

## FA Module 8 Diluted EPS for convertible debt practice exam questions

covering convertible bonds, net income available to common shareholders, basic earnings per share, dividend payout ratio, earnings retention rate, If-converted method numerator, If-converted method denominator, diluted earnings per share

(The attached PDF file has better formatting.)

In 20XX, the corporate tax rate is 10% and a firm has net income of 3,170. Its capital structure consists of

- ! 610 common shares outstanding
- ! 6,120 (face value) of 6.40% convertible bonds, convertible into a total of 240 common shares

In 20XX, the firm pays dividends of 4.15 per common share.

Question 8.1: Net income available to common shareholders

What is the firm's net income available to common shareholders?

Answer 8.1: 3,170

(Firm has not issued preferred shares, so no deduction)

Question 8.2: Basic earnings per share

What is the firm's basic earnings per share?

Answer 8.2:  $3,170 / 610 = 5.197$

(net income available to common shareholders / weighted average common shares outstanding)

Question 8.3: Dividend payout ratio

What is the firm's dividend payout ratio?

Answer 8.3:  $4.15 / 5.197 = 79.85\%$

(Dividends per share / earnings per share)

Question 8.4: Earnings retention rate

What is the firm's earnings retention rate?

Answer 8.4:  $1 - 79.85\% = 20.15\%$

(earnings retention rate = complement of dividend payout ratio)

Question 8.5: If-converted method numerator

What would net income be if the convertible debt had been converted at the beginning of the year?

Answer 8.5:  $3,170 + 6,120 \times 6.40\% \times (1 - 10\%) = 3,522.51$

(net income available to common shareholders + par value of convertible debt  $\times$  coupon rate on convertible debt  $\times$  (1 – tax rate) )

Question 8.6: If-converted method denominator

What would the weighted average common shares outstanding be if the convertible debt had been converted at the beginning of the year?

Answer 8.6:  $610 + 240 = 850$

(weighted average common shares outstanding + shares from convertible debt)

Question 8.7: Diluted earnings per share

What is the firm's diluted earnings per share?

Answer 8.7:  $3,522.51 / 850 = 4.144$