c. The ratio of **net tangible assets to long-term debt** is a more conservative measure. The numerator consists of only those assets that can be readily converted to cash to satisfy creditors in the event of liquidation.

1) $$\frac{\text{Total assets} - \text{Prepaid expenses} - \text{Intangible assets} - \text{Total liabilities} - \text{Par value of preferred stock}}{\text{Long-term debt}}$$

a) EXAMPLE:

$$\text{Current Year} = \frac{\$1{,}800{,}000 - \$10{,}000 - \$5{,}000 - (\$390{,}000 + \$610{,}000) - \$120{,}000}{\$610{,}000}$$

$$= \frac{\$665{,}000}{\$610{,}000} = 1.090$$

$$\text{Prior Year} = \frac{\$1{,}600{,}000 - \$5{,}000 - \$5{,}000 - (\$275{,}000 + \$675{,}000) - \$0}{\$675{,}000}$$

$$= \frac{\$640{,}000}{\$675{,}000} = 0.948$$

b) The ratio has increased from less than 1.0 to greater than 1.0. Thus, the firm's long-term creditors can feel more comfortable that, in the current year, tangible assets are sufficient to pay them in the case of liquidation.

2) A high ratio assures creditors of the firm's solvency.

3) This conservative ratio is based on two assumptions:

a) Intangible assets are more difficult to liquidate than tangible assets.

b) The firm's tangible assets (including net working capital) can be disposed of at their carrying amounts.

d. The ratio of **total liabilities to net tangible assets** measures the security provided to all creditors, not just long-term, by the firm's more readily realizable assets.

1) $$\frac{\text{Total liabilities}}{\text{Total assets} - \text{Prepaid expenses} - \text{Intangible assets} - \text{Total liabilities} - \text{Par value of preferred stock}}$$

a) EXAMPLE:

$$\text{Current Year} = \frac{\$390{,}000 + \$610{,}000}{\$1{,}800{,}000 - \$10{,}000 - \$5{,}000 - (\$390{,}000 + \$610{,}000) - \$120{,}000}$$

$$= \frac{\$1{,}000{,}000}{\$665{,}000} = 1.504$$

$$\text{Prior Year} = \frac{\$275{,}000 + \$675{,}000}{\$1{,}600{,}000 - \$5{,}000 - \$5{,}000 - (\$275{,}000 + \$675{,}000) - \$0}$$

$$= \frac{\$950{,}000}{\$640{,}000} = 1.484$$

b) The higher ratio indicates that the company has lost some ground with with respect to covering all its debts with net tangible assets.

2) This ratio yields a still more conservative assessment of debt-paying ability when the carrying amounts of tangible assets are understated.