



## Leverage Ratios

When analyzing a company it's extremely important to measure the amount of debt and the cost of capital. High debt equates to high interest payments. This is a fixed cost which reduces the amount of profit made during upswings in the company's business cycle and increases losses during downswings. While debt can be used to boost growth and business expansions, you should be wary of companies with too much debt since fixed costs deflate company profits long term. You need to look for low amounts of debt in comparison to their total capitalization, specifically under twenty percent. You can also use the weighted average cost of capital to estimate the cost of the firm's financing, including the cost of the firm's long term debt.

### Debt to Equity

The debt to equity ratio measures the proportion that assets are funded by debt or by equity investment, or shareholder's funds. This measure can indicate future problems with a company's stability, and solvency.

$$\text{Debt To Equity} = \text{Total Liabilities} / \text{Total Shareholder's Equity}$$

Debt allows firms to boost the asset base without diluting shareholder control or revenues. The return on assets increase generates profit, the debt generates interest costs. If the return on assets exceeds interest profit from debt financing will exceed the interest cost. If a business is doing well, debt can increase profits for shareholders. During upswings in business, there is a high chance of return on assets exceeding interest. During business downturns there is a low chance of return on assets exceeding interest. This means that interest costs exceed profits from using debt, and earnings leave the business as interest payments. Debt boosts earnings during upswings and lowers earnings during downswings.

If debt to equity is high, the firm will generate greater profit per shareholder during the firm's business cycle upswings. The interest payments eat a higher percentage of low profits if the trend goes sour. If debt to equity is low, the firm will not be using debt to boost profits during upswings, but will easily meet interest payments, if they exist, during downturns. The key to debt as a boost to return on assets is in moderation. A firm's debt level should be in between the two measures, enough debt to comfortably boost profits, but not enough to sink the firm during market downswings.

Debt to equity should only be compared to other firms in context of industry or competitors. Some industries require high capital investments into assets. These firms require heavy outlays into plant, property, and equipment. Manufacturing and Airlines are examples. These firms will typically have higher debt to equity levels. Other firms, like internet or service companies, do not require heavy capital investments into plant, property, and equipment. These firms will typically have low debt to equity levels. The comparison of debt to equity should only be made amongst firms in the same industry, but typically it is better to accept a moderate or low debt to equity than a higher level.

### Financial Leverage Ratio

This ratio compares assets with equity, and is a modification of the Debt to Equity Ratio.

$$\text{Financial Leverage Ratio} = \text{Total Assets} / \text{Total Equity}$$

This ratio compares assets with equity, and is a modification of the Debt to Equity Ratio. If assets are equal to equity, the ratio has an output of one, which is the lowest it can go. This means the company is paying for all of its assets with shareholder investments and has no debt. If the ratio is higher than one, this means that the firm has more assets than equity. Since assets can only be paid for with debt or equity, the firm must be using debt to pay for assets. The higher

the ratio, the more assets the firm is purchasing without using equity and the more debt is being employed to purchase assets. This is riskier than using lower amounts of debt. The leverage ratio allowable for firms changes from industry to industry. For certain firms, such as banking, high leverage ratios are allowable since their collateral is extremely liquid and returns on assets are typically high. For other firms, which have to manufacture inventory or grow produce, there is low liquidity in their returns.

If a firm earns higher return than the interest rates of its debt it can use debt to finance its activities. This is risky. If the firm hits a downturn its rate of debt will exceed the profits and the firm will have to pay out of its retained earnings or equity. This will continue until performance of the firm improves or the firm goes bankrupt. You will need to ensure that the rate of return on assets exceeds the interest rates the firm is charged for its debts.

### **Interest Coverage**

The interest coverage is the total amount of times a company or firm could pay its interest expense with its earnings.

$$\text{Interest Coverage} = \text{Operating Profit} / \text{Annual Interest Charges}$$

The higher this number is, the farther the company is from defaulting on debts. Interest Coverage will be higher with the firm's debt, and it will be harder for a company to make its interest payments. This essentially indicates if a company can make its debt payments. If calculating this metric, calculate it for several years to determine if the number is rising or falling. If Interest Coverage is falling the company is becoming riskier, if rising, the firm is becoming safer.

### **Dividend Cover**

The Dividend Cover displays the amount of times Earnings per Share exceeds Dividends per Share.

$$\text{Dividend Cover} = \text{Earnings Per Share} / \text{Dividends Per Share}$$

Generally, you want Earnings per Share to be triple of Dividends per Share. The higher this number is the safer for the company. A higher Dividend Cover also means the firm is focusing more on retained earnings and reinvestment than it is on paying dividends. It can also mean the dividends are too low for an investor seeking income through dividends and the company can afford to pay more. If the number for dividend cover is equal to 1, all earnings are being used to pay dividends, which is generally unwise. If the number is less than 1, the firm is using previous years of retained earnings to pay dividends. This means the firm is writing down its retained earnings in favor of paying dividends to you, which is not advisable. A firm generally should pay fewer dividends if the dividend cover is less than 2, or would be, and should stop paying at all as the number approaches 1.