2000	1.13		0.122
2001	0.82	-27.43%	-0.198
2002	0.9	9.76%	-0.105
2003	1.18	31.11%	0.166
2004	0.79	-33.05%	-0.236
2005	0.88	11.39%	-0.128
2006	1.2	36.36%	0.182
2007	1.26	5.00%	0.231

Source: Annual Reports of the company (www.convergys.com), Ashwath Damodaran on Investment Valuation

There are two methods of estimating the growth rate through this method.

1. Co-eff of linear regression between EPS and Time variable/ Average EPS
2. Regress ln(EPS) against the time variable.

Co-eff of linear regression between EPS and Time variable/ Average EPS = **2.75%**

While regressing the LN (EPS) against the time variable coefficient on the time variable here can be viewed as a measure of compounded percent growth in earnings per share which equaled **2.62%**.

ESTIMATING GROWTH ON THE BASIS OF WHAT RESEARCH ANALYSTS PREDICT

Convergys Corporation is followed by analysts from the following firms:

Banc of America Securities	First Analysis	Morgan Stanley	Thomas Weisel
BMO Capital Markets	Garp Research Corp.	Oppenheimer	UBS Investment Research
Breen Murray, Carret	ICAP	Raymond James	Wachovia
Citigroup	Kaufman Brothers	Robert W. Baird & Co.	Wedbush Morgan Securities
Credit Suisse	McAdams, Wright, Ragen	Stifel, Nicolaus & Co.	Zacks

I reviewed the consensus forecasts available on Thompson Reuters and www.nasdaq.com to study the expected growth rate of the company. Following were the results:

	# of estimates	Mean	High	Low	Growth Rate of Mean value vis-à-vis 2007
Revenues	18	2900.38	2849.47	2947.4	2%
EPS	18	1.33	1.35	1.28	5.56%

While, the growth rate is expected to range from 2.62% to 3.82% p.a as per the historical growth rate estimation method. Fundamental analysis of the company estimates a growth rate of 11.71%. However, we may not consider this method of estimation of future growth of the company because it does not issue any dividend and there is no forecast of any distribution of dividend. The company is assumed to grow as per the ROE or ROCE which may not be a fair estimation. Also, the company has a negative reinvestment rate in the business which may dilute the validity of this model. Hence, only the EPS and revenue growth figures from the analyst forecast were taken within the scope of study. **All forecasts suggest that the company is in a stable growth phase and is expected to grow at a rate in the range of 3% - 5% in the future ie: in the rate of long term expected inflation to GDP growth rate of the USA economy. This growth is expected to last till maturity. Not much change in the capital structure should be expected from the company as well in the future.**

It is due to the aforementioned reasoning that I would consider a 1 stage FCFE model for computation of intrinsic value of the company.

TO CALCULATE FCFE

$$FCFE = \text{Net Income} - (1 - \delta) (\text{Capex} - \text{Depreciation}) - (1 - \delta) \Delta \text{ non cash Working}$$

Table 3:

<i>To Calculate FCFE</i>	<i>Forecast</i>			<i>Historical</i>		
	2010	2009	2008	2007	2006	2005
Revenues	3345.60	3033.95	2937.59	2844.30	2789.80	2582.10
Net Income after Tax	162.68	164.92	167.19	169.50	166.20	122.60
Gross Fixed Assets	1639.34	1486.63	1439.42	1300.30	1298.90	1321.90
Amortization	22.42	20.33	19.68	14.50	12.60	21.20
Depreciation	153.28	139.00	134.59	115.40	130.10	126.10
Δ Non Cash Working Capital	126.13	114.38	110.75	216.00	62.80	38.00
Debt/ (Equity + Debt) Ratio	14.59%	14.59%	14.59%	14.59%	19.10%	24.18%
Capital Expenditure	152.71	47.21	139.12	1.40	-23.00	-7.70
FCFE	77.151	163.043	87.923			

Source: Annual Reports of the company (www.convergys.com)

Intrinsic Value = [FCFE*(1+g)]/(Ke-g)	<i>Forecast</i>
	2008
	2377.14

TO CALCUALTE VALUE OF STOCK FOR 2008

$$\text{VALUE} = [\text{FCFE} * (1 + \text{GROWTH}) / (\text{KE} - \text{GROWTH})] / \text{No. of shares}$$

Computed value of Equity for 2008 = \$19.37

Source: Annual Reports of the company 2003- 2007, Thompson Reuters

Assumptions and Formulae used in estimation of all future cash flows

1. Revenues are expected to grow @ 3.28% [GM as computed in table 1]
2. Net Income after tax has been forecasted to grow at a negative rate of - 3.32% [GM as computed in table 1]
3. Gross fixed Assets have been estimated to grow as a percentage of sales @49%
4. Amortization is estimated to grow as percentage of sales @ 0.67%
5. Depreciation is forecasted by taking the average of depreciation/ gross fixed assets @ 9.35% of gross fixed assets.
6. Non Cash working capital is estimated by taking it as an average of its percentage of sales for the period 2004-2007. Change in non cash working capital / Sales averaged @ 3.77% for the period 2005 – 2007. The variance of the same was much lesser than that as a percentage of gross fixed assets which averaged around 8.11% during the same period of study.
7. The D/V ratio of the company is along the lines of the sector. Hence, we assumed it to be constant for the future as well (Source: www.reuters.com)
8. Capital Expenditure = Gross Fixed Assets 1 - Gross fixed Assets 0
9. **The company does not have any amortization expenses on account of Research and Development Expenditure**
10. **Non Cash working capital is considered for our analysis as cash as a percentage of current assets over the period 2004 – 2007 is 17% which is reasonably high. This means that the company is holding cash.**

BASIS FOR ESTIMATING DISCOUNTING FACTOR

DISCOUNTING FACTOR = KE – G

Cost of Equity was computed using 3 methods as summarized below

	CAPM	Country Risk Premium	Competitors Beta Method
Beta	0.910	0.910	0.97
RFR	3.66%	3.66%	3.66%
RM - RFR	3.78%	4.79%	3.78%
KE	7.100%	8.02%	8.32%

Source: Thompson Reuters, Annual Reports of the company, www.finance.yahoo.com

Source: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html

METHOD FOR COMPUTATION OF COMPETITORS BETA

COMPETITORS BETA METHOD	
Amdocs Ltd.	1.02
IBM	1.08
Sykes Enterprise	1
Accenture Ltd.	0.94
APAC Customer Services Inc.	0.8
Average Levered Beta	0.97
Average Unlevered Beta	0.81
Levering Beta for Convergys	0.97

Source: Thompson Reuters

All of the above methods indicate that the KE would be in the range of 7.10% - 8.32%. **For our purposes we would chose to rely on the KE computed as per CAPM.**

VALUE OF EQUITY BY CONVERTING OPERATING ASSET VALUE TO EQUITY VALUE

FCFF = Operating Income (1 – Tax rate) – (Capex – Depreciation) – Δ Non-Cash Working Capital

This method of valuation is often preferred as we move from computing the operating activities and then add back the non operating activities to arrive at the free cash flow to firm. The FCFF values the firm from all stakeholders perspective vis-à-vis the FCFE method which is intended to value the firm from the common shareholders perspective. Also, the FCFF method is used to value companies with a changing leverage or debt – equity ratio which is the case with Convergys Corporation.

To Calculate FCFF	Forecasted	Historical		
	2008	2007	2006	2005
Revenues	2937.59	2844.30	2789.80	2582.10
Operating Income	248.23	244.80	252.90	223.60
Amortization	19.68	115.40	130.10	126.10
Depreciation	134.59	14.50	12.60	21.20
Δ Non Cash Working Capital	110.75	153.20	24.80	38.00
Capital Expenditure	139.12	1.40	-23.00	-7.70
FCFF	65.75			

	Forecast
	2008
Intrinsic Value = [FCFF*(1+g)]/(WACC-g)	1777.58

Source: Annual Reports of the company 2003- 2007, Thompson Reuters

WACC is computed by taking $K_e = 7.10\%$ and $K_d = 3.16\%$

$KD = [\text{Interest Expense 2007} / \text{Avg Interest Bearing Liabilities}] * (1-35\%)$

Marginal Tax rate = 35% as the average tax rate for the period 2004 – 2007 is approximately 31%

TO CALCULATE VALUE OF EQUITY FOR 2008

VALUE = [FCFF discounted at Cost of Capital + CASH AND MARKETABLE SECURITIES + VALUE OF MINORITY HOLDINGS + VALUE OF IDLE ASSETS – VALUE OF MINORITY INTERESTS – PRESENT VALUE OF LEASING OBLIGATION – UNFUNDED PENSION OBLIGATION – EXPECTED LITIGATION PAYOUT] / No. of shares

Computed value of Equity for 2008 = \$9.56

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	2008 F	2007	2006	2005	2004
Cash and Cash equivalents	166.14139	120.3	235.9	196	58.4
Interest Bearing Debt	346.83	259.90	343.50	432.20	351.70
Pension Obligation	204.45	215.6	214.7	202.3	185.2
PV of leases	226				
FCFF 2008F					1777.5826
Value of Equity					1,166.45
Value of Equity Stock					9.56

Source: Annual Reports of the company 2003- 2007, Thompson Reuters

Assumptions and Formulae

Same as for computation of FCFE

The company has no minority holdings and minority interests

Also, on studying the annual reports of the company I noted that these amounts were negligible and that the “results of any such claims or administrative proceedings, either individually or in the aggregate, will not have a materially adverse effect on our financial condition.”

Conclusion

The current stock price of the company is \$5.75 (www.reuters.com). The value of equity is \$19.37 as per the FCFE model and \$9.56 as per the FCFF model. While, the later is closer to the actual value, it is still 66% above the actual. This is primarily because all analysis was done based on data available upto 2007. The global financial crisis has hit the IT industry heavily in the year. On review of the consensus forecasts available on Thompson Reuters I noted that the growth rate of the company has undergone 16 downward revisions.