

## Earning Trust



# 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**

|   | 2002-03     | 2001-02 |
|---|-------------|---------|
| Profit Before Tax (PBT)                       | 70.1        | 63.2    |
| Interest                                      | 0.9         | 2.5     |
| Net Operating Profit Before Tax               | 71.0        | 65.7    |
| Cash operating tax on PBT                     | 14.4        | 15.4    |
| Cash operating tax on interest                | 0.4         | 0.9     |
| <b>Net Operating Profit After Tax (NOPAT)</b> | <b>56.2</b> | 49.4    |

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 2002-03 was set at the beginning of the year.

**Table 2 : Calculation of WACC**

|  | 2002-03            | 2001-02     |
|--|--------------------|-------------|
| Leverage beta ( $\beta$ )  | <b>0.63</b>        | 0.63        |
| Market risk premium (P)  | <b>10%</b>         | 10%         |
| Equity risk premium ( $P \times \beta$ )                                   | <b>6.3%</b>        | 6.3%        |
| Risk free return (r)   | <b>9.3%</b>        | 11.5%       |
| Cost of equity $\{r + (P \times \beta)\}$                                  | <b>15.6%</b>       | 17.8%       |
| Equity/market value (e)  | <b>0.96</b>        | 0.96        |
| <b>Wt. Cost of equity <math>\{[r + (P \times \beta)] \times e\}</math></b> | <b>15.0%</b>       | 17.1%       |
| Pretax cost of borrowing (I)   | <b>10%</b>         | 14%         |
| Retention rate (1-tax rate)  | <b>64.3%</b>       | 65%         |
| Debt/market value (d)  | <b>0.04</b>        | 0.04        |
| Wt. Cost of debt $\{I(1-t)d\}$   | <b>0.3%</b>        | 0.4%        |
| <b>WACC</b>  | <b>15.3% (16%)</b> | 17.5% (18%) |

GCPL's average capital employed for 2002-03 is Rs. 90.4 crore (Rs.107.1 crore for 2001-02). Given a WACC of 16% (18% for 2001-02) this translates into Rs. 14.5 crore (Rs.19.3 crore for 2001-02) cost of capital employed.

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

**Table 3 : EVA**

**Rs. crore**

|                | 2002-03     | 2001-02 |
|----------------|-------------|---------|
| NOPAT          | <b>56.2</b> | 49.4    |
| Capital Charge | <b>14.5</b> | 19.3    |
| EVA            | <b>41.7</b> | 30.1    |