Example: Cost of Capital for Amgen

- Estimate the WACC for Amgen based on the following assumptions:
  - The cost of equity was estimated previously to be 8.06%
  - The cost of debt is 5.0% (based on the firm’s rating and comparable bonds)
  - Amgen’s book value of debt equals $5.11 billion
  - Amgen’s market value of equity equals $98.29 billion (bk = $19.705b)
  - The marginal tax rate is 40%

$$WACC = \left( \frac{98.29}{98.29 + 5.11} \right) \times 8.06\% + \left( \frac{5.11}{98.29 + 5.11} \right) \times 5.0\% (1 - 0.4)$$

$$= 0.9506(8.06\%) + 0.0494(3\%) = 7.809\%$$

Dealing with Hybrids and Preferred Stock

- When dealing with hybrids such as convertible bonds, break the security down into debt and equity and allocate the amounts accordingly.
  - Example, if a firm has $125 million in convertible debt, separate the $125 million into straight debt and conversion option components. The conversion option is equity.

- When dealing with preferred stock, it is best to consider it as a separate component.
  - The cost of preferred stock is the preferred dividend yield.
Example: Convertible Debt at Amgen

- As of 12/31/2004, Amgen’s debt included a 30-year zero-coupon convertible bond issued in March of 2002. This bond has a face value of $3.937 billion and a yield of 1.125%.

- Estimate the market value of the debt and equity components for this convertible bond (assume the book value of debt equals the market value).

\[
\text{Straight Debt Component} = \frac{3.937}{(1.05)^{30}} = $1.004b
\]

\[
\text{Equity Component} = 3.937b - 1.004b = $2.933b
\]

- The corrected WACC formula for Amgen then equals:

\[
WACC = \left( \frac{101.223}{101.223 + 2.177} \right) 8.06\% + \left( \frac{2.177}{101.223 + 2.177} \right) 5.0\%(1 - .4)
\]

\[
= (.9789)(8.06\%) + (.0211)(3\%) = 7.953\%
\]