

## ANALYZING DEBT RATIOS

Companies report the generation and use of cash from three basic activities: cash from operations, selling assets and investments, and the financing sources of issuing new shares and taking on debt. Most companies use a combination of the three, sometimes relying more heavily on one type over another as they move from growth and expansion to a more mature company. This column focuses on the use of borrowed funds. Knowing the debt level of a company can help you more fully understand how the company structures its finances and whether it can continue to operate.

When used properly, debt can allow a company to earn a higher level of profits for a given level of owner equity. However, interest on debt must be paid whether or not a company is profitable, so too much debt may force a company into bankruptcy if cash flow dries up. In addition, the market's appetite for debt can change over time, making it more difficult and expensive to borrow.

### Defining the Ratios

Debt ratios fall under the realm of measuring and understanding financial risk. Financial risk ratios examine a company's ability to meet all liability obligations and the impact of these liabilities on the balance sheet. Debt ratios help you gauge if a company can meet future financial obligations such as interest and debt payments.

Table 1 shows the formulas for each of the ratios discussed below. These debt ratios will give you similar information about a company's

**Table 1. Debt Ratios**

Ratio	Formula
Debt to Assets	$\text{total liabilities} \div \text{total assets}$
Debt to Equity	$\text{long-term debt} \div \text{total shareholder's equity}$
Debt to Total Capital	$\text{long-term debt} \div (\text{long-term debt} + \text{shareholder's equity})$
Interest Coverage	$\text{earnings before interest and taxes} \div \text{interest expense}$

financial health. All but one of the ratios use debt in the numerator but they use various other factors in the denominator, giving you a slightly different picture. In the end, the debt ratios should point to the same conclusion.

### Debt Ratio

The debt ratio is also called the debt (or liabilities)-to-assets ratio. This measures a company's use of leverage: It tells you the percentage of debt used to finance assets. Assets can include both tangible (property, plant and equipment) and intangible (patents and trademarks) resources. On the liability side, this ratio normally includes both short- and long-term debt. The formula is total liabilities divided by total assets.

A lower debt ratio indicates that a company relies less on borrowing as compared to equity for financing its assets. Generally, the lower the debt-to-assets ratio the better, but acceptable levels will vary across industries and companies. Larger, stable and more established companies can take on more debt without adding too much risk for investors. The more predictable and stable the cash flow, the easier and cheaper it is for firms to borrow. Companies in more volatile industries (like technology) may have a harder time adding debt if times get rocky.

### Debt to Equity

This ratio measures leverage by comparing long-term debt directly to shareholder's equity. The formula is total long-term debt divided by total shareholder's equity.

This ratio is similar to the debt ratio but it normally eliminates the use of short-term (operational) liabilities that companies use to fund day-to-day operations. Some analysts and investors

believe this is a more accurate reading of a company's financial position, as it does not count items such as accounts payable in the calculation of debt. A smaller number means a company is less reliant on debt as compared to equity.

Generally, a smaller number also translates to less risk; this is because more debt means more interest payments and more outstanding loans that must be paid. On the other hand, shareholder's equity carries no guarantee of income to investors. Again, acceptable numbers will vary across industries and companies.

### Debt to Total Capital

For this ratio, long-term debt is compared to a firm's capital structure. Capital structure refers to all sources of long-term financing (long-term debt and stockholder's equity). The formula is long-term debt divided by long-term debt plus shareholder's equity. This ratio measures the amount of debt compared to all financing.

A higher ratio indicates higher risk due to higher levels of debt. However, a low level may not be an indication of low risk if current liabilities are high.

### Interest Coverage

The interest coverage ratio, also called times interest earned, measures a company's ability to pay interest on its outstanding debt. The formula is earnings before interest and taxes divided by interest expense for the same period. Because interest on debt must be paid, regardless of cash flow, a higher number indicates a healthy firm.

A ratio below 1.0 indicates that the company is not generating enough earnings to pay its interest obligations.

Creditors look at this ratio to gauge the likelihood of payment if the company runs into financial trouble. Bond investors can also look at this ratio to judge how risky the debt might be. It is also an important

**Table 2. Examples of Debt Ratios Over Time**

Company (Exch: Ticker)	Price (\$)	Debt to Assets			Debt to Equity			Debt to Total Capital			Times Interest Earned		
		Q1 (%)	2009 (%)	2008 (%)	Q1 (%)	2009 (%)	2008 (%)	Q1 (%)	2009 (%)	2008 (%)	12 Mo (X)	2009 (X)	2008 (X)
Starbucks Corp. (N: SBUX)	25.98	0.45	0.45	0.56	16.4	18.0	22.1	14.1	15.3	18.1	25.2	15.3	9.6
McDonald's Corp. (N: MCD)	70.59	0.54	0.54	0.53	75.2	75.2	76.1	42.9	42.9	43.2	14.7	14.4	12.5
Restaurant industry	—	0.65	0.64	0.61	34.9	41.0	42.3	35.5	36.6	33.2	2.8	2.4	1.5

Exchange Key: N = New York Stock Exchange.  
Source: AAI's Stock Investor Pro/Thomson Reuters. Data as of 4/30/2010.

number for shareholders because a low number can mean that a company may not be able to pay its interest and may default on a loan. If this happens, the company may be forced to sell assets or businesses or to file for bankruptcy (at which point, the common equity of the company will be wiped out). Each of these issues will affect a company's share price.

### Interpreting the Ratios

As with most financial ratios, it is important to see how a company's ratios compare to competitors and the industry as a whole. Ratios will vary widely among industries, so it is only meaningful to compare companies in similar lines of business. For example, capital intensive industries (i.e., manufacturing) will have more debt and higher ratios than companies in the software industry. When looking at ratios, it is also important to see how they have changed over time.

Using data from AAI's fundamental stock screening and research database program, *Stock Investor Pro*, we can evaluate the debt ratios of two companies in the restaurant industry: McDonald's and Starbucks. Table 2 lists the debt ratios for the two companies as well as the restaurant industry. You can also find debt and leverage ratios at Yahoo! Finance and at Morningstar.com.

The debt-to-assets, debt-to-equity and debt-to-total-capital ratios are

calculated from the balance sheet and represent a snapshot of the company at a point in time. Times interest earned is calculated from the income statement and measures financial strength over a period of time.

Table 2 shows that Starbucks has an improving (declining) debt ratio (labeled debt to assets). McDonald's ratio has pretty much remained the same. Both companies have ratios below the industry ratio, a good sign.

Moving to the debt-to-equity ratios, Starbucks' ratio is improving (declining) and is much lower than both McDonald's and the industry ratio. In 2008, Starbucks had a debt-to-equity ratio of 22.1 and in 2009 it fell to 18.0. The ratio for McDonald's has hovered around 75, while the industry average was 41 at the time.

McDonald's is a large company (\$75 billion in market cap and \$23.3 billion in sales over the last 12 months versus Starbucks' market cap of \$19 billion and \$10.1 billion in sales) and has over \$33 billion in property plant and equipment. Starbucks has just over \$2 billion in property plant and equipment. The difference in capital requirements can explain some of the differences in the ratios, but you can conclude that McDonald's relies more heavily on long-term debt than Starbucks. This is evident in recent financial statements. In 2009, McDonald's had \$10 billion in long-term debt and about \$3 billion in current liabilities. Star-

bucks had about \$1 billion in long-term debt and \$1.5 billion in current liabilities.

The debt-to-total-capital ratios tell a similar story. Starbucks has a much lower ratio than McDonald's as well as the industry on average. You can also see more improvement in this ratio for Starbucks (18.1 in 2008 to 15.3 in 2009) than McDonald's (43.2 in 2008 to 42.9 in 2009) over the last two years.

This ratio tells us that while McDonald's uses a lot of long-term debt compared to equity offerings, its use of debt in relation to all outstanding financing is much more reasonable.

Finally, we look at times interest earned (the interest coverage ratio). Again, Starbucks has a much healthier and improving ratio (from 9.6 in 2008 to 15.3 in 2009 and 25.2 in the trailing 12-month period). The McDonald's ratio is lower (12.5 in 2008, 14.4 in 2009 and 14.7 in the trailing 12 months) but is still much higher than the industry average.

In the case of times interest earned, a higher ratio is better. Both companies have enough earnings to pay interest on debt.

What does all of this mean? Both Starbucks and McDonald's have fairly strong balance sheets when compared to their industry. Starbucks appears to have a stronger balance sheet than McDonald's, but McDonald's is a large and well-established company. It has been able to handle more debt without adding too much risk. ☐

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