Corpfin mod 15 Stockholder dividends practice exam question

(The attached PDF file has better formatting.)

Question 15.1: Share repurchase

On December 31, 20X1, a firm's 88,700 outstanding shares trade at 76.33 per share. Earnings per share in 20X1 are 7.16, and the target payout ratio is 43.1%. Assume that dividend announcements do not reveal anything about the firm's prospects. The firm intends to pay the dividend at the beginning of 20X2.

How much does the firm intend to pay in dividends at the beginning of 20X2?

Answer 15.1: The firm intends to pay a dividend of earnings per share × the target payout ratio for each share. The total dividend is outstanding shares × earnings per share × the target payout ratio =

$$7.16 \times 43.1\% \times 88{,}700 = 273{,}724.65$$

Question 15.2: Share repurchase

What is the share price on the ex-dividend date if the firm pays the intended dividend?

Answer 15.2: The share price declines on the ex-dividend date by the dividend per share to become

$$76.33 – 7.16 \times 43.1\% = 73.24$$

Question 15.3: Share repurchase

The firm cancels the dividend and announces it will use the money to repurchase shares. How many shares will the firm purchase?

Answer 15.3: The firm cancels the dividend so the share price does not decline on the ex-dividend date. The number of shares the firm will purchase is

earnings per share × the target payout ratio × outstanding shares / trading price per share =

$$7.16 \times 43.1\% \times 88{,}700 / 76.33 = 3{,}586$$

Question 15.4: Trading price of the new shares

Instead of paying the planned dividend, the firm increases dividends to earnings per share and issues new shares to recoup the extra cash paid out.

What is the share price on the ex-dividend date if the firm increases dividends to earnings per share?

Answer 15.4: The share price on the ex-dividend date if the firm increases dividends to earnings per share

= the current share price – earnings per share

= 76.33 – 7.16 = 69.17

Question 15.5: Extra dividend payment

What is the *extra* dividend payment made by the firm?

Answer 15.5: The extra dividend payment made by the firm = the outstanding shares × earnings per share × (1 – the target payout ratio) = 88,700 × 7.16 × (1 – 43.1%) = 361,367.35

This is the cost of the new shares the firm will issue to recoup the extra cash it paid out.

Question 15.6: New shares

How many shares will the firm issue to recoup the extra cash it paid out?

Answer 15.6: The cost of the new shares the firm will issue divided by the share price on the ex-dividend date (if the firm increases dividends to earnings per share) is the number of new shares the firm will issue =

361,367.35 / 69.17 = 5,224