



economic  
value added

Building a lean and operationally efficient business that delivers profitable growth.

# Economic Value Added

GCPL is an Economic Value Added (EVA) Company. EVA, developed by Stern Stewart and Company, is a measure of corporate value creation. This measure tells us whether the management of a company generates returns that cover the opportunity cost of scarce capital. EVA improves if :

- Operating profits grow without employing more capital, implying greater efficiencies
- Additional capital is invested in projects that return more than the cost of capital
- Capital is curtailed in activities that do not cover its costs – minimising or eliminating unproductive capital.

EVA is the excess of operating profits over the cost of capital employed. It is calculated as :

$$\text{EVA} = \text{NOPAT} - (\text{WACC} \times \text{CE})$$

Where NOPAT = Net Operating Profit After Taxes

WACC = Weighted Average Cost of Capital

CE = Total Capital Employed

NOPAT is equal to Profit Before Tax (PBT) plus interest payments minus cash operating tax. Table 1 gives the detailed calculations of NOPAT for GCPL.

**Table 1 : Calculation of NOPAT**

**Rs. crore**

|   | 2003-04     | 2002-03     |
|---|-------------|-------------|
| Profit Before Tax (PBT)                       | 76.6        | 70.1        |
| Add : Interest (incl. forex fluctuation)      | (0.5)       | 0.9         |
| Net Operating Profit Before Tax               | 76.1        | 71.0        |
| Less : Cash operating tax on PBT              | 8.8         | 14.4        |
| Less : Cash operating tax on Interest         | (0.2)       | 0.4         |
| <b>Net Operating Profit After Tax (NOPAT)</b> | <b>67.5</b> | <b>56.2</b> |

To calculate the WACC for a company, we need to calculate the cost of equity and the cost of debt. Market, as a whole, would demand an extra income to invest in risky, non-contractual residual claims to corporate cash flow. This is the market premium ( $p$ ). Company specific risks over and above the market risk premium, measuring the volatility of the Company's stock relative to the market average, is captured by the leveraged beta ( $\beta$ ), which is the ratio of the coefficient of variation of a Company's stock prices compared to the market as a whole. The cost of equity, which is the risk free return ( $r$ ) plus a company premium ( $p \times \beta$ ) is weighted by the ratio of equity to market value ( $e$ ) to get the weighted cost of equity.

Multiplying the pretax cost of borrowing ( $I$ ) with the retention rate ( $1$ -tax rate) gives tax-adjusted cost of debt. This is then weighted by the ratio of debt to market value ( $d$ ) to arrive at the weighted cost of debt. By adding the weighted cost of equity and the weighted cost of debt, we get WACC. Table 2 gives the calculation of WACC for GCPL. The WACC for 2003-04 was set at the beginning of the year.

Table 2 : Calculation of WACC

|  | 2003-04            | 2002-03            |
|--|--------------------|--------------------|
| Leverage beta ( $\beta$ )  | 0.63               | 0.63               |
| Market risk premium (P)  | 10%                | 10%                |
| Equity risk premium ( $P \times \beta$ )                           | 6.3%               | 6.3%               |
| Risk free return (r)   | 7.1%               | 9.3%               |
| Cost of equity $\{r + (P \times \beta)\}$                          | 13.4%              | 15.6%              |
| Equity/market value (e)  | 0.96               | 0.96               |
| <b>Wt. Cost of equity <math>[\{r + (P \times \beta)\}e]</math></b> | <b>12.9%</b>       | <b>15.0%</b>       |
| Pretax cost of borrowing (I)                                       | 9%                 | 10%                |
| Retention rate (1-taxrate)   | 64.1%              | 64.3%              |
| Debt/market value (d)  | 0.04               | 0.04               |
| <b>Wt. Cost of debt <math>\{I (1 - \text{taxrate})d\}</math></b>   | <b>0.2%</b>        | <b>0.3%</b>        |
| <b>WACC</b>  | <b>13.1% (14%)</b> | <b>15.3% (16%)</b> |

GCPL's average capital employed for 2003-04 is Rs. 98.3 crore (Rs. 90.4 crore for 2002-03). Given a WACC of 14% (16% for 2002-03) this translates into Rs. 13.8 crore (Rs. 14.5 crore for 2001-02) cost of capital employed.

$EVA = NOPAT - [\{I(1 - \text{tax rate})d\} + \{(r + p\beta)e\}] \times \text{capital employed.}$

Table 3 : EVA

Rs. crore

|                       | 2003-04 | 2002-03 |
|-----------------------|---------|---------|
| NOPAT                 | 67.5    | 56.2    |
| Less : Capital Charge | 13.8    | 14.5    |
| EVA                   | 53.7    | 41.7    |