The cost of equity of the firm has been found out by using the CAPM method taking help of the following formulae:

Beta	1.7
Market Risk Premium	0.07
Rf	0.08
Ke	0.199

KE = RFR + Beta*(RM-RFR)

Next we need to find out the growth rate for Virat industries.

ESTIMATING THE GROWTH RATE OF VIRAT INDUSTRIES THROUGH HISTORICAL DATA

Estimating future growth rate based on historical earnings and revenue may be particularly usefully for valuing companies in a stable growth phase. We may note at this juncture, that, while historical growth may not always be a good indicator for predicting the future, it does reveal and convey important information for the future. There are primarily three methods for valuing growth of a company based on past data:

1. Arithmetic Growth rates based on past revenues or Earnings per Share
2. Geometric Average Growth rates based on past revenues or Earnings per Share
3. The Linear and log Linear Model
4. Time Series models such as Box-Jenkins model using quarterly returns

Note: The time series models of estimating future growth rate by using past quarterly returns is used to value companies in the super normal growth stage. Virat Industries, however, is a company in the stable growth rate stage and hence, we chose to leave this model out of the scope of this paper. We are also leaving the log linear model of calculating growth rate.

The following calculations have been done for the company to find out its growth rate.

Historical growth						
	2009 E	**2008 E**	**2007**	**2006**	**2005**	**2004**
Sales	**16.29198302**	**12.32238945**	9.32	8.03	5.29	3.05
Sales growth	32.21%	32.21%	16.06%	51.80%	73.44%	
Sales Growth(AM)			**47.10%**			

Sales Growth(GM)			**32.21%**			
PAT	**1.773675041**	**1.409438202**	1.12	0.89	0.36	-0.28
PAT growth	25.84%	25.84%	25.84%	147.22%	-228.57%	
PAT Growth(AM)			**-18.50%**			
PAT Growth(GM)			**41.42%**			
PAT margin			12.02%	11.08%	6.81%	-9.18%
ROE			22.76%	18.09%	11.18%	
NW			4.92	4.92	4.92	4.92
PAT/NW			22.76%	18.09%	7.32%	-5.69%

Assumptions:

1.The growth has been forecasted based on the CAGR of the past Sales and past PAT. We can observe that the growth of the firm using the CAGR method is more accurate both in the case of PAT and Sales growth and is similar to each other.

2.While the growth rate as indicated by both methods of estimation under this method are quite close, they would be expected to vary significantly with an increase in the volatility of earnings. However, the company under study, Virat industries is in a stable growth stage and hence, these figures are expected to remain similar.

3. But we cannot take these growth rates since the Cost of Equity as calculated above is 0.199 or 19.9%. The growth rate of a company cannot exceed its cost of Equity since in such a scenario, the shareholders expectations will increase to an extent where the cost of equity will also increase and finally the growth will have to stabilise to be less than the cost of equity.

Thus we will assume that the company grows at a rate less than its cost of equity at 15%.

METHODS OF VALUATION:

1.DIVIDEND DISCOUNTING MODEL:

VIRAT Industries Financials:

- **EPS for 2007= 2.28**
- **Ke= 20%** (*calculated using CAPM model)*
- **Growth rate = 15%** (*Assumed*)

Constant Growth Model:

Intrinsic Value of Stock = EPS*(1+ Growth rate)/(Cost of Equity-Growth rate)

=52.44

- This method is best suited for firms experiencing long-term stable growth . Generally, stable firms are assumed to grow at the rate equal to the long-term nominal growth rate of the economy (inflation plus real growth in GDP).
- Finally, the dividend discount model generally understates the intrinsic value of the firm. Important considerations such as the value of patents, brand name, and other intangible assets should be used in tandem with the DDM to assess the value of a firm's equity. These intangibles should be added to the result of a DDM calculation to arrive at a more appropriate valuation.

2. FCFF and FCFE METHOD

The FCFE method is used in the following cases:

1. The dividend payout ratio is stable

2. The D/E ratio is small and stable

3. The company is a growth company

We will use the FCFF method to value this company since its DE ratio is not so stable over the years as shown under:

	2007	2006	2005	2004
D/E Ratio	0.93	1.55	2.32	2.62

The FCFF method can be defined by the following formulae:

FCFF=Operating Income*(1-Tax Rate)-(Capex-Dep)-Change in Non Cash WC

The FCFF has been calculated for Virat industries for the years starting from 2005 and have been projected for the year 2008. The results are shown as under:

	2008 E	2007	2006	2005	
FCFF	1.03	3.77	1.36	1.05	

To find out the intrinsic value per share, the FCFF has to be divided by the number of equity shares.

Intrinsic Value = FCFF * (1+Growth)/ (Ke-Growth)

Assumptions:

1. The Effective tax rate has been taken as tax payable/ Taxable Income or EBIT
2. Current year's depreciation has been taken

The advantage of using both FCFF and the FCFE method is that they consider free cash flow as against EPS and they focus outward on key business drivers rather than inward on budget variances.

The Free Cash flow to Cash method is better suited to value companies in the high growth or even growth stage. This method intends to value the firm from all stake holders point of view rather than just equity share holders. In a high growth or even a growth stage, the companies may earn minimal returns which may sometime even be negative. Very little of what the company would actually earn would trickle down to the bottom-line, thus resulting in lesser payouts to the shareholders. Also, those companies with a high variance in the debt – equity ratio are better suited to be valued under the FCFF method as leverage generally increases the growth rate of the firm in the FCFE method, relative to the FCFF method.