Chapter 19
Share-Based Compensation and Earnings Per Share
Part 4: Diluted EPS – Convertible Securities

Student Learning Outcomes
• Apply the test for dilution for convertible securities
• Apply the If Converted Method for convertible securities in the computation for diluted earnings per share
• Account for multiple common stock equivalents

Complex Capital Structure
• Common Stock Equivalents that are dilutive
  ▪ Exercisable
  ▪ Convertible
• Two Earning Per Share figures
  ▪ Basic Earnings Per Share
  ▪ Diluted Earnings Per Share
• Diluted Earnings Per Share – the maximum potential dilution or decline in EPS
Impact of Convertible Securities on EPS

- Impacts both the numerator and denominator
- Convertible Preferred Stock
  - Dividends would not be "paid"
  - Additional shares of stock would be issued
- Convertible Bonds
  - Net income would not include interest, net of tax \( (1 - \text{tax rate}) \)
  - Additional shares of stock would be issued

Test for Dilution

- If conversion ratio \( \leq \) EPS without including the convertible security, then dilutive
- If anti-dilutive, ignore in all computations
- Convertible preferred stock – Conversion ratio: Preferred dividends \div \text{Weighted average # shares issued on conversion}
- Convertible bonds – Conversion ratio: Interest, net of tax \div \text{weighted average # additional shares issued on conversion}

If Converted Method

- Used in the computation of diluted earnings per share with respect to convertible securities
- Impacts both the numerator and the denominator
- Conversion is assumed to have taken place at the later of the date of issue of the security or the beginning of the year being presented
If Converted Method (continued)

- Net income figure (numerator) is adjusted by adding back any dividends on convertible preferred stock, or interest net of tax on convertible bonds
- Weighted average # shares outstanding (denominator) is adjusted by adding to it weighted average # shares assumed to have been issued on conversion

For Example

Apex, Inc., had 100,000 shares of common stock, and 10,000 shares of cumulative, 10% $100 par convertible preferred stock outstanding for the entire year, 2013. Each share of preferred stock is convertible into 2 shares of common stock. Net income for 2013 was $720,000. The income tax rate is 40%.

Compute the basic and diluted EPS for 2013

For Example (continued)

- Basic EPS (numerator): Net income = $720,000; Preferred dividend = $100,000 [(10% x $100) x 10,000]
- Basic EPS (denominator): Weighted Average # shares = 100,000 x (12/12) = 100,000
- Basic EPS = ($720,000 - $100,000) ÷ 100,000 = $6.20
For Example (continued)

- If Converted Method – Assume conversion on 1/1/13
- Dividend not paid = $100,000
- # shares issued on conversion = 20,000
- Conversion ratio = $100,000 / 20,000 = $5.00
- Is $5.00 ≤ EPS without including security ($6.20)? Yes. Therefore dilutive.
- Diluted EPS = ($720,000 - $100,000 + $100,000) / (100,000 + 20,000) = $6.00

Multiple Common Stock Equivalents

- Include all dilutive exercisable securities first
- Compute conversion ratio for all convertible securities
- Rank from smallest to largest
- Determine incremental EPS starting with convertible security with smallest conversion ratio until resultant EPS is greater than the previously computed EPS

For Example

Apex, Inc., had 100,000 shares of common stock, and 10,000 shares of cumulative, 10% $100 par convertible preferred stock outstanding for the entire year, 2013. Each share of preferred stock is convertible into 2 shares of common stock. In addition, Apex had 25,000 stock options, exercisable into 25,000 shares of common stock for $20 per share. The average market price per share of the stock was $100. Apex also had 10% $1,000,000 bonds convertible into 20,000 shares of stock. Net income for 2013 was $720,000. The income tax rate is 40%.

Compute the basic and diluted EPS for 2013
For Example (continued)

• Basic EPS (numerator): Net income = $720,000; Preferred dividend = $100,000 [(10% x $100) x 10,000]
• Basic EPS (denominator): Weighted Average # shares = 100,000 x (12/12) = 100,000
• Basic EPS = ($720,000 - $100,000) ÷ 100,000 = $6.20

For Example (continued)

• Stock Options: Are they dilutive? Is $20 < $100? Yes. Use the Treasury Stock Method.
• Assume exercise 1/1/13.
• If exercised, 25,000 shares issued x $20 = $500,000.
• # shares repurchased = $500,000 ÷ $100 = 5,000
• Net Increase in # Shares = 20,000 (25,000 – 5,000)

For Example (continued)

• Convertible Preferred Stock – Use If Converted Method
• Assume conversion on 1/1/13
• Dividend not paid = $100,000
• # shares issued on conversion = 20,000
• Conversion ratio = $100,000 ÷ 20,000 = $5.00
For Example (continued)

• Convertible Bonds – Use If Converted Method
• Assume conversion on 1/1/13
• Interest not paid, net of tax = [(10% x $1,000,000) x 60%] = $60,000
• # shares issued on conversion = 20,000
• Conversion ratio = $60,000 ÷ 20,000 = $3.00

Order of Entry

• Include all exercisable securities that are dilutive.
  ($720,000 - $100,000) ÷ (100,000 + 20,000) = $5.17
• Order of inclusion of convertible securities:
  Convertible bonds ($3.00); Convertible preferred stock ($5.00)
  ($720,000 - $100,000 + $60,000) ÷ (100,000 + 20,000 + 20,000) = $4.86
• Convertible preferred stock is anti-dilutive because $5.00 (conversion ratio) is not less than or equal to $4.86
• Basic EPS = $6.20
• Diluted EPS = $4.86

The Next Step

• Exercises 1, 6, 10, 12, 13, 14, 16, 17, 18, 19, 20, 21
• Problems 8, 11, 12, 14, 15, 16, 17