***Corporate Finance, 4e, Global Edition* (Berk / DeMarzo)**

**Chapter 23 Raising Equity Capital**

23.1 Equity Financing for Private Companies

*Use the following information to answer the question(s) below.*

Suppose that Galt Ventures, a venture capital firm, raised $250 million of committed capital. Each year over the 10-year life of the fund, 2% of this committed capital will be used to pay Galt's management fee. As is typical in the venture capital industry, Galt will only invest $200 million (committed capital less lifetime management fees). At the end of 10 years, the investments made by the fund are worth $800 million. Galt also charges 20% carried interest on the profits of the fund (net of management fees). Assume that Galt collects the $250 of committed capital and invests $200 million of it immediately. Also assume that Galt collects all proceeds from its investments at the end of the ten year life.

1) The IRR on the investments made by Galt Ventures is closest to:

A) 9.9%

B) 12.4%

C) 14.9%

D) 15.8%

2) The IRR on the investment of a limited partner into Galt Ventures net of all management fees and expenses is closest to:

A) 7.8%

B) 9.9%

C) 12.4%

D) 14.9%

3) Which of the following statements is NOT true regarding Angel Investors?

A) They are typically arranged as limited partnerships.

B) For many start-ups, the first round of outside private equity financing is often obtained from them.

C) Because their capital investment is often large relative to the amount of capital already in place at the firm, they typically receive a sizeable equity share in the business in return for their funds.

D) These investors are frequently friends or acquaintances of the entrepreneur.

4) Which of the following statements is NOT true regarding venture capitalists?

A) They can provide substantial capital for young companies.

B) They offer limited partners a number of advantages over investing directly in start-ups themselves as angel investors.

C) They use their control to protect their investments, so they may therefore perform a key nurturing and monitoring role for the firm.

D) They might invest for strategic objectives in addition to the desire for investment returns.

5) Which of the following is NOT a common name for a corporation that invests in private companies?

A) Strategic investor

B) Corporate partner

C) Venture partner

D) Strategic partner

6) Which of the following statements is FALSE?

A) A venture capital firmis a limited partnership that specializes in raising money to invest in the private equity of young firms.

B) Venture capitalists typically control about three-quarters of the seats on a start-up's board of directors, and often represent the single largest voting block on the board.

C) The initial capital that is required to start a business is usually provided by the entrepreneur herself and her immediate family.

D) Individual investors who buy equity in small private firms are called angel investors.

7) Which of the following statements is FALSE?

A) The general partners work for the venture capital firm and run the venture capital firm; they are called venture capitalists.

B) An important consideration for investors in private companies is their exit strategy—how they will eventually realize the return from their investment.

C) When a company founder decides to sell equity to outside investors for the first time, it is common practice for private companies to issue common stock rather than preferred stock to raise capital.

D) Institutional investors such as pension funds, insurance companies, endowments, and foundations manage large quantities of money.

8) Which of the following statements is FALSE?

A) The preferred stock issued by young companies typically does not pay regular cash dividends.

B) The preferred stock issued by young companies usually gives the owner an option to convert it into common stock on some future date, so it is often called callable preferred stock.

C) If the company runs into financial difficulties, the preferred stockholders have a senior claim on the assets of the firm relative to any common stockholders.

D) Preferred stockissued by mature companies such as banks usually has a preferential dividend and seniority in any liquidation and sometimes special voting rights.

*Use the information for the question(s) below.*

You founded your own firm three years ago. You initially contributed $200,000 of your own money and in return you received 2 million shares of stock. Since then, you have sold an additional 1 million shares of stock to angel investors. You are now considering raising capital from a venture capital firm. This venture capital firm would invest $5 million and would receive 2 million newly issued shares in return.

9) The post-money valuation of your firm is closest to:

A) $12.5 million

B) $5.2 million

C) $10.0 million

D) $5.0 million

10) Assuming that this is the venture capitalist's first investment in your firm, what percentage of the firm will the venture capitalist own?

A) 50%

B) 40%

C) 25%

D) 33%

11) Assuming that this is the venture capitalist's first investment in your firm, what percentage of the firm will you own?

A) 50%

B) 40%

C) 33%

D) 25%

12) Assuming that this is the venture capitalist's first investment in your firm, the post-money valuation of your shares are closest to:

A) $5.0 million

B) $12.5 million

C) $4.0 million

D) $2.5 million

13) Assuming that this is the venture capitalist's first investment in your firm, the post-money valuation of the angel investor's shares are closest to:

A) $12.5 million

B) $4.0 million

C) $5.0 million

D) $2.5 million

14) The share of any positive return generated by venture capital firms that is taken by the firm's partners is known as:

A) carried interest.

B) partner return.

C) carried capital.

D) angel interest.

15) When a private equity firm purchases the outstanding equity of a publicly traded firm, thereby taking the company private, the transaction is called a(n):

A) private leveraged transaction.

B) leveraged buyout.

C) cash offer.

D) initial public offering.

16) A(n) \_\_\_\_\_\_\_\_ invests in the equity of existing privately held firms.

A) venture capital firm

B) private debt firm

C) vulture fund

D) private equity firm

23.2 The Initial Public Offering

1) Which of the following statements is FALSE?

A) The process of selling stock to the public for the first time is called a seasoned equity offering (SEO).

B) Public companies typically have access to much larger amounts of capital through the public markets.

C) By going public, companies give their private equity investors the ability to diversify.

D) The two advantages of going public are greater liquidity and better access to capital.

2) Which of the following statements is FALSE?

A) Once a company goes public, it must satisfy all of the requirements of public companies.

B) Organizations such as the Securities and Exchange Commission (SEC), the securities exchanges (including the New York Stock Exchange and the Nasdaq), and Congress (through the Sarbanes-Oxley Act of 2002) adopted new standards that focused on more thorough financial disclosure, greater accountability, and more stringent requirements for the board of directors.

C) The major advantage of undertaking an IPO is also one of the major disadvantages of an IPO: When investors diversify their holdings, the equity holders of the corporation become more concentrated.

D) Several high profile corporate scandals during the early part of the twenty-first century prompted tougher regulations designed to address corporate abuses.

3) Which of the following statements is FALSE?

A) After deciding to go public, managers of the company work with an underwriter, an investment banking firm that manages the offering and designs its structure.

B) The shares that are sold in the IPO may either be new shares that raise new capital, known as a secondary offering, or existing shares that are sold by current shareholders (as part of their exit strategy), known as a primary offering.

C) Many IPOs, especially the larger offerings, are managed by a group of underwriters.

D) At an IPO, a firm offers a large block of shares for sale to the public for the first time.

4) Which of the following statements regarding best efforts IPOs is FALSE?

A) For smaller IPOs, the underwriter commonly accepts the deal on thisbasis.

B) The underwriter does not guarantee that the stock will be sold, but instead tries to sell the stock for the best possible price.

C) Often these arrangements have an all-or-none clause: either all of the shares are sold in the IPO, or the deal is called off.

D) If the entire issue does not sell out, the underwriter is on the hook.

5) Which of the following statements regarding firm commitment IPOs is FALSE?

A) If the entire issue does not sell out, the remaining shares must be sold at a lower price and the underwriter must take the loss.

B) The underwriter purchases the entire issue (at a the offer price) and then resells it at a slightly higher price to interested investors.

C) It is the most common underwriting arrangement.

D) The underwriter guarantees that it will sell all of the stock at the offer price.

6) Which of the following statements is FALSE?

A) In recent years, the investment banking firm of W.R. Hambrecht and Company has attempted to change the IPO process by selling new issues directly to the public using an online auction IPO mechanism called Open IPO.

B) The lead underwriteris the primary banking firm responsible for managing the deal. The lead underwriter provides most of the advice and arranges for a group of other underwriters, called the syndicate, to help market and sell the issue.

C) Because of the potential conflict of interest, the underwriter will not make a market in the stock after the issue.

D) The SEC requires that companies prepare a registration statement, a legal document that provides financial and other information about the company to investors, prior to an IPO. Company managers work closely with the underwriters to prepare this registration statement and submit it to the SEC.

7) A part of the registration statement, called the preliminary prospectus, circulates to investors before the stock is offered. This preliminary prospectus is also called a(n):

A) IPO filing.

B) 10-K filing.

C) blue whale.

D) red herring.

8) Which of the following statements is FALSE?

A) Once the issue price (or offer price) is set, underwriters may invoke another mechanism to protect themselves against a loss—the over-allotment allocation.

B) Before the offer price is set, the underwriters work closely with the company to come up with a price range that they believe provides a reasonable valuation for the firm.

C) Before an IPO, the company prepares the final registration statement and final prospectuscontaining all the details of the IPO, including the number of shares offered and the offer price.

D) A "road trip" is where senior management and the lead underwriters travel around the country (and sometimes around the world) promoting the company and explaining their rationale for the offer price to the underwriters' largest customers—mainly institutional investors such as mutual funds and pension funds.

9) Which of the following statements is FALSE?

A) Underwriters appear to use the information they acquire during the book-building stage to intentionally under price the IPO, thereby reducing their exposure to losses.

B) The blue tooth option allows the underwriter to issue more stock, amounting to 15% of the original offer size, at the IPO offer price.

C) The lead underwriter usually makes a market in the stock and assigns an analyst to cover it.

D) In most cases, the preexisting shareholders are subject to a 180-day lockup; they cannot sell their shares for 180 days after the IPO. Once the lockup period expires, they are free to sell their shares.

10) Which of the following is NOT one of the four characteristics of IPOs that puzzle financial economists?

A) On average, IPOs appear to be underpriced.

B) The long-run performance of a newly public company (three to five years from the date of issue) is superior to the overall market return.

C) The number of issues is highly cyclical.

D) The costs of the IPO are very high, and it is unclear why firms willingly incur such high costs.

23.3 IPO Puzzles

*Use the following information to answer the question(s) below.*

Wyatt Oil has 8 million shares outstanding and is about to issue 10 million new shares in an IPO. The IPO price has been set at $15 per share, and the underwriting spread is 6%. The IPO is a big success with investors, and the share price rises to $35 the first day of trading.

1) The amount that Wyatt Oil raised during the IPO is closest to:

A) $113 million

B) $141 million

C) $150 million

D) $329 million

E) $350 million

2) The amount that Wyatt Oil pays as an underwriting spread is closest to:

A) $6 million

B) $7 million

C) $9 million

D) $17 million

E) $21 million

3) The market value of Wyatt Oil after the IPO is closest to:

A) $329 million

B) $350 million

C) $592 million

D) $630 million

4) Suppose that the post IPO value of Wyatt is its fair market value. Suppose Wyatt could have issued shares directly to investors at their fair market value, in a perfect market with no underwriting spread and no under pricing. If you raise the same amount of funds that you would have with the investment banker handling the underwriting, the share price in this case is closest to:

A) $35

B) $37

C) $46

D) $61

5) The total cost to the firm's original investors due to the market imperfections from the IPO is closest to:

A) $141 million

B) $210 million

C) $280 million

D) $489 million

23.4 The Seasoned Equity Offering

*Use the following information to answer the question(s) below.*

Nielson Motors sold 10 million shares of stock in an SEO. The market price of Nielson's stock at the time was $37.50. Of the 10 million shares sold, 4 million shares were primary shares sold by the company, and the remaining 6 million shares were being sold by the venture capital investors. Assume the underwriter charges 4% of the gross proceeds as an underwriting fee which is shared proportionately between the primary and secondary shares.

1) The amount of money raised by Nielson Motors is closest to:

A) $144 million

B) $150 million

C) $216 million

D) $219 million

2) The amount of money raised by the venture capitalists is closest to:

A) $144 million

B) $150 million

C) $216 million

D) $219 million

3) The amount of money the underwriter will earn on this transaction is closest to:

A) $4 million

B) $6 million

C) $9 million

D) $15 million

Which of the following statements is FALSE?

A) More often than not, firms return to the equity markets and offer new shares for sale, a type of offering called a seasoned equity offering (SEO).

B) Usually, profitable growth opportunities occur throughout the life of the firm, and in some cases it is not feasible to finance these opportunities out of retained earnings.

C) When a firm issues stock using an SEO, it follows many of the same steps as for an IPO. The main difference is that a market price for the stock already exists, so the price-setting process is not necessary.

D) A firm's need for outside capital usually ends at the IPO.

5) Which of the following statements is FALSE?

A) Primary shares are new shares issued by the company.

B) Today, investors become informed about the impending sale of stock by the news media, via a road show, or through the book-building process, so tombstones are purely ceremonial.

C) In a cash offer, the firm offers the new shares to existing shareholders.

D) Historically, intermediaries would advertise the sale of stock (both IPOs and SEOs) by taking out advertisements in newspapers called tombstones.

6) Which of the following statements is FALSE?

A) In a rights offer, the firm offers the new shares only to existing shareholders.

B) Secondary shares are shares sold by existing shareholders, including the company's founder.

C) If a firm's management is concerned that its equity may be under priced in the market, by using a rights offering the firm can continue to issue equity without imposing a loss on its current shareholders.

D) In the United States, most offers are rights offers.

7) Which of the following statements is FALSE?

A) SEO rights offers have lower costs than cash offers.

B) The decision to raise financing externally usually implies that a firm plans to pursue an investment opportunity.

C) Although not as costly as IPOs, seasoned offerings are still expensive.

D) Researchers have found that, on average, the market greets the news of an SEO with a price increase.

8) Which of the following statements is FALSE?

A) The one advantage of a cash offer is that the underwriter takes on a larger role and, therefore, can credibly certify the issue's quality.

B) SEO underwriting fees average about 5% of the proceeds of the issue and, as with IPOs, the variation across issues of different sizes is relatively small.

C) As with IPOs, evidence suggests that companies over perform following a seasoned offering.

D) Often the value destroyed by the price decline can be a significant fraction of the new money raised with a SEO.

9) Luther Industries currently has 100 million shares of stock outstanding at a price of $25 per share. The company would like to raise money and has announced a rights issue. Every existing shareholder will be sent one right per share of stock that he or she owns. The company plans to require twenty rights to purchase one share at a price of $20 per share. The amount of money that Luther will raise through its rights offering is closest to:

A) $500 million

B) $125 million

C) $100 million

D) $400 million

*Use the information for the question(s) below.*

Luther Industries sold 10 million shares of stock in an SEO. The market price of Luther at the time was $25 per share. Of the 10 million shares sold, 6 million shares were primary shares being sold by the company, and the remaining 4 million shares were being sold by venture capitalists. Luther's underwriter charges 5% of the gross proceeds as an underwriting fee.

10) How much money did Luther raise?

11) How much money did the venture capitalists receive?

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**Chapter 24 Debt Financing**

24.1 Corporate Debt

1) What kind of corporate debt must be secured by real property?

A) Mortgage bonds

B) Notes

C) Asset-backed bonds

D) Debentures

2) What kind of corporate debt can be secured by any specified assets?

A) Mortgage bonds

B) Notes

C) Asset-backed bonds

D) Debentures

3) What kind of corporate debt has a maturity of less than 10 years?

A) Asset-backed bonds

B) Debentures

C) Notes

D) Mortgage bonds

4) What kind of unsecured corporate debt has a maturity of less than 10 years?

A) Mortgage bonds

B) Asset-backed bonds

C) Debentures

D) Notes

5) Bonds issued by a local entity, denominated in the local currency, traded in a local market, but purchased by foreigners are called:

A) domestic bonds.

B) Yankee bonds.

C) Eurobonds.

D) foreign bonds.

6) Bonds issued by a foreign company in a local market, intended for local investors, and denominated in the local currency are known as:

A) domestic bonds.

B) Yankee bonds.

C) Eurobonds.

D) foreign bonds.

7) Which of the following statements is FALSE?

A) Global bondscombine the features of domestic, foreign, and Eurobonds, and are offered for sale in several different markets simultaneously.

B) In a leveraged buyout (LBO), a group of private investors purchases all the equity of a public corporation.

C) A term loan is a bank loan that lasts for a specific term.

D) Eurobondsare international bonds that are denominated in the local European currency of the country in which they are issued.

8) Which of the following statements is FALSE?

A) With registered bonds, on each coupon payment date, the bond issuer consults its list of registered owners and mails each owner a check (or directly deposits the coupon payment into the owner's brokerage account).

B) If a coupon bond is issued at a discount, it is called an original issue discount bond.

C) The face value or principal amount of the bond is denominated in standard increments, most often $10,000.

D) In a public offering, the indenture lays out the terms of the bond issue.

9) Which of the following statements is FALSE?

A) In the event of default, the assets not pledged as collateral for outstanding bonds cannot be used to pay off the holders of subordinated debentures until all more senior debt has been paid off.

B) Because more than one debenture might be outstanding, the bondholder's priority in claiming assets in the event of default, known as the bond's seniority, is important.

C) When a firm conducts a subsequent debenture issue that has lower priority than its outstanding debt, the new debt is known as a subordinated debenture.

D) Most debenture issues contain clauses restricting the company from issuing new debt with equal or lower priority than existing debt.

10) Which of the following statements regarding the private debt market is FALSE?

A) Private debt has the advantage that it avoids the cost of registration.

B) Bank loans are an example of private debt, debt that is not publicly traded.

C) Private debt has the disadvantage of being illiquid.

D) The public debt market is larger than the private debt market.

24.2 Other Types of Debt

1) In January 2010, the U.S. Treasury issued a $1000 par, ten-year, inflation-indexed note with a coupon of 4%. On the date of issue, the consumer price index (CPI) was 200. By January 2020, the CPI had increased to 300. The coupon payment that was made in January 2020 is closest to:

A) $20

B) $30

C) $40

D) $50

2) In January 2010, the U.S. Treasury issued a $1000 par, ten-year, inflation-indexed note with a coupon of 4%. On the date of issue, the consumer price index (CPI) was 200. By January 2020, the CPI had increased to 300. The principal payment that was made in January 2020 is closest to:

A) $1000

B) $1020

C) $1030

D) $1500

3) In January 2010, the U.S. Treasury issued a $1000 par, five-year, inflation-indexed note with a coupon of 5%. On the date of issue, the consumer price index (CPI) was 250. By January 2015, the CPI had decreased to 200. The coupon payment that was made in January 2015 is closest to:

A) $20

B) $25

C) $30

D) $40

4) In January 2010, the U.S. Treasury issued a $1000 par, five-year, inflation-indexed note with a coupon of 5%. On the date of issue, the consumer price index (CPI) was 250. By January 2015, the CPI had decreased to 200. The principal payment that was made in January 2015 is closest to:

A) $800

B) $1000

C) $1250

D) $1500

5) Treasury securities that are pure discount bonds with original maturities ranging from a few days to 26 weeks are called:

A) TIPS.

B) Treasury bonds.

C) Treasury notes.

D) Treasury bills.

6) Treasury securities that are semiannual coupon bonds with original maturities of between 1 and 10 years are called:

A) Treasury bonds.

B) Treasury bills.

C) Treasury notes.

D) TIPS.

7) Treasury securities that are semiannual-paying coupon bonds with maturities longer than 10 years are called:

A) Treasury bonds.

B) TIPS.

C) Treasury bills.

D) Treasury notes.

8) Treasury securities that are standard coupon bonds where the outstanding principal is adjusted for inflation are called:

A) Treasury notes.

B) Treasury bonds.

C) TIPS.

D) Treasury bills.

9) Which of the following statements is FALSE?

A) Zero-coupon Treasury securities with maturities longer than one year also trade in the bond market.

B) Treasury securities are initially sold to the public through dealers.

C) Municipal bonds ("munis") are issued by state and local governments.

D) Municipal bonds' distinguishing characteristic is that the income on municipal bonds is not taxable at the federal level.

10) Which of the following statements is FALSE?

A) In the case of a Treasury note or Treasury bond offering, the stop-out yield determines the coupon of the bond and then all bidders pay the discounted value for the bond or note.

B) All competitive bidders submit sealed bids in terms of yields and the amount of bonds they are willing to purchase.

C) In the past, the Treasury has issued bonds with maturities of 30 years (often called long bonds) and 20 years.

D) Noncompetitive bidders (usually individuals) just submit the amount of bonds they wish to purchase and are guaranteed to have their orders filled at the auction.

24.3 Bond Covenants

1) Galt Industries has just issued a callable, $1000 par value, five-year, 6% coupon bond with semiannual coupon payments. The bond can be called at par in three years or anytime thereafter on a coupon payment date. If the bond is currently trading for $978.94, then its yield to maturity is closest to:

A) 3.4%

B) 6.0%

C) 6.5%

D) 6.8%

2) Galt Industries has just issued a callable, $1000 par value, five-year, 6% coupon bond with semiannual coupon payments. The bond can be called at par in three years or anytime thereafter on a coupon payment date. If the bond is currently trading for $978.94, then its yield to call is closest to:

A) 3.4%

B) 6.0%

C) 6.5%

D) 6.8%

3) Rearden Metal has just issued a callable, $1000 par value, twenty-year, 8% coupon bond with semiannual coupon payments. The bond can be called at par in five years or anytime thereafter on a coupon payment date. If the bond is currently trading for $1040.79, then its yield to maturity is closest to:

A) 3.8%

B) 7.0%

C) 7.6%

D) 8.0%

4) Rearden Metal has just issued a callable, $1000 par value, twenty-year, 8% coupon bond with semiannual coupon payments. The bond can be called at par in five years or anytime thereafter on a coupon payment date. If the bond is currently trading for $1040.79, then its yield to call is closest to:

A) 3.8%

B) 7.0%

C) 7.6%

D) 8.0%

5) Which of the following statements is FALSE?

A) If the issuer fails to live up to any covenant, the issuer goes into bankruptcy.

B) The stronger the covenants in the bond contract, the less likely the issuer will default on the bond, and so the lower the interest rate investors will require to buy the bond.

C) Covenantsare restrictive clauses in a bond contract that limit the issuer from taking actions that may undercut its ability to repay the bonds.

D) Bond agreements often contain covenants that restrict the ability of management to pay dividends.

6) Which of the following statements is FALSE?

A) By including more covenants, issuers increase their costs of borrowing.

B) Once bonds are issued, equity holders have an incentive to increase dividends at the expense of debt holders.

C) Covenants may restrict the level of further indebtedness and specify that the issuer must maintain a minimum amount of working capital.

D) If the covenants are designed to reduce agency costs by restricting management's ability to take negative NPV actions that exploit debt holders, then the reduction in the firm's borrowing cost can more than outweigh the cost of the loss of flexibility associated with covenants.

24.4 Repayment Provisions

1) You own a bond with a face value of $1000 and a conversion ratio of 45. The conversion price is closest to:

A) $18

B) $22

C) $45

D) $1000

2) You own a bond with a face value of $1000 and a conversion price of $40. The conversion ratio is closest to:

A) 15

B) 20

C) 25

D) 40

3) Which of the following statements is FALSE regarding a call provision?

A) The issuer can repurchase a fraction of the outstanding bonds in the market or it can make a tender offer for the entire issue.

B) A callprovision allows the issuer to repurchase the bonds at a predetermined price.

C) The call price is generally set at or below, and expressed as a percentage of, the bond's face value.

D) A call feature allows the issuer of the bond the right (but not the obligation) to retire all outstanding bonds on (or after) a specific date (the call date), for the call price.

4) Which of the following statements is FALSE?

A) When bond yields have increased, by exercising the call on the callable bond and then immediately refinancing, the issuer can lower its borrowing costs.

B) To understand how call provisions affect the price of a bond, we first need to consider when an issuer will exercise its right to call the bond.

C) If the call provision offers a cheaper way to retire the bonds the issuer will forgo the option of purchasing the bonds in the open market and call the bonds instead.

D) An issuer can always retire one of its bonds early by repurchasing the bond in the open market.

5) Which of the following statements is FALSE?

A) The holder of a callable bond faces reinvestment risk precisely when it hurts: when market rates are lower than the coupon rate she is currently receiving.

B) When yields have risen, the issuer will not choose to exercise the call on the callable bond.

C) The issuer will exercise the call option only when the prevailing market rate exceeds the coupon rate of the bond.

D) A callable bond is relatively less attractive to the bondholder than the identical non-callable bond.

6) Which of the following statements is FALSE?

A) Before the call date, investors anticipate the optimal strategy that the issuer will follow, and the bond price reflects this strategy.

B) The yield to maturity of a callable bond is calculated as if the bond were called at the earliest opportunity.

C) A callable bond will trade at a lower price (and therefore a higher yield) than an otherwise equivalent non-callable bond.

D) The price of a callable bond can be low when yields are high, but does not rise above the call value when the yield is low.

7) Which of the following statements is FALSE?

A) The assumption that underlies the yield calculation of a callable bond—that it will not be called—is not always realistic, so bond traders often quote the yield to call.

B) The yield to call (YTC)is the annual yield of a callable bond assuming that the bond is called at the earliest opportunity.

C) We can think of the yield to maturity of a callable bond as the interest rate the bondholder receives if the bond is not called and repaid in full.

D) Because the price of a callable bond is higher than the price of an otherwise identical non-callable bond, the yield to maturity of a callable bond will be lower than the yield to maturity for its non-callable counterpart.

8) Which of the following statements regarding sinking fund provisions is FALSE?

A) With a sinking fund, if a bond is trading below its face value, because the bonds are repurchased at par the decision as to which bonds to repurchase is made by lottery.

B) With a sinking fund, instead of repaying the entire principal balance on the maturity date, the company makes regular payments into a sinking fund administered by a trustee over the life of the bond.

C) Sinking fund provisions usually specify a minimum rate at which the issuer must contribute to the fund.

D) Because the sinking fund allows the issuer to repurchase the bonds at par, the option to accelerate the payments is another form of call provision.

9) Which of the following statements is FALSE?

A) A convertible bond can be thought of as a regular bond plus a special type of call option called a warrant.

B) On the maturity date of the bond, the strike price of the embedded warrant in a convertible bond is equal to the face value of the bond divided by the conversion ratio—that is, the conversion price.

C) Calling a convertible bond transfers the remaining time value of the conversion option from shareholders to bondholders.

D) If the stock price is low so that the embedded warrant is deep out-of-the-money, the conversion provision is not worth much and the bond's value is close to the value of a straight bond—an otherwise identical bond without the conversion provision.

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**Chapter 25 Leasing**

25.1 The Basics of Leasing

1) Which of the following statements is FALSE?

A) A lease is a contract between two parties: the lessee and the lessor.

B) Most leases involve little or no upfront payment.

C) The lesseeis the owner of the asset, who is entitled to the lease payments in exchange for lending the asset.

D) At the end of the contract term, the lease specifies who will retain ownership of the asset and at what terms.

2) Which of the following statements is FALSE?

A) In a direct lease,the lessor is the manufacturer (or a primary dealer) of the asset.

B) The lease specifies any cancellation provisions, the options for renewal and purchase, and the obligations for maintenance and related servicing costs.

C) If a firm already owns an asset it would prefer to lease, it can arrange a sale and leaseback transaction.

D) With many leases, the lessor provides the initial capital necessary to purchase the asset, and then receives and retains the lease payments.

3) Which of the following statements is FALSE?

A) In a leveraged lease, the lessor borrows from a bank or other lender to obtain the initial capital for the purchase, using the lease payments to pay interest and principal on the loan.

B) In some circumstances, the lessor is not an independent company but rather a separate business partnership, called a special-purpose entity (SPE), which is created by the lessor for the sole purpose of obtaining the lease.

C) In a direct lease, the lessor is not the manufacturer, but is often an independent company that specializes in purchasing assets and leasing them to customers.

D) SPEs are commonly used in synthetic leases, which are designed to obtain specific accounting and tax treatment.

4) A lease that gives the lessee the option to purchase the asset at its fair market value at the termination of the lease is called a:

A) fair market value cap lease.

B) fair market value lease.

C) $1.00 out lease.

D) fixed price lease.

5) A lease where ownership of the asset transfers to the lessee at the end of the lease for a nominal cost is called a:

A) fair market value cap lease.

B) fixed price lease.

C) $1.00 out lease.

D) fair market value lease.

6) A lease where the lessee has the option to purchase the asset at the end of the lease for a set price that is set upfront in the lease contract is called a:

A) fixed price lease.

B) $1.00 out lease.

C) fair market value lease.

D) fair market value cap lease.

7) A lease where the lessee can purchase the asset at the minimum of its fair market value and a fixed price is called a:

A) $1.00 out lease.

B) fixed price lease.

C) fair market value lease.

D) fair market value cap lease.

8) Which of the following statements is FALSE?

A) Because we are getting the entire asset when we purchase it with the loan, the loan payments are higher than the lease payments.

B) In a perfect market, the cost of leasing and then purchasing the asset is equivalent to the cost of borrowing to purchase the asset.

C) With a lease we are financing the entire cost of the asset, with a standard loan we are financing only the cost of the economic depreciation of the asset during its life.

D) The amount of the lease payment will depend on the purchase price, the residual value, and the appropriate discount rate for the cash flows.

9) Which of the following statements is FALSE?

A) Absent market imperfections, leases represent another form of zero-NPV financing available to a firm, and the Modigliani-Miller propositions apply: Leases neither increase nor decrease firm value, but serve only to divide the firm's cash flows and risks in different ways.

B) In a perfect market, the cost of leasing is equivalent to the cost of purchasing and reselling the asset.

C) Each lease agreement can be tailored to fit the precise nature of the asset and the needs of the parties at hand.

D) Features of leases will be priced as part of the lease payment. Terms that give valuable options to the lessee lower the amount of the lease payments, whereas terms that restrict these options will raise them.

10) Which of the following statements is FALSE?

A) Leases may include early cancellation options that allow the lessee to end the lease early (perhaps for a fee).

B) The cost of the lease will depend on the asset's residual value, which is its book value at the end of the lease.

C) Leases may allow the lessee to trade in and upgrade the equipment to a newer model at certain points in the lease.

D) Leases may contain buyout options that allow the lessee to purchase the asset before the end of the lease term.

*Use the information for the question(s) below.*

Suppose the purchase price of a bulldozer is $90,000, its residual value in four years is certain to be $15,000, and there is no risk that the lessee will default on the lease. Assume that capital markets are perfect and the risk-free interest rate is 6% APR with monthly compounding.

11) The monthly lease payments for a four year lease of the bulldozer are closest to:

A) $1870

B) $1825

C) $1750

D) $2115

12) Suppose that instead of leasing the bulldozer, the company is considering purchasing a bulldozer outright by borrowing the purchase price using a four-year annuity loan. The monthly loan payments for a four year loan to purchase the bulldozer are closest to:

A) $2115

B) $1825

C) $1870

D) $1750

13) Calculate the monthly lease payments for a four year $1.00 out lease of the bulldozer.

14) Calculate the monthly lease payments for a four year fixed price lease that allows the lessee to buy the bulldozer at the end of the lease for $8000.

25.2 Accounting, Tax, and Legal Consequences of Leasing

1) The lease is treated as a capital lease (financial lease) for the lessee and must be listed on the firm's balance sheet if it satisfies any of the following conditions EXCEPT:

A) the lease contains an option to purchase the asset at its fair market value.

B) the present value of the minimum lease payments at the start of the lease is 90% or more of the asset's fair market value.

C) the title to the property transfers to the lessee at the end of the lease term.

D) the lease term is 75% or more of the estimated economic life of the asset.

2) A lease will be treated as a non-tax lease if it satisfies any of the following conditions EXCEPT:

A) the property may be acquired at the fair market value of the asset at the time when the option may be exercised.

B) some portion of the lease payments is specifically designated as interest or its equivalent.

C) the lessee receives ownership of the asset on completion of all lease payments.

D) the total amount that the lessee is required to pay for a relatively short period of use constitutes an inordinately large proportion of the total value of the asset.

3) Which of the following statements regarding operating leases is FALSE?

A) They are also called finance leases.

B) The leaseis viewed as a rental for accounting purposes.

C) The lessee reports the entire lease payment as an operating expense.

D) They are disclosed in the footnotes of the lessee's financial statements.

4) Which of the following statements regarding capital leases is FALSE?

A) Because capital leases increase the apparent leverage on the firm's balance sheet, firms sometimes prefer to have a lease categorized as an operating lease to keep it off the balance sheet.

B) The firm does not report the present value of the future lease payments as a liability on the balance sheet.

C) The asset acquired is listed on the lessee's balance sheet, and the lessee incurs depreciation expenses for the asset.

D) They are viewed as an acquisition for accounting purposes.

5) Which of the following statements is FALSE?

A) The decision to lease is often driven by real-world market imperfections related to leasing's accounting, tax, and legal treatment.

B) When publicly traded firms disclose leasing transactions in their financial statements, they must follow the recommendations of the Financial Accounting Standards Board (FASB).

C) In its Statement of Financial Accounting Standards No. 13 (FAS13), the FASB provides specific criteria that distinguish a true tax lease from a non-tax lease.

D) The categories used to report leases on the financial statements affect the values of assets on the balance sheet, but they have no direct effect on the cash flows that result from a leasing transaction.

6) Which of the following statements is FALSE?

A) If the lease is deemed to be a true lease, the firm is assumed to have effective ownership of the asset and the asset is protected against seizure.

B) Although the legal ownership of the asset resides with the lessor, in a non-tax leasethe lessee receives the depreciation deductions.

C) The treatment of leased property in bankruptcy will depend on whether the lease is classified as a security interest or a true lease by the bankruptcy judge.

D) In a non-tax lease**, t**he interest portion of the lease payment is interest income for the lessor.

7) Which of the following statements regarding leases and bankruptcy is FALSE?

A) Operating and true tax leases are generally viewed as true leases by the courts, whereas capital and non-tax leases are more likely to be viewed as a security interest.

B) By retaining ownership of the asset, the lessor has the right to repossess it if the lease payments are not made, even if the firm seeks bankruptcy protection.

C) If a lease contract is characterized as a true lease in bankruptcy, the lessor is in a somewhat superior position than a lender if the firm defaults.

D) If the lease is classified as a true leasein bankruptcy, then the lessee retains ownership rights over the asset.

8) Which of the following statements regarding leases and taxes is FALSE?

A) In a non-tax lease**, t**he lessee can deduct the interest portion of the lease payments as an interest expense.

B) In a true tax lease, the lease payments are treated as revenue for the lessor.

C) In a true tax lease, the lessee receives the depreciation deductions associated with the ownership of the asset.

D) The IRS separates leases into two broad categories: true tax leases and non-tax leases.

*Use the table for the question(s) below.*

Luther Industries currently has the following balance sheet (in thousands of dollars):

|  |  |  |  |
| --- | --- | --- | --- |
| **Assets** |  | **Liabilities** |  |
| Cash | $500 | Debt | $4500 |
| Property, Plant, and Equipment | $7000 | Equity | $3000 |
| Total Assets | $7500 | Total Debt plus Equity | $7500 |

Luther is about to add a new fleet of delivery trucks. The price of the fleet is $1.5 million.

9) If Luther acquires the new fleet of delivery trucks using a capital lease, Luther's Debt to Equity ratio will be closest to:

A) 0.66

B) 1.5

C) 0.80

D) 2.0

10) If Luther acquires the new fleet of delivery trucks using an operating lease, Luther's Debt to Equity ratio will be closest to:

A) 2.0

B) 1.5

C) 0.80

D) 0.66

25.3 The Leasing Decision

*Use the following information to answer the question(s) below.*

Rearden Metal is considering the purchase of a new blast furnace costing a total of $5 million dollars. This furnace will qualify for accelerated depreciation: 20% can be expense immediately, followed by 32%, 19.2%, 11.52%, 11.52% and 5.76% over the next five years. However, because of Rearden's substantial tax loss carry forwards, Rearden estimates its marginal tax rate to be only 10% over the next five years. Since Rearden will get very little tax benefit from the depreciation expense, they consider leasing the furnace instead. Suppose that Rearden and the lessor face the same 8% borrowing rate, but the lessor has a 40% marginal tax rate. Assume that the furnace is worthless after five years, the lease term is five years, and a lease would qualify as a true tax lease.

1) Assuming that Rearden's annual lease payments are $1.1 million, then the effective after-tax lease borrowing rate is closest to:

A) 8.0%

B) 12.8%

C) 15.4%

D) 17.0%

2) Assuming that Rearden's annual lease payments are $1.2 million, then the amount of the lease-equivalent loan is closest to:

A) $3.8 million

B) $3.9 million

C) $4.0 million

D) $4.2 million

3) Assuming that Rearden's annual lease payments are $1.2 million, then the amount of the savings in year 0 from leasing is closest to:

A) $3.8 million

B) $3.9 million

C) $4.0 million

D) $4.2 million

4) Assuming that Rearden's annual lease payments are $1.2 million, and using the direct method, the NPV of leasing is closest to:

A) ($165,000)

B) ($95,000)

C) $0

D) $95,000

5) Assuming that Rearden's annual lease payments are $1.2 million, then the effective after-tax lease borrowing rate is closest to:

A) 7.2%

B) 8.0%

C) 8.8%

D) 9.1%

6) Assuming that Rearden's annual lease payments are $1.2 million, then Rearden Metal should:

A) lease the furnace since the amount saved in year zero from leasing is greater than the amount of the lease equivalent loan.

B) buy the furnace since the amount saved in year zero from leasing is greater than the amount of the lease equivalent loan.

C) lease the furnace since the amount saved in year zero from leasing is less than the amount of the lease equivalent loan.

D) buy the furnace since the amount saved in year zero from leasing is less than the amount of the lease equivalent loan.

7) Assuming that Rearden's annual lease payments are $1.1 million, then the amount of the lease-equivalent loan is closest to:

A) $3.7 million.

B) $3.8 million.

C) $3.9 million.

D) $4.0 million.

8) Which of the following statements is FALSE?

A) Lease payments are a fixed obligation of the firm.

B) The risk of the lease payments is no greater than the risk of secured debt, so it is reasonable to discount the lease payments at the firm's secured borrowing rate.

C) If a firm purchases a piece of equipment, the expense is a capital expenditure. Therefore, the purchase price can be depreciated over time, generating a depreciation tax shield.

D) If the equipment is leased and the lease is a non-tax lease, there is no capital expenditure, but the lease payments are an operating expense.

9) Which of the following statements is FALSE?

A) The lease-equivalent loan is the loan that is required on the purchase of the asset that leaves the purchaser with the same obligations as the lessor would have.

B) Lease obligations themselves could trigger financial distress.

C) When a firm enters into a lease, it is committing to lease payments that are a fixed future obligation of the firm.

D) When a firm leases an asset, it is effectively adding leverage to its capital structure (whether or not the lease appears on the balance sheet for accounting purposes).

10) Which of the following statements is FALSE?

A) We can compare leasing to buying the asset using equivalent leverage by discounting the incremental cash flows of leasing versus buying using the after-tax borrowing rate.

B) A non-tax lease is attractive if it offers a better interest rate than would be available with a loan.

C) Evaluating a true tax lease is much more straightforward than evaluating a non-tax lease.

D) To determine whether a non-tax lease offers a better rate, we discount the lease payments at the firm's pre-tax borrowing rate and compare it to the purchase price of the asset.

25.4 Reasons for Leasing

*Use the following information to answer the question(s) below.*

Rearden Metal is considering the purchase of a new blast furnace costing a total of $5 million dollars. This furnace will qualify for accelerated depreciation: 20% can be expense immediately, followed by 32%, 19.2%, 11.52%, 11.52% and 5.76% over the next five years. However, because of Rearden's substantial tax loss carry forwards, Rearden estimates its marginal tax rate to be only 10% over the next five years. Since Rearden will get very little tax benefit from the depreciation expense, they consider leasing the furnace instead. Suppose that Rearden and the lessor face the same 8% borrowing rate, but the lessor has a 40% marginal tax rate. Assume that the furnace is worthless after five years, the lease term is five years, and a lease would qualify as a true tax lease.

1) The lease rate for which the lessor will break even is closest to:

A) $1,110,000

B) $1,130,000

C) $1,150,000

D) $1,160,000

2) The lease rate for which Rearden will break even is closest to:

A) $1,110,000

B) $1,130,000

C) $1,150,000

D) $1,160,000

3) Which of the following statements is FALSE?

A) For a lease to be attractive to both the lessee and the lessor, the gains must come from some underlying economic benefits that the leasing arrangement provides.

B) With a true tax lease, the lessor replaces depreciation and interest tax deductions with a deduction for the lease payments.

C) Generally speaking, if the asset's tax depreciation deductions are more rapid than its lease payments, a true tax lease is advantageous if the lessor is in a higher tax bracket than the lessee.

D) A tax gain occurs if the lease shifts the more valuable deductions to the party with the higher tax rate.

4) Which of the following statements is FALSE?

A) If a firm only needs to use the asset for a short time, it is probably less costly to lease it than to buy and resell the asset.

B) While owners of assets are likely to resell them only if the assets are "lemons," a short-term lease can commit the user of an asset to return it regardless of its quality. In this way, leases can help mitigate the adverse selection problem in the used goods market.

C) Car dealerships are in a better position to sell a used car at the end of a lease than a consumer is.

D) If the asset's tax depreciation deductions are faster than its lease payments, there are tax gains from a true tax lease if the lessor is in a lower tax bracket than the lessee.

5) Which of the following statements is FALSE?

A) By offering assets together with complementary services, lessors can achieve efficiency gains and offer attractive lease rates.

B) Assets leased under a true lease are afforded bankruptcy protection and cannot be seized in the event of default.

C) Because of the higher recovery value in the event of default, a lessor may be able to offer more attractive financing through the lease than an ordinary lender could.

D) Lessors often have efficiency advantages over lessees in maintaining or operating certain types of assets.

6) Which of the following statements is FALSE?

A) Most financial analysts and sophisticated investors consider operating leases (which must be listed in the footnotes of the financial statements) to be additional sources of leverage.

B) By carefully avoiding the four criteria that define a operating lease for accounting purposes, a firm can avoid listing the long-term lease as a liability.

C) Because a lease is equivalent to a loan, the firm can increase its actual leverage without increasing the debt-to-equity ratio on its balance sheet.

D) For most large corporations, the amount of leverage the firm can obtain through a lease is unlikely to exceed the amount of leverage the firm can obtain through a loan.

7) Which of the following statements is FALSE?

A) Leasing allows the party best able to bear the risk to hold it. For example, small firms with a low tolerance for risk may prefer to lease rather than purchase assets.

B) When the lessor is the manufacturer, a lease in which the lessor bears the risk of the residual value can improve incentives and lower agency costs.

C) For leases in which the lessor retains a substantial interest in the asset's residual value, the lessee has more of an incentive to take proper care of an asset that is leased rather than purchased.

D) Whether they appear on the balance sheet or not, lease commitments are a liability for the firm.