

# CHAPTER 11

## STOCKHOLDERS' EQUITY: PAID-IN CAPITAL

### Suggested answers to discussion questions

1. Large corporations are often said to be *publicly owned* because they are literally owned by the general public. The capital stock of many large corporations is actively traded on organized stock exchanges, such as the New York Stock Exchange. Anyone may purchase an ownership interest in such corporations, even if that interest is but a single share of capital stock. Many large corporations have hundred of thousands, even millions, of individual stockholders.
2. a. *Owners' liability.* Sole proprietors are personally liable for the debts of the business. A corporation, however, is responsible for its own debts; the stockholders of a corporation are not personally liable for the debts of the business entity. Thus, the amount of money that a stockholder might lose by investing in a corporation is limited to the amount of his or her investment.  
b. *Transferability of ownership interest.* A sole proprietor generally must sell his or her entire interest in the business. This creates a new business owned by a new sole proprietor. Shares of stock in a corporation are freely transferable.  
c. *Continuity of existence.* A sole proprietorship is terminated upon sale or abandonment by the owner and upon that person's death or incapacitation. Corporations continue in existence regardless of changes in ownership.  
d. *Federal taxation on income.* A corporation is subject to federal income tax on its income, and stockholders are also subject to a personal income tax on any amounts they receive as dividends. A sole proprietorship is not a taxable entity, but the owner must pay personal taxes on the income earned by the business, whether or not it is actually withdrawn by the owner.
3. There are three basic rights: (1) the right to vote, (2) the right to share in dividends when declared, and (3) the right to share in assets upon liquidation.

A share of preferred stock is typically entitled to cumulative preference to a limited amount of dividends and to a prior claim against assets in case of liquidation; in return, it usually has no voting power.

4. The term *double taxation* refers to the fact that the income of a corporation may be taxed on two separate occasions. First, the income of a corporation is subject to corporate income taxes, which must be paid by the corporation. Second, if the corporation distributes its earnings as dividends to stockholders, the stockholders must pay personal income taxes on the amounts they receive. This double taxation of income is one of the principal disadvantages of the corporate form of business organization.
5. *Paid-in capital* of a corporation represents the amount invested by stockholders and is generally not available for dividends. *Retained earnings* represents the cumulative amount of net income not distributed to shareholders as dividends. The distinction between paid-in capital and retained earnings is useful because it shows how much of the total stockholders' equity represents investments by the owners and how much has been accumulated through profitable operations since the company started in business.
6. Par value represents the *legal capital* per share, that is, the amount below which stockholders' equity cannot be reduced except by losses. Thus, a corporation cannot declare a dividend if this action would reduce total stockholders' equity below the par value of the outstanding stock.

Par value is not an indication of a fair or reasonable market price for a share of stock. The market price of stock is determined by such factors as the profitability and solvency of the issuing company, interest

rates, the amount of dividends paid by the stock, and general market conditions. The market price of a share of stock may be above or below its par value.

7. a. *Cumulative* means that dividends in arrears on preferred stock must be fully paid before any dividends can be paid on common stock.
  - b. *Convertible* means that each share of preferred stock may be returned to the corporation in exchange for a given number of shares of common stock under specified conditions.
  - c. *Callable* means that the corporation has the option of retiring outstanding shares of preferred stock by paying a specified amount to the stockholder.
8. Noncumulative preferred stock is entitled to dividends only if and when they are declared. If noncumulative preferred dividends had not been declared for several years, it would be possible to declare only the current year's dividends on preferred and then declare a dividend on common. Noncumulative preferred stock does not have the protection afforded by the cumulative requirements that any dividends in arrears must be paid before dividends can be paid on common. This means a weak form of dividend preference, and as a result the noncumulative feature is not attractive to most investors.
9. When noncash assets are acquired in exchange for the shares, the most pertinent evidence of the amount that has been received by the corporation is the value of the assets. The accountant should attempt to determine independently and objectively the value of the noncash assets as the basis for the record. This may include retaining the services of an independent firm of appraisers. Often, the most objective evidence of the value of these assets is the market value of the shares given in exchange. If the stock is actively traded it will have an established market value, and we may assume that the shares could have been sold for this amount of cash and the money used to purchase the assets.
10. (a) Cash is classified as an asset; (b) Organization Costs typically are classified as an expense; (c) Preferred Stock, (d) Retained Earnings, (e) Donated Capital, and (f) Additional Paid-in Capital are all classified as stockholders' equity accounts; (g) Income Taxes Payable is classified as a liability.
11. In the baseball team's balance sheet the asset account, Land, and the stockholders' equity account, Donated Capital, will both increase by the current market value of the land received as a donation from the city. The receipt of the donated land will have no effect upon the team's income statement. The Donated Capital account is not regarded as revenue; it is viewed as an element of paid-in capital.
12. a. *Stock transfer agent*. A bank or trust company retained by a corporation to maintain records of stock ownership and transfers.
- b. *Stockholders subsidiary ledger*. A record kept by a corporation showing the number of shares owned by each stockholder.
- c. *Underwriter*. An investment banking company that undertakes to sell new shares of corporate stock to investors. The underwriter usually guarantees the corporation a specified price, and plans to make a profit by selling to individual investors at a slightly higher price.
- d. *Stock registrar*. An independent fiscal agent, usually a large bank, retained by a corporation to control the issuance of stock certificates and provide assurance against overissuance.
13. *Book value per share* indicates the amount of net assets (or stockholders' equity) represented by each share of common stock. It is determined by dividing the total stockholders' equity in the corporation, less the amount assigned to preferred stock (liquidation value plus dividends in arrears) by the number of common shares outstanding. Book value does not represent the amount common stockholders would receive in the event of liquidation. If a corporation were liquidated, many assets would be sold at prices different from their carrying values in the accounting records. The resulting gains or losses would cause stockholders' equity to change accordingly.

14. To compute book value per share of common stock for a company with both preferred stock and common stock outstanding, the starting point is total stockholders' equity, including both preferred and common stock and all other elements of capital. Deduct from this total the preferred stock at its call price and any dividends in arrears. The remainder is the equity of the common stockholders. Divide this amount by the number of shares of common stock outstanding to arrive at book value (or net assets) per share of common stock.
15.
  - a. When a corporation obtains a bank loan there will be no effect upon book value per share of common stock. Assets and liabilities will both increase by the amount of the loan. Net assets, therefore, will be unchanged.
  - b. Declaration of a dividend reduces book value per share. Total assets are not affected by the declaration of a dividend, but liabilities are increased. Net assets (stockholders' equity), therefore, are decreased.
16. A change in the market price of IBM's outstanding shares of capital stock has *no effect* upon IBM's balance sheet. These shares belong to IBM's stockholders, not to IBM. Therefore, a change in the market value of these shares has no effect upon the recorded amounts of IBM's assets, liabilities, or stockholders' equity. IBM's paid-in capital accounts will continue to show the amount received by IBM at the time the capital stock was issued. This historical amount is not affected by subsequent changes in market price.
17. When you ask a stockbroker to purchase shares of stock for you, the stock is purchased on a *secondary market*—in this case the New York Stock Exchange, because that is where Exxon stock is traded. On a secondary market, you are purchasing the stock from another investor. The transaction will have no effect on the financial statements of Exxon.
18. The purpose of a stock split is to reduce the per-share market price of the company's stock *down* to a more appropriate "trading range"—that is, a price that is appealing to a greater number of potential investors.
19. *Treasury stock* is corporate stock that has been issued and then reacquired by the issuing company.

One reason for acquiring treasury stock is to have stock available to issue to officers and employees under profit-sharing agreements, stock options, or bonus plans. Purchases of treasury stock may also be intended to support the market price of the stock or to increase earnings per share.

Treasury stock is not an asset; it represents a reduction in the amount of stockholders' investment in the corporation. For this reason the cost of the treasury shares is reported in the balance sheet as a reduction of the stockholders' equity.
20. The purpose of this rule is to protect corporate creditors, for whom stockholders' equity represents the margin of safety against loss from a shrinkage of asset values. The restriction of retained earnings for dividend purposes to the extent of the cost of treasury shares assures creditors that the stockholders' equity of a corporation will not, as a result of the purchase of treasury shares, be reduced below the amount of paid-in capital. If this restriction were not imposed, a corporation might distribute assets equal to the entire amount of its retained earnings as dividends, and then distribute additional assets in payment for shares of its own stock, thereby reducing the net assets of the corporation below the amount of the paid-in capital or even below the amount of stated (legal) capital.

- Ex. 11-2**
- Double taxation
  - Market value
  - None (Retained earnings is not an amount of cash; it is an element of owners' equity.)
  - Common stock
  - None (Dividends in arrears are prior years' dividends owed to holders of cumulative preferred stock.)
  - None (This statement might be described as the "majority interest." It does not describe the board of directors, who do not necessarily own any stock at all.)
  - Publicly owned corporation
  - Paid-in capital
  - Retained earnings
  - None (Book value is *common stockholders' equity* divided by the number of common shares outstanding.)
  - None (The price of preferred stock varies *inversely* with interest rates.)

**Ex. 11-3**

a. Stockholders' equity:	
8% cumulative preferred stock, \$100 par value, callable at \$106, 5,000 shares authorized, 2,500 shares issued .....	\$ 250,000
Common stock, \$2 stated value, 100,000 shares authorized, 70,000 shares issued .....	140,000
Additional paid-in capital:	
Preferred stock .....	7,500
Common stock .....	<u>770,000</u>
Total paid-in capital .....	\$1,167,500
Retained earnings .....	<u>382,000</u>
Total stockholders' equity .....	<u>\$1,549,500</u>

b. No. The market value of a corporation's stock has no effect on the amount in the financial statements. Capital stock is recorded at the amount for which it was originally issued.

**Ex. 11-4**

a. Total dividends paid in third year .....	\$736,000
Dividends on 9% cumulative preferred stock:	
Dividends ( $\$50 \times .09 \times 40,000 \times 2$ years) .....	\$360,000
Current year's dividend ( $\$50 \times .09 \times 40,000$ ) .....	<u>180,000</u>
Total paid on 9% cumulative preferred stock .....	\$540,000
Dividends on 12% noncumulative preferred stock:	
Current year's dividend ( $\$100 \times .12 \times 8,000$ ) .....	<u>96,000</u>
Total paid on 12% noncumulative preferred stock .....	<u>636,000</u>
Dividends on common stock in third year .....	<u>\$100,000</u>

b. Dividends per share:

Preferred stock, 9% cumulative ( $\$540,000 \div 40,000$ shares) .....	<u>\$13.50 per share</u>
Preferred stock, 12% noncumulative ( $\$96,000 \div 8,000$ shares) .....	<u>\$12.00 per share</u>
Common stock ( $\$100,000 \div 400,000$ shares) .....	<u>\$ 0.25 per share</u>

c. The stockholders' equity section of the balance sheet reports no additional paid-in capital. Thus, the preferred shares must have been issued at their respective par values (\$50 per share for the 9% cumulative preferred stock, and \$100 per share for the noncumulative preferred stock).

- Ex. 11-5**
- 150,000 shares (\$15,000,000 total par value, divided by \$100 par value per share)
  - \$1,050,000 (\$15,000,000 total par value  $\times$  7% or  $150,000 \times \$100 \times 7\%$ )
  - \$16 [(\$20 million par value + \$44 million additional paid-in capital)  $\div$  4,000,000 shares issued]
  - \$35,000,000 legal capital (\$15,000,000 preferred, plus \$20,000,000 common)  
\$79,300,000 total paid-in capital (\$35,000,000 legal capital, plus \$44,300,000 additional paid-in capital)
  - |   |                   |
|---|-------------------|
| Total stockholders' equity .....  | \$143,750,000     |
| Less: Call price of preferred stock (150,000 shares $\times$ \$105) ..... | <u>15,750,000</u> |
| Equity of common stockholders .....                                       | \$128,000,000     |
| Common shares outstanding .....   | 4,000,000         |
| Book value per share (\$128 million $\div$ 4 million shares).....         | <u>\$32</u>       |
  - No. Changes in the market value of capital stock do not directly affect a corporation's financial position and are not reflected in the equity section of the balance sheet.

**Ex. 11-7**

Event	Current Assets	Stockholders' Equity	Net Income	Net Cash Flow (from Any Source)
a	I	I	NE	I
b	NE	I	NE	NE
c	NE	NE	NE	NE
d	D	D	NE	D
e	NE	I	NE	NE

- Ex. 11-8**
- |   |                  |
|---|------------------|
| Net assets (stockholders' equity):                |                  |
| 8% cumulative preferred stock .....               | \$200,000        |
| Common stock, \$5 par, 60,000 shares issued ..... | 300,000          |
| Additional paid-in capital .....                  | <u>452,800</u>   |
| Total paid-in capital .....                       | \$952,800        |
| Less: Deficit .....                               | <u>146,800</u>   |
| Total net assets (stockholders' equity).....      | <u>\$806,000</u> |
  - |   |                  |
|---|------------------|
| Book value per share of common stock:   |                  |
| Total stockholders' equity (from part a).....   | \$806,000        |
| Less: Claims of preferred stockholders (call price of \$220,000 plus dividends in arrears, \$16,000)..... | <u>236,000</u>   |
| Equity of common stockholders .....   | <u>\$570,000</u> |
| Number of shares of common stock outstanding.....   | 60,000           |
| Book value per share (\$570,000 $\div$ 60,000 shares).....  | <u>\$9.50</u>    |
  - No. The book value per share represents the stockholders' share of the net book value of the corporation's assets, not the assets' liquidation values. The stockholders may receive more or less than the book value per share if the corporation is liquidated, depending primarily on the amounts at which the corporation's assets are sold.

<b>Ex. 11-9</b>	a.	Feb. 10	Treasury Stock.....	435,000		
			Cash .....		435,000	
			Purchased 14,500 shares of treasury stock at \$30 per share.			
		June 4	Cash.....	198,000		
			Treasury Stock.....		180,000	
			Additional Paid-in Capital: Treasury Stock Transactions .....		18,000	
			Sold 6,000 shares of treasury stock, cost \$180,000, for \$33 per share.			
		Dec. 22	Cash.....	112,000		
			Additional Paid-in Capital: Treasury Stock Transactions .....	8,000		
	Treasury Stock.....		120,000			
	Sold 4,000 shares of treasury stock, cost \$120,000, for \$28 per share.					

- b. Restriction of retained earnings for treasury stock owned at year-end:  
\$135,000 (4,500 shares still owned × \$30 per share cost)
- c. No, a restriction on retained earnings does not affect the total amount of retained earnings reported in the balance sheet. A restriction of retained earnings is disclosed, but does not reduce the total amount of retained earnings of a company. The restriction on retained earnings simply limits the amount of dividends the corporation can pay as long as it holds treasury stock.

- Ex. 11-10** a. Had the stock been split 2-for-1, it would begin trading at approximately \$50 per share immediately after the split ( $\$100 \div 2 = \$50$ ).
- b. Had the stock been split 4-for-1, it would begin trading at approximately \$25 per share immediately after the split ( $\$100 \div 4 = \$25$ ).
- c. When the market price of a corporation's common stock appreciates in value significantly, as it had in the case of Maxwell Corporation, it may become too expensive for many investors (to get the "best price" per share, investors purchase stock in lots of 100 shares). Thus, the decision to split the company's stock was probably made with the intent of making it more affordable to investors.

**PROBLEM 11-4**  
**GORDON COMMUNICATIONS, INC.**

a.		General Journal													
20															
Jan	6	Cash	2	8	0	0	0	0							
		Common Stock								4	0	0	0		
		Additional Paid-in Capital: Common Stock								2	4	0	0		
		Issued 20,000 shares of \$2 par value common stock at \$14 per share.													
	7	Organization Costs	7	0	0	0									
		Common Stock								1	0	0	0		
		Additional Paid-in Capital: Common Stock								6	0	0	0		
		Issued 500 shares of common stock to Gordon in exchange for services relating to formation of the corporation. Implied issuance price (\$7,000 ÷ 500 shares) = \$14 per share.													
	12	Cash	2	5	0	0	0								
		10% Cumulative Preferred Stock								2	5	0	0		
		Issued 2,500 shares of \$100 par value, 10%, cumulative preferred stock at par value.													
June	4	Land	2	2	5	0	0								
		Common Stock								3	0	0	0		
		Additional Paid-in Capital: Common Stock								1	9	5	0		
		Issued 15,000 shares of common stock in exchange for land valued at \$225,000 (15,000 shares x \$15).													
Nov	15	Dividends (Preferred Stock)	2	5	0	0									
		Dividends Payable								2	5	0	0		
		To record declaration of annual dividend of \$10 per share on 2,500 preferred shares outstanding. Payable Dec. 20.													
Dec	20	Dividends Payable	2	5	0	0									
		Cash								2	5	0	0		
		To record payment of dividend declared Nov. 15.													
	31	Income Summary	1	4	7	2	0								
		Retained Earnings								1	4	7	2		
		To close the Income Summary account for the year.													
	31	Retained Earnings	2	5	0	0									
		Dividends (Preferred Stock)								2	5	0	0		
		To close the Dividends account.													



- a. *Par value* is the legal capital per share—the amount by which stockholders' equity cannot be reduced except by losses. Thus, par value may be viewed as a minimum cushion of equity capital existing for the protection of creditors.

*Book value* per share is equal to the *net assets* represented by each share of common stock. Book value is a historical cost concept, representing the amounts invested by the stockholders, plus the amounts earned and retained by the corporation. By comparing book value with current market value, stockholders may gain insight into whether management has increased or diminished the value of the resources entrusted to their care.

The *market value* of a share of stock is established in the marketplace. It represents the per-share price at which willing sellers can and will sell shares of the stock to willing buyers. Market value is related primarily to investors' future expectations of the company's performance, rather than to historical amounts.

- b. The company's par value—one-tenth of a cent per share—is quite low. However, the corporation is free to set par value at any level that it chooses; the amount of par value has no direct effect upon either book value or market value. It does mean, however, that the amount of the company's legal capital—serving as a cushion for creditors—is quite low.

The fact that book value per share (\$6.50) is far above par value indicates either that (1) the stock initially was issued at a price far above par value, or (2) that the company has retained substantial amounts of earnings.

The market value of \$65 is *10 times* book value. This implies that investors believe that management and product lines make the company worth far more than the amounts of capital historically invested.

The very low par value offers little “cushion” to the company's creditors. On the other hand, a market value of many times book value implies that little cushion is required for creditors' claims to be secure. If the company performs as its market price implies that it will, its earnings and cash flows should make the creditors' positions quite secure. Earnings and cash flows are far more relevant to a company's debt-paying ability than is the cushion provided by par value.

## PROBLEM 11-8 WELLS CORPORATION

<b>a.</b>												
<b>Stockholders' equity:</b>												
Common stock, \$1 par, 50,000 shares authorized and issued											\$	50000
Additional paid-in capital: Common stock												35000
Additional paid-in capital: Treasury stock												5000
<b>Total paid-in capital</b>											<b>\$ 40500</b>	
Retained earnings*												16300
<b>Total stockholders' equity</b>											<b>\$ 56800</b>	
<b>*Computation of retained earnings at Dec. 31, 2002:</b>												
Net income in 2000											\$	82000
Net income in 2001												25000
Net income in 2002												56000
<b>Retained earnings, Dec. 31, 2002</b>											<b>\$ 16300</b>	

- b. The company's book value per share is \$11.36 (\$568,000 total stockholders' equity ÷ 50,000 shares outstanding).
- c. The treasury stock purchase of \$35,000 in 2001 was reported as a financing cash outflow in the statement of cash flows for that year. The reissue of the treasury stock for \$40,000 in the following year was reported as a financing cash inflow in the 2002 statement of cash flows.

## CASE 11-2 WHY DID THE PRICE CHANGE?

- a. The value of a share of common stock is based on investors' expectations about future earnings and cash flows of the business. Thus, the increase in the price of the shares of *McDonnell Douglas* resulted from an increase in investors' expectations about future earnings of the company based on this large order by Saudia Airlines.
- b. The fall in the price of *Citicorp's* common stock probably is based on two factors. The increase in the discount rate by the Federal Reserve Board signals a general increase in interest rates which will affect the required yield on all investments. Since investors will demand a higher yield on their investments, stock and bond prices may suffer an overall decline.

As a financial institution, this increase in the discount rate has additional significance to Citicorp. The increase in the discount rate increases Citicorp's cost of funds, which will reduce its net income, at least in the short run. This reduction in expectations about future earnings will further reduce the bank's stock price.

- c. The visit by the Federal Drug Administration signaled to the market that *Ventitex* may be having problems with approval for one or more of its products. If approval is denied, the company will not be able to sell the products. Therefore, investors are reducing their expectations of the company's future earnings and increasing their assessments of the risk of the business. This caused the stock price to drop.