CHAPTER 15

ANALYSIS OF DIVIDENDS AND SHARE REPURCHASES

1. (B) **increased agency conflict between bondholders and shareholders.**

Explanation

Paying dividends can be helpful in reducing agency conflicts between shareholders and managers because dividend payouts constrain managers' ability to invest in negative NPV projects that benefit the managers at the expense of shareholders.

Paying dividends is likely to intensify the agency conflict between bondholders and shareholders, as it represents a transfer of wealth from bondholders to shareholders.

There is no agency conflict between bondholders and managers.

(Module 15.1, LOS 15.d)

Related Material

SchweserNotes - Book 2

2. (B) **an increase in financial leverage ratios.**

Explanation

A cash dividend will increase leverage ratios such as debt-to-equity and debt-to-assets, reflecting a decrease in the denominator. A cash dividend should decrease liquidity ratios such as the current ratio and cash ratio, due to the decrease in cash in the numerator. Unlike a cash dividend, a stock dividend or a stock split has no impact on liquidity or financial leverage ratios.

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

3. (C) **cause financial leverage ratios to increase.**

Explanation

All else equal, the result of a cash dividend is that financial leverage ratios (such as the debt-to-equity ratio) should increase, while liquidity ratios (such as the cash ratio) should decrease. Cash dividends reduce assets (as cash is paid out) and reduce shareholders' equity (by lowering retained earnings). (Stock dividends, on the other hand, do not impact liquidity ratios or financial leverage ratios.)

(Module 15.1, LOS 15.a)

Related Material

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4. (B) $30.00.

Explanation

Market value of equity before the repurchase is $30 x 2.4 million = $72 million. Shares Repurchased = $2.4 million / $30 = 80,000 shares.

Shares remaining = Shares outstanding - Shares repurchased

= 2,400,000 – 80,000 = 2,320,000.

Share price after the repurchase = ($72 million - $2.4 million) / 2,320,000 = $30.

(Module 15.2, LOS 15.l)

Related Material

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5. (B) 6 years.

Explanation

The formula to determine the expected dividend increase in a target payout approach is:

Expected increase in dividends = [(expected earnings x target payout ratio) - previous dividend] x adjustment factor

Where the adjustment factor is 1/ number of year over which the adjustment will take place.

Using the numbers given:

$0.51 – $0.30 = [($5.20 × 0.30) – $0.30] × (1/n)

$0.21 = [$1.26] × (1/n)

$0.21/$1.26 = 1/n

n = $1.26 / $0.21

n = 6

(Module 15.1, LOS 15.g)

Related Material

SchweserNotes - Book 2

6. (B) have no impact on financial leverage ratios and liquidity ratios.

Explanation

Stock dividends do not affect assets or shareholders' equity, and financial leverage ratios and liquidity ratios are unaffected. Stock dividends have no economic impact on a company and do not affect a company's capital structure. (Cash dividends, on the other hand, decrease liquidity ratios and increase financial leverage ratios.)

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

7. (C) **shareholders are primarily tax-exempt institutions.**

Explanation

Taxes on dividends are one factor that sometimes discourages companies from paying dividends, however if most shareholders are tax exempt, tax considerations are unlikely to discourage a company from making dividend payouts. A company with high flotation costs is less likely to pay out high dividends, to ensure that projects can be financed through earnings and to thus avoid the expense of issuing new shares. Bondholders are often contractually protected from high dividend payouts; strong debt covenants are likely to prevent the company from making high dividend payouts.

(Module 15.1, LOS 15.e)

Related Material

SchweserNotes - Book 2

8. (A) **Disgruntled stockholders are forced to sell their shares, improving management's position.**

Explanation

A repurchase gives stockholders a choice. They can sell or not sell. Stock repurchase is also more tax-efficient as only those shareholders that choose to sell their shares would potentially have a tax liability.

(Module 15.2, LOS 15.i)

Related Material

SchweserNotes - Book 2

9. (B) **A share repurchase is equivalent to a cash dividend of an equal amount, so total shareholder wealth will be the same.**

Explanation

Assuming that the tax treatment of a share repurchase and a cash dividend of equal amount is the same, a share repurchase is equivalent to a cash dividend payment, and shareholder wealth will be the same.

(Module 15.2, LOS 15.l)

Related Material

SchweserNotes - Book 2

10. (A) **Disgruntled stockholders are forced to sell their shares, improving management's position.**

Explanation

A repurchase gives stockholders a choice. They can sell or not sell. Stock repurchase is also more tax-efficient as only those shareholders that choose to sell their shares would potentially have a tax liability.

(Module 15.2, LOS 15.l)

Related Material

SchweserNotes - Book 2

11. (C) **58%.**

Explanation

This is an example of a split-rate corporate tax system. The calculation of the effective tax rate on a Swiss franc of corporate income distributed as dividends is based on the corporate tax rate for distributed income.

The effective tax rate on income distributed as dividends

= 30% + [(1 – 30%) × 40%] = 58%

(Module 15.2, LOS 15.1)

Related Material

SchweserNotes - Book 2

12. (C) Kelley Medical Devices.

Explanation

Due to inflation considerations, a company with a stable dividend policy will have stability in the rate of increase for its dividend each year. This typically means aligning the company's dividend growth rate with its long-term growth rate. Although the company with the fixed per share dividend is a tempting choice, once inflation is considered, a fixed $2.00 per share dividend is actually declining each year in terms of spending power.

(Module 15.2, LOS 15.g)

Related Material

SchweserNotes - Book 2

13.		Drakar	O'Rourke
	(A)	30%	40%

Explanation

Under an imputation tax system, taxes are paid at the corporate level, but are attributed to the shareholder, so that all taxes are effectively paid at the shareholder rate.

(Module 15.1, LOS 15.f)

Related Material

SchweserNotes - Book 2

14. (C) A lower proportion of US companies pay dividends as compared to their European counterparts.

Explanation

A lower proportion of US companies pay dividends as compared to their European counterparts. The percentage of companies making stock repurchases has been trending upwards in the US (since 1980s), the UK and continental Europe (since 1990s).

(Module 15.2, LOS 15.h)

Related Material

SchweserNotes - Book 2

15. (A) an immediate lack of profitable investment opportunities.

Explanation

When earnings are volatile, companies are more hesitant to increase dividends, as there are greater chances that a higher dividend may not be covered by future earnings. When there is reduced availability of credit in the market, a strong cash position—such as might be gained from cutting dividends—is a benefit. A company that foresees few profitable investment opportunities tends to pay out more in dividends, since these opportunities would otherwise be funded with cash flows from earnings.

(Module 15.1, LOS 15.e)

Related Material

SchweserNotes - Book 2

16. (A) **A low dividend yield compared to the company's historic average.**

Explanation

High dividend yields compared to the company's record suggest that investors are expecting dividends to be cut. Net borrowings are not sustainable, and will eventually require a cut in share repurchases and dividends. A higher-than-average dividend payout ratio creates the risk that dividends may be cut if earnings decline.

(Module 15.2, LOS 15.n)

Related Material

SchweserNotes - Book 2

17. (A) **stock dividend**

Explanation

Stock dividends are dividends paid out in new shares of stock instead of cash. Unlike stock dividends, dividend reinvestment plans are at the discretion of individual shareholders. In the case of stock repurchases, the company is buying back shares so the number of shares in the investment public's hands is declining.

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

18. (A) **Special dividend.**

Explanation

Special dividends are used when favorable circumstances allow the firm to make a one-time cash payment to shareholders, in addition to any regular dividends the firm pays. Many cyclical firms (e.g., automakers) will use a special dividend to share profits with shareholders when times are good but maintain the flexibility to conserve cash when profits are down. Other names for special dividends include extra dividends and irregular dividends.

Liquidating dividends occur when a company ceases to operate and distributes any equity proceeds to shareholders. Stock dividends are paid out in shares of stock rather than cash and are similar to stock splits.

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

19. (C) Reasons 2, 3, 4, and 5.

Explanation

A share repurchase would decrease the percentage of equity in a firm's capital structure, which would in turn increase the percentage of debt. An increase in debt would add more leverage to the firm which would be negative for the firm's bondholders. The other reasons listed are all rationales for a share repurchase.

(Module 15.2, LOS 15.l)

Related Material

SchweserNotes - Book 2

20.		Jones	Beane
	(C)	No	No

Explanation

Neither statement is accurate. Cash dividends will decrease both assets and equity, causing liquidity ratios to decline (assets fall, while liabilities stay the same). Stock dividends do not affect the firm's leverage ratios. Total equity remains unchanged because a stock dividend neither raises capital nor distributes earnings to shareholders.

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

21. (B) It will decrease.

Explanation

According to the dividend preference theory (bird-in-the-hand argument), dividends are perceived to be of a lower risk than potential capital gains from reinvested earnings. Dividends have certainly, whereas future capital gains do not. A company that pays dividends will, therefore, have a lower cost of equity compared to a similar non-dividend paying firm.

(Module 15.1, LOS 15.b)

Related Material

SchweserNotes - Book 2

22. (B) Target payout ratio.

Explanation

Target payout ratio is consistent with the proposed dividend policy of Rainham Inc. Under the target payout ratio approach, the management would define a target payout ratio and move toward the target payout ratio over time.

(Module 15.2, LOS 15.g)

Related Material

SchweserNotes - Book 2

23. (C) Clientele effect.

Explanation

The six factors that affect dividend policy are:

- Availability of investment opportunities
- Future earnings volatility
- Financial flexibility
- Tax considerations
- Flotation costs
- Contractual and legal restrictions

(Module 15.1, LOS 15.e)

Related Material

SchweserNotes - Book 2

24. (B) Higher than 35%.

Explanation

U.S. tax rules are based on a double taxation system As such, the effective tax rate will be higher than just the corporate tax rate of 35% as taxes paid would include both corporate tax and the tax paid on the dividend.

(Module 15.1, LOS 15.f)

Related Material

SchweserNotes - Book 2

25.		Cash dividend	Share repurchase
	(B)	$34.00	$34.00

Explanation

If the company pays a cash dividend, the dividend per share will be $22 million/8 million = $2.75.

The value of its shares will be:

$$\frac{8,000,000(\$34)-\$22,000,000}{8,000,000-647,058}=\frac{\$250,000,000}{8,000,000}=\$31.25$$

So the total wealth from owning one share will be $31.25 + $2.75 = $34.00.

If the company repurchases shares, it can buy $22 million/$34 = 647,058 shares. The value of one share would then be:

$$\frac{8,000,000(\$34)-\$22,000,000}{8,000,000-647,058}=\frac{\$250,000,000}{7,352,942}=\$34.00$$

If you remember that both a cash dividend and a share repurchase for cash leave shareholder wealth unchanged, this question does not require calculations of the amounts.

(Module 15.2, LOS 15.l)

Related Material

SchweserNotes - Book 2

26. (B) 40.00.

Explanation

$$\frac{20,000,000\text{ x }40 — 20,000,000}{20,000,000 — 500,000}$$

$$=\frac{780,000,000}{19,500,000}=40.00$$

(Module 15.2, LOS 15.l)

Related Material

SchweserNotes - Book 2

27. (C) 48%.

Explanation

0.35 + (1 - 0.35)(0.20) = 48%

(Module 15.1, LOS 15.f)

Related Material

SchweserNotes - Book 2

28. (C) $3.33.

Explanation

Total earnings = $3.33 x 30,600,000 = $101,898,000

$$\text{EPS after buyback} = \frac{\text{total earnings - after - tax cost of funds}}{\text{shares outstanding after buyback}}$$

$$=\frac{\$101,898,000-(600,000\text{ shares x }\$50\text{ x }0.067)}{(30,600,000-600,000)\text{ shares}}$$

$$=\frac{\$101,998,000-\$2,010,000}{30,000,000\text{ shares}}$$

$$= \frac{\$99,888,000}{30,000,000 \text{ shares}}$$

= \$3.33

Since the after-tax cost of borrowing of 6.7%% is equal to the 6.7% earnings yield (E/P) of the shares, the share repurchase has no effect on Pants R Us' EPS.

(Module 15.2, LOS 15.j)

Related Material

SchweserNotes - Book 2

29. (B) an optimal trading range exists.

Explanation

Although there is little empirical evidence to support the contention, there is nevertheless a widespread belief in financial circles that an optimal price range exists for stocks. "Optimal" means that if the price is within this range, the price/earnings ratio, price/sales and other relevant ratios will be maximized. Hence, the value of the firm will be maximized.

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

30. (C) with a tender offer.

Explanation

In a tender offer, the company may either select a price or use a Dutch auction to determine the lowest price at which it can repurchase the number of shares desired.

(Module 15.2, LOS 15.i)

Related Material

SchweserNotes - Book 2

31. (B) do not in and of themselves affect firm value.

Explanation

Stock splits divide up each existing share into multiple shares. The price of each share will drop correspondingly to the number of shares created, so there is no change in the owner's wealth. Empirical research has shown that in the absence of a dividend yield increase, the stock price falls to the stock split ratio of the original price (i.e., to 25% of the original price in a 4-for-1 stock split). This makes sense, given that the investor's percentage ownership of the company has not changed.

(Module 15.1, LOS 15.a)

Related Material

SchweserNotes - Book 2

32. (B) FCFE coverage ratio is 2.0.

Explanation

Dividend coverage ratio = Net Income / Dividends = \$10 / \$1 = 10.

FCFE coverage ratio = FCFE / (dividends + share repurchases)

= \$8 / (\$1 + \$3) = 2.0.

Dividend payout ratio = Dividends / Net Income = \$1 / \$10 = 0.1.

(Module 15.2, LOS 15.m)

Related Material

SchweserNotes - Book 2

33. (A) send a positive signal to investors.

Explanation

The premium offered in a fixed price tender offer provides a positive signal to investors about management's view of the stock's value. Dutch auctions can be accomplished quickly, but usually not as quickly as fixed price tender offers. Dutch auctions generally enable a company to do the buyback at a lower price than with a fixed price tender offer.

(Module 15.2, LOS 15.i)

Related Material

SchweserNotes - Book 2

34. (A) \$3.36.

Explanation

Total earnings = \$3.33 x 30,600,000 = \$101,898,000

$$\text{EPS after buyback} = \frac{\text{total earnings} - \text{after-tax cost of funds}}{\text{shares outstanding after buyback}}$$

$$= \frac{\$101{,}898{,}000 - (600{,}000 \text{ shares} \times \$50 \times 0.04)}{(30{,}600{,}000 - 600{,}000) \text{ shares}}$$

$$= \frac{\$101{,}898{,}000 - \$1{,}200{,}000}{30{,}000{,}000 \text{ shares}} = \frac{\$100{,}698{,}000}{30{,}000{,}000 \text{ shares}} = \$3.36$$

Since the after-tax cost of borrowing of 4% is less than the 6.7% earnings yield (E/P) of the shares, the share repurchase will increase Francis's EPS.

(Module 15.2, LOS 15.j)

Related Material

SchweserNotes - Book 2

35.		Cost of Capital	Stockholder wealth
	(B)	**None**	**None**

Explanation

If investors do not consider dividends to be relevant, the dividend payout will not affect the required rate of return. If the required rate of return does not change, stockholder wealth will be unchanged despite the change in its dividend payout rate.

(Module 15.1, LOS 15.b)

Related Material

SchweserNotes - Book 2

36. (B) $18.54.

Explanation

The share buyback is $10 million / $5 per share = 2,000,000 shares.

Remaining shares: 50 million - 2 million = 48 million shares.

Winnipeg Auto Unlimited's current BVPS = $900 million / 50 million = $18.

Book value after repurchase: $900 million - $10 million = $890 million.

BVPS = $890 million / 48.0 million = $18.54.

BVPS increased by $0.54.

Book value per share (BVPS) increased because the share price is less than the original BVPS. If the share prices were more than the original BVPS, then the BVPS after the repurchase would have decreased.

(Module 15.2, LOS 15.k)

Related Material

SchweserNotes - Book 2

37. (B) Buying a fixed number of shares at a fixed price.

Explanation

A tender offer refers to buying a fixed number of shares at a fixed price (usually at a premium to the current market price).

(Module 15.2, LOS 15.i)

Related Material

SchweserNotes - Book 2

38. (C) Increase in dividend and FCFE coverage ratios.

Explanation

Both dividend and FCFE coverage ratios are indicators of dividend safety. FCFE coverage is simply more comprehensive measure and takes into account all cash distributed to shareholders.

(Module 15.2, LOS 15.m)

Related Material

SchweserNotes - Book 2

39. (B) decrease of $1.60.

Explanation

Book value per share before the repurchase = $200 million / 10 million shares = $20.00 per share.

Shares repurchased = $25 million / $50.00 = 500,000 shares.

Remaining shares = 10 million — 500,000 = 9.5 million shares.

After the repurchase, book value = $200 million — $25 million = $175 million.

Book value per share after the repurchase = $175 million / 9.5 million shares = $18.42.

Difference = $18.42 — $20.00 = —$1.58 per share.

(Module 15.2, LOS 15.k)

Related Material

SchweserNotes - Book 2

40.	**Solar Automotive Industries**	**Winnipeg Auto Unlimited**
(A)	**Decrease by $0.16**	**Decrease by $0.13**

Explanation

The share buyback for each company is $10 million / $50 per share = 200,000 shares.

Remaining shares for each company = 50 million - 200,000 = 49.8 million shares.

For Solar Automotive Industries:

Solar Automotive Industries' current BVPS = $500 million / 50 million = $10.

The market price per share of $50 is greater than the BVPS of $10.

Book value after repurchase = $500 million - $10 million = $490 million

BVPS = $490 million / 49.8 million = $9.84

BVPS decreased by $0.16

For Winnipeg Auto Unlimited:

Winnipeg Auto Unlimited's current BVPS = $900 million / 50 million = $18.

The market price per share of $50 is greater than the BVPS of $18.

Book value after repurchase = $900 million - $10 million = $890 million

BVPS = $890 million / 49.8 million = $17.87

BVPS decreased by $0.13.

In the case of both Solar Automotive Industries and Winnipeg Auto Unlimited, book value per share (BVPS) decreased because the share price is greater than the original BVPS. If the share prices were less than the original BVPS, then the BVPS after the repurchase for each firm would have increased.

(Module 15.2, LOS 15.k)

Related Material

SchweserNotes - Book 2

41. (A) Shareholders prefer capital gains to cash dividends.

Explanation

Some shareholders prefer capital gains, while others prefer dividends. Repurchases offer shareholders the choice of tendering or not tendering their stock, while cash dividends represent a payment they cannot refuse. Raising dividends is often seen as a positive signal, but an increase funded by short-term cash flows may not be sustainable, forcing the company to reduce the dividend later.

(Module 15.2, LOS 15.i)

Related Material

SchweserNotes - Book 2

42. (B) $9.84.

Explanation

The share buyback is $10 million / $50 per share = 200,000 shares.

Remaining shares: 50 million – 200,000 = 49.8 million shares.

Solar Automotive Industries' current BVPS = $500 million / 50 million = $10.

Book value after repurchase: $500 million – $10 million = $490 million.

BVPS = $490 million / 49.8 million = $9.84.

BVPS decreased by $0.16.

Book value per share (BVPS) decreased because the share price is greater than the original BVPS. If the share prices were less than the original BVPS, then the BVPS after the repurchase would have increased.

(Module 15.2, LOS 15.k)

Related Material

SchweserNotes - Book 2

43. (B) Investors view a stock repurchase as a positive signal and a stock issue as a negative signal.

Explanation

Investors view a stock repurchase as a positive signal and a stock issue as a negative signal. A repurchase may mean that management believes the stock is undervalued. To understand why a stock issue is viewed negatively, consider the following circumstances: A biotech company has a new blockbuster drug that will increase its profitability, but to produce and market the drug, the company needs to raise capital. If the company sells new stock, then as sales (and thus profits) occur, the price of the stock will rise. The current shareholders will do well but not as well as they would have had the company not sold more stock before the share price increased. Thus, it is assumed that management will prefer to finance growth with non-stock sources.

The other statements are false. A person who believes in the clientele effect and a proponent of the "bird-in-hand" theory would not have similar views on dividend policy. Under the agency cost theory, dividends reduce free cash flow that managers can use for empire building and hence, a high payout is preferred. According to the "bird-in-hand" theory, investors prefer dividends to capital appreciation because they view the former (D_1 / P_0) as less risky than the latter (g, or growth rate). Both approaches have similar (and not opposite) views on dividend policy.

(Module 15.1, LOS 15.d)

Related Material

SchweserNotes - Book 2

44. (C) $3.32.

Explanation

Total earnings = $3.33 x 30,600,000 = $101,898,000

$$\text{EPS after buyback} = \frac{\text{total earnings} - \text{after-tax cost of funds}}{\text{shares outstanding after buyback}}$$

$$= \frac{\$101,898,000 - (600,000 \text{ shares} \times \$50 \times 0.08)}{(30,600,000 - 600,000) \text{ shares}}$$

$$= \frac{\$101,898,000 - \$2,400,000}{30,000,000 \text{ shares}} = \frac{\$99,498,000}{30,000,000 \text{ shares}} = \$3.32$$

Since the 8.0% after-tax cost of borrowing is greater than the 6.7% earnings yield (E/P) of the shares, the share repurchase reduces Sinclair's EPS.

(Module 15.2, LOS 15.j)

Related Material

SchweserNotes - Book 2

45. (B) A permanent decrease in company profitability.

Explanation

A permanent decrease in profits is expected to result in a decrease in the dividend payment level; however this would probably not lead to a decrease in the payout ratio. If interest rates were to increase, it would make retained earnings a more attractive way of financing new investment; as a result, the payout ratio would be more likely to decline. A decrease in the capital gains tax rate would (for investors that pay tax) make capital gains more appealing; accordingly, aggregate payout ratios would be expected to decline.

(Module 15.1, LOS 15.e)

Related Material

SchweserNotes - Book 2

46. (C) Exercise a call provision.

Explanation

Call provisions are not relevant to common stock and are not considered a repurchase in any case. There are three repurchase methods. The first is to buy in the open market. A company may repurchase stock by making a tender offer to repurchase a specific number of shares at a price that is usually at a premium to the current market price. The third way is to repurchase by direct negotiation. Companies may negotiate directly with a large shareholder to buy back a block of shares, usually at a premium to the market price.

(Module 15.2, LOS 15.i)

Related Material

SchweserNotes - Book 2

47. (C) Correct.

Explanation

Bridges' statement is correct.

(Module 15.2, LOS 15.h)

Related Material

SchweserNotes - Book 2

48. (C) both are incorrect.

Explanation

A dividend initiation is often viewed differently by different investors. On one hand, a dividend initiation could mean that a company is sharing its wealth with shareholders - a positive signal. On the other hand, initiating a dividend could mean that a company has a lack of profitable reinvestment opportunities - a negative signal. Dividend decreases or omissions are typically negative signals that current and future earnings prospects are not good and that management does not think the current dividend payment can be maintained.

(Module 15.1, LOS 15.c)

Related Material

SchweserNotes - Book 2

49. (C) dividend policy may be relevant.

Explanation

Modigliani and Miller assume a world without taxes and transaction costs. They (correctly) claim that the validity of their theory should be judged on empirical tests, not the realism of their assumptions. Myron Gordon and John Lintner have championed the "bird-in-the-hand" theory, which gives greater value to firms with high dividend yields because investors perceive dividends to be less risky than capital gains.

(Module 15.1, LOS 15.b)

Related Material

SchweserNotes - Book 2

50. (B) only one is correct.

Explanation

Buying in the open market gives the company the flexibility to choose the timing of the transaction. Thus, Statement 1 is correct. A second way is to buy a fixed number of shares at a fixed price. A company may repurchase stock by making a tender offer to repurchase a specific number of shares at a price that is at a premium to the current market price. They would not be willing to tender their shares for less than the prevailing market price, so Statement 2 is incorrect.

(Module 15.1, LOS 15.i)

Related Material

SchweserNotes - Book 2

51. (A) selling a portion of the company's stock each year.

Explanation

Miller and Modigliani's dividend irrelevancy theory states that shareholders can create their own dividend policy. If a firm does not pay dividends, a shareholder who wants a 4% dividend can "create" it by selling 4% of his or her stock. Note that Modigliani and Miller's theory assumes zero transaction costs or taxes. In actual practice, shareholders will have to pay transaction costs, and tax on any capital gains.

(Module 15.1, LOS 15.b)

Related Material

SchweserNotes - Book 2