Chapter 18

Analysis of Convertible Bonds

Bondholder has right to convert bond for shares of common stock

Conversion Ratio - number of shares bond can be converted into
Conversion Price - bond face value divided by conversion ratio
  Can vary over time
  Can be available for varying periods over life of bond
  Is adjusted for stock splits and dividends

Usually callable

Physical settle versus Cash settle

Conversion Value = market price of stock × conversion ratio

Minimum price of convertible = max \{conversion value, straight bond\}

Illustration Bond:
  maturity = 10 years
  coupon rate = 10%
  conversion ratio = 50
  par value = $1,000
  current price of bond = $950
  current stock price = $17
  dividends per share = $1

Conversion value = 17 \times 50 = $850

Market conversion price

  MCP = bond price/conversion ratio = 950/50 = $19
Market conversion premium = market conversion price - current stock price
= 19 - 17 = $2

Premium payback period = \( \frac{\text{market conversion premium}}{\text{favorable income differential per share}} \)

Favorable income differential per share = coupon interest - \((\text{conv ratio} \times \text{div})\)

\[ \text{FIDPS} = \frac{(100 - 50)}{50} \]

PPP = 2/1 = 2 years

Premium over straight value = market price of convertible/straight value - 1

Conversion premium ($2) gives you gain on stock price increase somewhat below owning stock, but reduced downside risk because of straight bond value floor

Bond equivalent or busted convertible - trades like straight bond
Stock price so low that conversion extremely unlikely

Equity equivalent - behaves like stock
Stock price very high

Valuing Convertible Bonds
Call Risk
Takeover Risk

Convertible bond is a straight bond with an option to buy stock

CB Value = straight value + price of call option on the stock