Teaching and educational note

Financial accounting return on investment and financial leverage

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Abstract

This note presents a method for teaching the concept of financial leverage and its relationship to accounting rates of return. Typically, financial leverage is only briefly mentioned in introductory accounting textbooks, and it is rarely related explicitly to rates of return on total assets and on common stockholders’ equity. Yet the concept is an important one for financial managers. We have developed and class tested a numerical illustration to explain in a conceptually sound manner why the two rates of return differ. Accounting instructors who share our view that financial leverage should be covered more thoroughly in the introductory accounting course will find this example to be a useful supplement. The example can also be used as a way to develop critical thinking skills or to enhance a user orientation.

Keywords: Accounting rate of return; Financial leverage

This note presents a way of teaching how financial leverage works. Through a numerical illustration, we are able to explain to accounting students why rate of return on total assets and rate of return on common stockholders’ equity differ.

Most finance textbooks devote an entire chapter to the discussion of financial leverage, although usually not from an accounting perspective. In accounting curricula financial leverage may be mentioned in introductory courses, but detailed discussions of this topic are saved until intermediate accounting or financial statement analysis courses. Inasmuch as many of our future financial managers may have

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1 A group of 11 introductory textbooks was examined. Most all of them defined financial leverage but less than 30% related the discussion to financial accounting rates of return.

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exposure to only one or two introductory accounting courses, some instructors may wish to cover financial leverage more thoroughly in the introductory course. We have developed and classroom tested this example as a way of illustrating and summarizing the basic ideas underlying financial leverage. Accounting instructors may find it a useful supplement for their introductory courses as well.

1. Risk, return, and financial leverage

Risk and return are interrelated concepts important in both accounting and finance. Researchers have explored alternative measures of risk and return—both market-based and financial-statement-based—in numerous studies in finance and accounting. Most books on financial statement analysis and security evaluation list risk and return as key areas of analysis. Bernstein (1993, p.652) states the case as follows:

The relationship between net income and the capital invested in the generation of that income is one of the most valid and most widely recognized measures of enterprise performance. In relating income to invested capital, the ROI measure allows the analyst to compare it to alternative uses of capital as well as to the return realized by enterprises subject to similar degrees of risk...Riskier investments require higher returns in order to make them worthwhile.

In financial accounting courses, the concept of return typically is operationalized through the calculation of a rate of return on investment. Two common profitability rates are return on total investment, where total investment is usually defined as total assets, and return on common stockholders’ equity. Financial risk, the risk that arises when an entity relies on borrowed funds or money received from preferred stock to finance a portion of the business, is commonly expressed in financial statement analysis in the form of debt-equity ratios or stock-equity ratios. Indeed, collectively these ratios are often referred to as leverage ratios.

The calculation of rates of return and leverage ratios is covered in introductory accounting courses. But the ratios are not related to one another in a risk-return framework. In financial accounting, profitability and capital structure risk can be brought together in the concept of financial leverage or “trading on the equity”. The gain or loss from trading on the equity can be measured by contrasting the rate of return on total capital (assets) with the rate of return on common stockholders’ equity.

2. Why teach financial leverage?

Our decision to expose introductory students to the concept of financial leverage arises from three motivations. First is the need to develop critical thinking skills in our students. Students are taught how to calculate rate of return on total assets and
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