Session 5

Valuation: The Basics

Test

1. In intrinsic valuation, you value an asset based upon its fundamentals. Which of the following <u>will not affect value</u> in an intrinsic valuation?
    a. The operating income generated on existing investments
    b. The expected growth rate in earnings over time
    c. The reinvestment needed to sustain that growth
    d. The risk in the cash flows
    e. All of the above
2. There are two ways you can approach valuation: you can value the equity stake in the business or value the entire business. If you value the entire business, you should estimate cash flows to all claimholders (including lenders). Which of the following will measure cash flows to all claimholders (the firm)?
    a. Cash flows before taxes, debt payments and reinvestment needs
    b. Cash flows after taxes, but before debt payments and reinvestment needs
    c. Cash flows after taxes and debt payments, but before reinvestment needs
    d. Cash flows after taxes and reinvestment needs, but before debt payments
    e. Cash flows after taxes, reinvestment needs and debt payments
3. If you decide to value a business, you should discount cash flows to the firm at a cost of capital. Which of the following is the best way of estimating the cost of capital?
    a. A book-value weighted average of the cost of equity and an after-tax book interest rate (interest expenses/ book value of debt).
    b. A book-value weighted average of the cost of equity and a pre-tax book interest rate (interest expenses/ book value of debt).
    c. A market-value weighted average of the cost of equity and an after-tax book interest rate (interest expenses/ book value of debt).
    d. A market-value weighted average of the cost of equity and a pre-tax book interest rate (interest expenses/ book value of debt).
    e. A market-value weighted average of the cost of equity and an after-tax long term, current borrowing rate.
    f. A market-value weighted average of the cost of equity and an after-tax long term, current borrowing rate.
4. In the long term, the expected growth rate in a company is a function of two variables: how much it reinvests back in the business and the return it makes on that reinvestment. Which of the following statements best characterizes the value of expected growth?
    a. Growth will always add value to a business
    b. Growth will always destroy value in a business
    c. Growth will have no effect on value because it requires reinvestment
    d. Growth will increase value only if the return on reinvested capital = cost of capital

e. Growth will increase value only if the return on reinvested capital < cost of capital
f. Growth will increase value only if the return on reinvested capital > cost of capital

5. Assume that you are valuing a company, which is trading at a PE ratio of 10 in a sector where the median PE is 15. Which of the following conclusions can you draw about the company?
    a. The company is under valued (cheap).
    b. The company is under valued (cheap), if it is less risky and has less growth than the average company in the sector.
    c. The company is under valued (cheap), if it is less risky and has more growth than the average company in the sector.
    d. The company is under valued (cheap), if it is more risky and has more growth than the average company in the sector
    e. The company is under valued (cheap), if it is more risky and has less growth than the average company in the sector
6. In intrinsic valuation, you value a company based upon its fundamentals. In relative valuation, you value a company, given how other companies are being priced and after controlling for differences in fundamentals. Can a company be cheap on an intrinsic value basis and over valued on a relative value basis at the same time?
    a. Yes
    b. No

Solution

1. In intrinsic valuation, you value an asset based upon its fundamentals. Which of the following <u>will not affect value</u> in an intrinsic valuation?
    a. The operating income generated on existing investments
    b. The expected growth rate in earnings over time
    c. The reinvestment needed to sustain that growth
    d. The risk in the cash flows
    e. All of the above

Explanation: All of the above. (a), (b) and (c) will affect the expected cash flows and d will affect the discount rate.

2. There are two ways you can approach valuation: you can value the equity stake in the business or value the entire business. If you value the entire business, you should estimate cash flows to all claimholders (including lenders). Which of the following will measure cash flows to all claimholders (the firm)?
    a. Cash flows before taxes, debt payments and reinvestment needs
    b. Cash flows after taxes, but before debt payments and reinvestment needs
    c. Cash flows after taxes and debt payments, but before reinvestment needs
    d. Cash flows after taxes and reinvestment needs, but before debt payments
    e. Cash flows after taxes, reinvestment needs and debt payments

Explanation: Since you are valuing the entire business (and not just the equity in it), you should be looking at cash flows before debt payments. Cash flows should be after reinvestment and taxes.

3. If you decide to value a business, you should discount cash flows to the firm at a cost of capital. Which of the following is the best way of estimating the cost of capital?
    a. A book-value weighted average of the cost of equity and an after-tax book interest rate (interest expenses/ book value of debt).
    b. A book-value weighted average of the cost of equity and a pre-tax book interest rate (interest expenses/ book value of debt).
    c. A market-value weighted average of the cost of equity and an after-tax book interest rate (interest expenses/ book value of debt).
    d. A market-value weighted average of the cost of equity and a pre-tax book interest rate (interest expenses/ book value of debt).
    e. A market-value weighted average of the cost of equity and a after-tax long term, current borrowing rate.
    f. A market-value weighted average of the cost of equity and a pre-tax long term, current borrowing rate.

Explanation: The weights for cost of capital should be market value weights, since that is what you would get if you raised capital in the market today and the cost of debt should be the rate at which you can borrow money today (not a historical cost). In

other words, the cost of capital is what it would cost you to acquire the company in the market place today.

4. In the long term, the expected growth rate in a company is a function of two variables: how much it reinvests back in the business and the return it makes on that reinvestment. Which of the following statements best characterizes the value of expected growth?
    a. Growth will always add value to a business
    b. Growth will always destroy value in a business
    c. Growth will have no effect on value because it requires reinvestment
    d. Growth will increase value only if the return on reinvested capital = cost of capital
    e. Growth will increase value only if the return on reinvested capital < cost of capital
    f. Growth will increase value only if the return on reinvested capital > cost of capital

Explanation: The trade off on growth is a simple one. On the one hand, growth increases expected income in future periods. On the others, the reinvestment needed to get that growth lowers cash flows. For the first effect to dominate the second, the return earned on invested capital has to exceed the cost of capital.

5. Assume that you are valuing a company, which is trading at a PE ratio of 10 in a sector where the median PE is 15. Which of the following conclusions can you draw about the company?
    a. The company is under valued (cheap).
    b. The company is under valued (cheap), if it is less risky and has less growth than the average company in the sector.
    c. The company is under valued (cheap), if it is less risky and has more growth than the average company in the sector.
    d. The company is under valued (cheap), if it is more risky and has more growth than the average company in the sector
    e. The company is under valued (cheap), if it is more risky and has less growth than the average company in the sector

Explanation: A company with a lower PE ratio than the sector may deserve to trade at that low PE, if it is riskier or has lower growth than other companies in the sector. Thus, the only clear cut case of a company being cheap would be if it offered the best of all scenarios: a low PE, less risk and higher growth.

6. In intrinsic valuation, you value a company based upon its fundamentals. In relative valuation, you value a company, given how other companies are being priced and after controlling for differences in fundamentals. Can a company be cheap on an intrinsic value basis and over valued on a relative value basis at the same time?
    a. Yes
    b. No

Explanation: In intrinsic valuation, you value a company based on its fundamentals – cash flows, growth and risk. In relative valuation, you value a company based on how the market is pricing similar companies. If the market is under pricing similar companies, a company can be cheap on an intrinsic value basis but expensive relative to its peer group (it is less cheap than the other companies that it is compared to.)