

WACC Computations

- Pioneer Distilleries Limited is a small sized company with near zero institutional shareholding including Foreign Institutional Investors (FIIs). So, Pioneer is largely owned by retail investors (apart from promoters) and so is traded by them. Hence, we decided to take our market portfolio as CNX500.
- **Beta based on 1 Yr Daily Stock Prices:** Computation of Beta for Pioneer Distilleries based on the daily stock prices of the company compared to daily prices at CNX500.
 - Share Prices and CNX500 Index for Pioneer Distilleries for 1 year (07/12/2006 to 07/12/2007) period is taken.
 - The gains on Share price and CNX5000 is calculated using continuous compounding formula ($\ln(P1/P0)$)
 - Slope of the returns of the stock with the index is calculated to give Beta=0.506
- **Beta based on 5 Yrs Weekly Stock Prices:** Similar Computation of Beta for Pioneer Distilleries based on the weekly stock prices of the company compared to weekly prices at CNX500 for a period of last 5 years. Beta=0.606

Comments on Beta: There is no significant difference in the beta calculated for 1 year and 5 year. We choose weekly Beta- because daily trading volume is very less and the price fluctuations are not very significant. Also, in case of a stock having no / low trading, most databases take the previous days stock price resulting in zero percent change for the stock (vis-a-vis some change for the market portfolio).

Cost of Equity:

1) CAPM

- $R_m = 14.5\%$
- $R_f = 7.88\%$
- Beta=0.506 (For 1 Year) and Beta=0.606 (For 5 Year)
- Using the formula $K_e = R_f + \text{Beta} * (R_m - R_f)$
- Cost Of Equity Based on 5 Year Beta=11.89 %

2) Dividend discount Model

$$K_e = D_1 / P_0 + g \text{ where } D_1 = D_0(1+g)$$

$$D_0 = 1.93, P_0 = 99.5. \text{ Growth } = 7.34\% \text{ in the constant growth phase. So } D_1 = 1.93 * (1 + 7.34\%) = 2.07.$$

$$K_e = 9.42\%$$

Comments: We will reject both the methods as **Dividend discount Model** is theoretically poor and the beta values regressions resulting in the R square of stock vs index being very low. (In other words the regressions for computing stock beta were not statistically stable). We make use of the beta values of one of its competitors

Readers Resource/ Corporate Finance/ Ross, Westerfield, Jaffe & Kakani/ 8th Edition/ Special Indian Edition/ McGraw Hill /2009 *Chapter 12 Pioneer Distilleries Limited*

known as Tilaknagar Industries (alcohol manufacturer with distillery unit located in Maharashtra, same state). Beta value of Tilaknagar comes to 1.4. Hence, cost of equity would be

$$K_e = 7.88 + [1.4 \times (14.5 - 7.88)] = 17.12\%$$

Cost of Debt:

1) Using Credit Rating :

Cost of Debt is based on the Credit rating for the company. The credit rating data is neither available for the company nor for its competitors.

2) Financial Ratios.

$$\text{Interest Coverage Ratio} = (\text{PBIT} + \text{lease}) / (\text{Interest} + \text{lease}) = 11.93 / 1.87 = 6.38$$

From the tables available at websites such as CRISIL.com, for Interest coverage ratio 6.00-7.50 the typical default spread=0.85

$$\text{Hence cost of debt} = K_d = 8\% + 0.85\% = 8.85\% \text{ (Assuming 10 year treasury rate in India)}$$

3) From Balance Sheet = Total Interest / Debt attracting interest = 18610046/195867940 = 9.5%

Tax Calculation

| Year | 2007 | 2006 |
|---------------|--------|--------|
| PBT | 7.31 | 1.66 |
| Tax provision | 2.03 | 0.31 |
| Tax Rate | 27.77% | 18.67% |

We take a marginal tax rate of 30% for this company (given that the company is a agriculture sector company in a backward area with expansion plans leading to tax benefits).

Using the K_e from dividend model and K_d from financial ratios we arrive at a WACC value .

Weighted Average Cost Of Capital (WACC):

$$WACC = K_e \times (E/V) + K_d \times (D/V) (1-t)$$

| WACC using 5 Year Beta | |
|--|---------------|
| Equity (in mn Rs) ¹ | 1,111.53 |
| Debt (sec loans + Unsec loans) (in mn Rs) ² | 501.2 |
| Total (V) (Millions Rs) | 1,612.73 |
| $K_e \times (E/V)$ | 11.81% |
| $K_d (D/V)(1-t)$ | 1.92% |
| WACC | 13.73% |

Sources:

- Bloomberg
- ISI Securities

¹ Making use of the market value of equity = MP per share X number of equity shares

² Assuming MVD and BVD to be equal