Dividend Discounting Model

Assignment III

November 13

2008

A company valuation is an objective search for a "true" or "fair" value. Valuing a company involves studying a set of procedures used to estimate the economic value of an owner's interest in the firm / organization. Valuation is used by market players to determine the price they are willing to pay or receive to consummate a sale. In this paper, I attempt to determine whether the Dividend Discounting Model/ The Gorden Model is a suitable method of valuation for Convergys Corporation

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A BRIEF SYNOPSIS OF THE COMPANY

Sector: Technology

Industry: IT Consulting and Services

Indicator		Indicator	
Enterprise Value	973.31m	Beta	1.9
Enterprise Value/ EBITDA Multiple	2.48	P/Sales	0.3
Net Debt	139.60m	P/BV	0.67
Enterprise Value/ Total Market Cap	1.17	P/FCF	11.94
EBITD Margin (Avg)	14.5	ROA (Avg)	6.71
Net Profit Margin (Avg)	9.23	ROI (Avg)	8.95
EPS	6.98	ROE (Avg)	11.28

VALUATION THROUGH THE DIVIDEND DISCOUNTING MODEL

Assumptions made during the study

1. The company was listed on the New York Stock exchange in 1998. Since listing it has NOT paid any dividends to the common shareholders. Hence the d0 = ZERO.

2. Dividend for the next period (d1) was estimated as follows:

   - Growth = 5.56% was calculated based on the Compounding Annual Growth Rate of EPS for the period 2006 – 2008.

   - ROE = 7.08% was computed as the average ROE of the company for the period 2006 – 2008.

   - Dividend Payout Ratio = 1- (Growth/ROE)

   - D1 = Forecasted EPS * Dividend Payout Ratio

3. Ke = Risk Free Rate + Beta(Market Returns – Risk Free Rate)

   - The Risk Free rate was computed using the average Risk Free Rate of 10 Year Treasury bonds in USA for the period 1998 – 2008

   - The Market Returns are an average of the returns for the past 10 years

   - The Beta was computed by regressing the Stock Returns minus Risk Free Returns vs. the NASDAQ returns minus the Risk Free Returns.

THE CONSTANT GROWTH MODEL TILL PERPETUITY

CONVERGYS CORPORATION		
Cost Of Equity (ke)		**4.53%**
Growth to perpetuity (g)		**5.0%[1]**
d0	0	
d1	**0.30**	
INTRINSIC VALUE		***-USD 14.9***

Cost of Equity is lesser than the current expected growth rate of the USA economy; hence the intrinsic value of the company is negative. *The constant growth model may thus not be applicable to value this company.*

Source: Annual Reports for the years ended 2003 – 2007 of Convergys Corporation Limited, www.finance.yahoo.com, Thompson Reuters

1. The US economy is assumed to grow @ 5% till perpetuity

THE TWO PHASE GROWTH MODEL

CONVERGYS CORPORATION									
Cost Of Equity (ke)[3]			**4.5%**						
Growth to perpetuity (g)			**2.0%[1]**	**FORECAST - 09-14**			**HISTORICAL DATA**		
	2014	**2013**	**2012**	**2011**	**2010**	**2009**	**2008[2]**	**2007**	**2006**
EPS	1.78	1.74	1.65	1.56	1.48	1.40	1.33	1.26	1.2
DPS	**0.99**	**0.37**	**0.35**	**0.34**	**0.32**	**0.30**	**0**	**0**	**0**
Payout Ratio	***55.85%***	21.47%	21.47%	21.47%	21.47%	21.47%	0.00%	0.00%	0.00%
ROE	4.53%	7.08%	7.08%	7.08%	7.08%	7.08%	-1.32%	11.14%	11.42%
Growth	*2.00%*	*5.56%*	*5.56%*	*5.56%*	*5.56%*	*5.56%*			
PV - TERMINAL VALUE	**USD 31.5**								
PV – HI GR	**USD 1.5**								
INTRINSIC VALUE							***USD 32.9***		

Source: Annual Reports for the years ended 2003 – 2007 of Convergys Corporation Limited, www.finance.yahoo.com, Thompson Reuters

1. Growth till perpetuity of the USA Economy is assumed to grow at the expected rate of inflation ie:2%
2. EPS for 2008 is estimated based on TTM figures and industry estimates
3. In the long run ROE is assumed to be equal to Ke as the company is expected to compete in a perfectly competitive environment at perpetuity.

THE THREE PHASE GROWTH MODEL:

CONVERGYS CORPORATION									
Ke[5]	4.48%	4.5%	4.51%		4.53%[4]				
G[1]	2%			FORECAST - 09-14			HISTORICAL DATA		
	2014	**2013**	**2012**	**2011**	**2010**	**2009**	**2008[2]**	**2007**	**2006**
EPS	1.71	1.68	1.63	1.56	1.48	1.40	1.33	1.26	1.2
DPS	**0.96**	**0.74**	**0.51**	**0.34**	**0.32**	**0.30**	**0**	**0**	**0**
Payout Ratio	***55.85%***	44.24%	31.30%	21.47%	21.47%	21.47%	0.00%	0.00%	0.00%
ROE[3]	4.48%	5.38%	6.23%	7.08%	7.08%	7.08%	-1.32%	11.14%	11.42%
Growth	*2.00%*	*3.00%*	*4.28%*	*5.56%*	*5.56%*	*5.56%*			
PV – TERMINAL VALUE + TRANSITION PHASE + GROWTH PHASE			**USD 31.54**						
INTRINSIC VALUE							***USD 31.54***		

Source: Annual Reports for the years ended 2003 – 2007 of Convergys Corporation Limited, www.finance.yahoo.com, Thompson Reuters

1. Growth till perpetuity of the USA Economy is assumed to grow at the expected rate of inflation ie:2%
2. EPS for 2008 is estimated based on TTM figures and industry estimates
3. In the long run ROE is assumed to be equal to Ke as the company is expected to compete in a perfectly competitive environment at perpetuity.
4. Beta for the growth phase is the actual beta of the company based on last ten years returns (1998 – 2008) = 0.68
5. Beta for the year 2012 = 0.80, for 2013 = 0.85 and for 2014 = 0.95. Underlying assumption is that beta approaches 1 towards perpetuity. Even competitors such as IBM have a beta = 1.09

Conclusion:

Neither of the Dividend Discount models is able to capture the true price of Convergys Corporation. The current price of the stock is $6.93 where as the valuation as per the two stage model is $32.9 and that as per the three stage model is $31.54.

This means that the market values the company on a model other than the Gorden Model. Both of the above methods significantly over value the stock price of the company.

WHY THE MODEL MAY NOT BE APPLICABLE TO VALUE CONVERGYS CORPORATION?

1. The Gordon Model is usually preferred to value companies that distribute dividends to the common shareholders. Convergys Corporation has not distributed dividends since its listing on the New York Stock Exchange in 1998. Convergys does not have a well established dividend payout policy.

2. Even for dividend paying firms, the model may be difficult to apply. This is because the future dividends are extracted based on past records, which may not be a true reflection of the actual scenario.

3. The model is used for companies that have a Beta of 0.8 – 1.2. The Beta of the company using the stock returns for the period 1998 – 2008 is 0.68.

4. The constant growth dividend discounting model does not apply in this scenario because Cost of Equity is lesser than the current expected growth rate of the USA economy; hence the intrinsic value of the company is negative.

5. Also, while valuing the company through a two step model, the intrinsic value is equal to USD 32.9 where as the market price as on November 12, 2008 is $6.93. The variations may be on account of certain assumptions made to calculate future dividend and growth rates as mention on page one of the paper.

6. For the DDM model to apply for valuing a company, it must have a steady debt – equity ratio. We noted, however, that the debt – equity ratio has ranged from 0.45 in 2004 to 0.17 in 2007.

7. The industry to which the company belongs ie: IT consulting and Services prefer to hold cash for growth purposes instead of offering the same as dividends to shareholders. I studied the financial statements of 5 competitors and noted that only IBM and Accenture limited have distributed dividends.

RECOMMENDED TECHNIQUES OF VALUING CONVERGYS CORPORATION

RELATIVE VALUATION/ PRICE TO BOOK VALUE METHOD:

Since Convergys is a mature company we use the Price to Book Value Method of valuing the company. It is expected to earn reasonably constant returns in. Here, we multiply the Book Value of the company with the average Price to Book Value of its competitors.

Table 1: Price to book value ratio of competitors

IBM	Amdocs	APAC	Accenture Ltd.	Sykes Enterprise Incorporated	*Average*
4.21	1.47	2.5	8.98	1.81	***3.794***

(Source:http://www.convergys.com/pdf/investor/annual_report_2007.pdf, http://www.reuters.com/finance/stocks/ratios?symbol=IBM.N, http://www.reuters.com/finance/stocks/ratios?symbol=DXO.N, http://www.reuters.com/finance/stocks/ratios?symbol=APAC.N, http://www.reuters.com/finance/stocks/ratios?symbol=ACAN.N,

http://www.reuters.com/finance/stocks/ ratios?symbol=SYKES.P)

Value of the firm as per the price to book value model = 3.794*$1,521 Million.

Compare to the current price of the company ie: $6.93, the stock is overvalued by approximately 82%. This may result in further downside movement in the stock.

Value as per P/BV model = ***$5,770 Million or $5.77 Billion***

Actual P/BV = 0.67

Value of firm using actual P/BV = 0.67*$1,521 Million = ***$1,109 Million or $1.109 Billion***

Using the Price to Book Value method may over value the stock of the company. This method is far more likely to provide an accurate reflection of market volatility and perceptions as compared to the discounted cash flow method. The relative valuation technique generally requires less information as compared to other methods.

LIDUIDATION MODEL THROUGH BOOK VALUE APPROACH

Convergys has not distributed dividends since listing itself on NYSE in 1998. Having analyzed the financial statements of the company, it was noted that it is a cash rich company.

The company has limited Capital Expenditure to the extent of 14.12% only in 2007.

The goodwill accounts for 34% of the balance sheet and cash & cash equivalents 24% of the balance sheet. All of the above indicate that the company can be valued using a book value approach.

Net worth as per year ended 2007 = ***$1,521 Million.***

(Source:http://www.convergys.com/pdf/investor/annual_report_2004.pdf, http://www.convergys.com/pdf/investor/annual_report_2005.pdf, http://www.convergys.com/pdf/investor/annual_report_2006.pdf, http://www.convergys.com/pdf/investor/annual_report_2007.pdf)

The aforementioned figure indicates that in an exit scenario the common shareholders would realize $ 1.5 Billion.