How ROA and ROE give a clear picture of corporate health

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With all the ratios that investors toss around, it's easy to get confused. Consider return on equity (ROE) and return on assets (ROA). Because they both measure a kind of return, at first glance these two metrics seem pretty similar. Both gauge a company's ability to generate earnings from its investments. But they don't exactly represent the same thing. A closer look at these two ratios reveals some key differences. Together, however, they provide a clearer representation of a company's performance. Here we look at each ratio and what separates them.

Return on Equity

Of all the fundamental ratios that investors look at, one of the most important is return on equity. It's a basic test of how effectively a company's management uses investors' money. ROE shows whether management is growing the company's value at an acceptable rate. ROE is calculated as:

$$\frac{\text{Annual Net Income}}{\text{Average Shareholders' Equity}}$$

You can find net income on the income statement, and shareholders' equity appears at the bottom of the company's balance sheet.

Let's calculate ROE for the fictional company Ed's Carpets. Ed's 2018 income statement puts its net income at $3.822 billion. On the balance sheet, you'll find total stockholder equity for 2018 was $25.268 billion; in 2017 it was $6.814 billion.

To calculate ROE, average shareholders' equity for 2018 and 2017 ($25.268bn + $6.814bn ÷ 2 = $16.041 bn), and divide net income for 2018 ($3.822 billion) by that average. You will arrive at a return on equity of 0.23, or 23%. This tells us that in 2018 Ed's Carpets generated a 23% profit on every dollar invested by shareholders.

Many professional investors look for a ROE of at least 15%. So, by this standard alone, Ed's Carpets' ability to squeeze profits from shareholders' money appears rather impressive. (For further reading, see "Keep Your Eyes on the ROE.")

Return on Assets

Now, let's turn to return on assets, which, offering a different take on management's effectiveness, reveals how much profit a company earns for every dollar of its assets. Assets include things like cash in the bank, accounts receivable, property, equipment, inventory and furniture. ROA is calculated like this:

$$\frac{\textbf{Annual Net Income}}{\textbf{Total Assets}}$$

(You can also have the computer do it: See "What Is the Formula for Calculating Return on Assets (ROA) in Excel?")

Let's look at Ed's again. You already know that it earned $3.822 billion in 2018 and you can find total assets on the balance sheet. In 2018, Ed's Carpets' total assets amounted to $448.507 billion. Its net income divided by total assets gives a return on assets of 0.0085, or 0.85%. This tells us that in 2018 Ed's Carpets earned less than 1% profit on the resources it owned.

This is an extremely low number. In other words, this company's ROA tells a very different story about its performance than its ROE. Few professional

money managers will consider stocks with an ROA of less than 5%. (For further reading, see "ROA on the Way.")

The Difference Is All About Liabilities

The big factor that separates ROE and ROA is financial leverage, or debt. The balance sheet's fundamental equation shows how this is true: assets = liabilities + shareholders' equity. This equation tells us that if a company carries no debt, its shareholders' equity and its total assets will be the same. It follows then that their ROE and ROA would also be the same.

But if that company takes on financial leverage, ROE would rise above ROA. The balance sheet equation – if expressed differently – can help us see the reason for this: shareholders' equity = assets - liabilities. By taking on debt, a company increases its assets, thanks to the cash that comes in. But since equity equals assets minus total debt, a company decreases its equity by increasing debt. In other words, when debt increases, equity shrinks, and since equity is the ROE's denominator, ROE, in turn, gets a boost.

At the same time, when a company takes on debt, the total assets – the denominator of ROA – increase. So, debt amplifies ROE in relation to ROA.

Ed's balance sheet should reveal why the company's return on equity and return on assets were so different. The carpet-maker carried an enormous amount of debt, which kept its assets high while reducing shareholders' equity. In 2018, it had total liabilities that exceeded $422 billion – more than 16 times its total shareholders' equity of $25.268 billion.

Because ROE weighs net income only against owners' equity, it doesn't say much about how well a company uses its financing from borrowing and issuing bonds. Such a company may deliver an impressive ROE without actually being more effective at using the shareholders' equity to grow the

company. ROA, because its denominator includes both debt and equity, can help you see how well a company puts both these forms of financing to use.

The Bottom Line

So, be sure to look at ROA *as well as* ROE. They are different, but together they provide a clear picture of management's effectiveness. If ROA is sound and debt levels are reasonable, a strong ROE is a solid signal that managers are doing a good job of generating returns from shareholders' investments. ROE is certainly a "hint" that management is giving shareholders more for their money. On the other hand, if ROA is low or the company is carrying a lot of debt, a high ROE can give investors a false impression about the company's fortunes.

For related reading, see "Understanding ROE and ROA for Technology Companies."