AAII Subgroup

Investment Analysis by Lauren Rudd

Methods of Valuing Stocks

- Dividend Discount Model
- Discounted Earnings
- Discounted Free Cash Flow to the Firm
- Residual Income Valuation Model

CAPM

- **Capital Asset Pricing Model**
- r = Rf + beta x (Km - Rf) where:

  r = the expected rate return rate on a security

  Rf = the rate of a "risk-free" investment

  Km = the return rate of the appropriate asset class

  Beta measures the volatility of the security, relative to the asset class.

Expected Return

- The asset class for our purposes is the market itself.
- For calculation purposes we will use the S&P 500 index
- The historical return on the S&P 500 is 11%

Expected Return

- The risk free rate is defined as a 10 year Treasury whose rate we will assume to be 5%

Expected Return

- r = Rf + beta x (Km - Rf)

Therefore

r = 5 + beta x (11-5)

r = 5 + beta x 6

Expected Return

- Therefore:

  - if a security is just as risky as the overall market, investors would demand a return of 11 percent.

  - If a security is twice as risky as the overall market, investors would demand a return of 17 percent.

Expected Return

- Do not try to calculate a stock’s beta
- Betas are published by Merrill Lynch, Value Line, S&P among others.

Enterprise Value (EV)

- Value of a company from the point of view of all financing sources

- Enterprise Value = Market Cap
- + Debt at market value
- + Minority Interest (if any)
- + Preferred Equity at Market Value
- - Cash and cash equivalents

Enterprise Value (EV) cont.

- EV/EBITA = Length of time to pay back an investment
- EBITA/EV = cash rate of return on investment. Used to compare returns on equivalent companies on a risk adjusted basis.

Economic Profit

- The economic profit of a company after deducting the cost of all capital, debt and equity.
- It is sometimes referred to as residual income analysis
- The commercial version is "EVA," (economic value added) trade marked Stern Stuart & Co.

Economic Profit

- EVA is essentially net operating profit, from which is subtracted the cost of capital.

- EVA = NOPAT – (C% x TC)
- C% = Cost of Capital TC = Total Cap.
- Cost of Capital = Weighted Average Cost of Capital or WACC

Market Value Added

- Market Value Added is a related concept
- MVA = Market Value of a company – Total Capital
- A company with a positive EVA should have a market value in excess of the book value of its capital