

# Earnings per Share

## Overview

You may be wondering why an entire chapter is devoted to a topic that you probably previously encountered and mastered in just a few minutes. After all, earnings per share (EPS) is just income divided by the number of shares, right? Right...but then again, that isn't the whole story. If it were, this topic wouldn't have its own chapter.

The first "surprise" you'll find is that the income in the numerator doesn't always equal the income on the income statement. Preferred dividends are taken off of net income to arrive at the numerator. For diluted EPS, other items may also affect the numerator. Those include interest on some convertible bonds and the add-back of preferred dividends for some convertible preferred stock. If this is starting to sound complicated, just wait until we get to the denominator!

The other "surprise" is with respect to the denominator. The denominator has probably always been given to you as a single number of shares in the past. Coming up with that single number can actually be quite complex. Factors that affect the denominator include stock splits, stock dividends, purchase of treasury shares, and the issuance of new shares. For diluted EPS, additional portions of the denominator calculation can include the effect of exercising stock options, warrants, rights, and convertible securities.

Unlike leases and pensions, you don't have to look to the disclosure notes to get to the "good stuff" when it comes to EPS. Not only are basic and diluted EPS required to be listed on the face of the income statement, but companies must also list detailed EPS on the face of the statement for separately stated items such as extraordinary gains or losses and discontinued operations. The disclosure notes provide additional information about the composition of the calculation for the curious.

EPS is one of the most common, and highlighted, figures given for a company during quarterly announcements. The calculations aren't always simple, but analysts and investors find EPS to be an important measure of a company's performance. EPS is useful because it provides for comparability for different sized companies in a single industry and for a single company over time. (i.e., comparing current quarter EPS to the same quarter in the prior year, etc.)

## Learning Objectives

Refer to the Review of Learning Objectives at the end of the chapter. It is crucial that this section of the chapter is second nature to you before you attempt the homework, a quiz, or exam. This important piece of the chapter serves as your CliffsNotes or “cheat sheet” to the basic concepts and principles that must be mastered.

If after reading this section of the chapter you still don't feel comfortable with all of the Learning Objectives covered, you will need to spend additional time and effort reviewing those concepts that you are struggling with.

The following “Tips, Hints, and Things to Remember” are organized according to the Learning Objectives (LOs) in the chapter and should be gone over after reading each of the LOs in the textbook.

## Tips, Hints, and Things to Remember

**LO1** – Know the difference between a simple and a complex capital structure, and understand how dilutive securities affect earnings per share computations.

**How?** A company that doesn't have any securities that can be converted into common shares (i.e., they only have common shares or common shares and non-convertible preferred shares) has a simple capital structure and only need to worry about basic EPS. A company with potentially convertible securities (i.e., options, warrants, rights, convertible bonds, or convertible preferred stock) has a complex capital structure and must compute both basic and diluted EPS.

**LO2** – Compute basic earnings per share, taking into account the sale and repurchase of stock during the period as well as the effects of stock splits and stock dividends.

**How?** There are two things to remember for the computation of a basic EPS denominator. When shares are issued or bought back, the shares need to go into the denominator based on how long they were outstanding. On the other hand, when stock dividends or stock splits occur, they need to go into the denominator for the entire year as if they were outstanding all year long.

LO3 – Use the treasury stock method to compute diluted earnings per share when a firm has outstanding stock options, warrants, and rights.

**How?** The treasury stock method is a three-step process. The first step is to compute how much money would come in if the the options, warrants, or rights are exercised (exercise price  $\times$  number of shares). The second step is to divide the result by the average market price. The final step is to subtract the second number from the number of shares that were used in the first step. The answer is then added to the diluted EPS calculation denominator for the portion of the year in which they existed.

Be careful with that last sentence. We'll get to the details of what that means in LO5.

LO4 – Use the if-converted method to compute diluted earnings per share when a company has convertible preferred stock or convertible bonds outstanding.

**How?** The if-converted method affects both the numerator and denominator. For the numerator, don't forget to take out the tax benefit if you are dealing with convertible bonds. There is no tax effect for convertible preferred stock.

Always check for antidilution. If the EPS goes up, because of the calculation looking at what would happen if the security was converted, then you can disregard that portion of the calculation and not include it in diluted EPS. Diluted EPS, as the name implies, should always be less than basic EPS. If EPS is increasing by converting securities, then you aren't diluting EPS.

LO5 – Factor into the diluted earnings per share computations the effect of actual conversion of convertible securities or the exercise of options, warrants, or rights during the period, and understand the antidilutive effect of potential common shares when a firm reports a loss from continuing operations.

**How?** In LO3, the sentence you were cautioned to be careful with not only means that if the options were granted halfway through the year that the result from the final step is multiplied by 50 percent, but it also means that if the options existed on the first day of the year and were actually exercised halfway through the year that they should be multiplied by 50 percent as well. They would be included in the denominator at 100 percent (i.e., without regard for the treasury method steps in the preceding paragraph) for the final half of the year. Here's an example:

If a company had 10,000 stock options outstanding at the beginning of the year that were exercised halfway through the year, what would be the effect on the denominator for diluted EPS purposes if the exercise price was \$5 and the average market price during the year was \$12?

The denominator would be increased as follows:

$$0.50 \times [10,000 - (10,000 \times 5)/12] + 0.50 \times 10,000 = 7,917$$

One final note with regard to antidilution and stock options is that you need not do the calculation and see its effect on EPS to determine antidilution. Just look at the exercise price and the average market price. If the average market price is higher than the exercise price, then antidilution will not be the case and the calculation should be performed. If, on the other hand, the exercise price is higher, then you can skip it because antidilution will be the result.

**LO6 – Determine the order in which multiple potentially dilutive securities should be considered in computing diluted earnings per share.**

**How?** When multiple potentially dilutive securities exist, they should be added to the EPS calculation with the most dilutive security going first. That one is then followed by the next most dilutive and so on until the remaining securities are antidilutive. At that point, the calculation stops and you have diluted EPS.

**LO7 – Understand the disclosure requirements associated with basic and diluted earnings per share computations.**

**How?** Both basic and diluted EPS (if different from basic) are required to be presented on the face of the income statement for all years presented. They are broken down and shown not just for net income but also for any separately stated items.

Disclosure notes related to EPS include a reconciliation of both the numerators and denominators, preferred dividend effects, antidilutive securities, and subsequent events that would materially change EPS.

**LO8 – Make complex earnings per share computations involving multiple potentially dilutive securities.**

*The following sections, featuring various multiple choice questions, matching exercises, and problems, along with solutions and approaches to arriving at the solutions, is intended to develop your problem-solving and critical-thinking abilities. While learning through trial and error can be effective for improving your quiz and exam scores, and it can be a more interesting way to study than merely re-reading a chapter, that is only a secondary objective in presenting this information in this format.*

*The main goal of the following sections is to get you thinking, “How can I best approach this problem to arrive at the correct solution—even if I don’t know enough at this point to easily arrive at the proper results?” There is not one simple approach that can be applied to all questions to arrive at the right answer. Think of the following approaches as possibilities, as tools that you can place in your problem-solving toolkit—a toolkit that should be consistently added to. Some of the tools have yet to even be created or thought of. Through practice, creative thinking, and an ever-expanding knowledge base, you will be the creator of the additional tools.*

## Multiple Choice

**MC18-1 (LO1)** The EPS computation that is forward-looking and based on assumptions about future transactions is

- a. basic EPS.
- b. diluted EPS.
- c. continuing operations EPS.
- d. extraordinary EPS.

**MC18-2 (LO1)** Under current GAAP, a company with a complex capital structure and potential earnings per share dilution must present

- a. primary and fully diluted earnings per share.
- b. basic and diluted earnings per share.
- c. basic and primary earnings per share.
- d. basic earnings per share and cash flow per share.

**MC18-3 (LO2)** On December 31, 2010, Credence Company had 600,000 shares of common stock issued and outstanding. Credence issued a 10 percent stock dividend on July 1, 2011. On October 1, 2011, Credence reacquired 48,000 shares of its common stock and recorded the purchase using the cost method of accounting for treasury stock. What number of shares should be used in computing basic earnings per share for the year ended December 31, 2011?

- a. 612,000
- b. 618,000
- c. 648,000
- d. 660,000

**MC18-4 (LO2)** On December 31, 2010, the Momentum Company had 150,000 shares of common stock issued and outstanding. On April 1, 2011, an additional 30,000 shares of common stock were issued. Momentum's net income for the year ended December 31, 2011, was \$517,500. During 2011, Momentum declared and paid \$300,000 in cash dividends on its nonconvertible preferred stock and \$100,000 on its common stock. The basic earnings per common share, rounded to the nearest cent, for the year ended December 31, 2011, should be

- a. \$3.00.
- b. \$1.26.
- c. \$1.21.
- d. \$68.

**MC18-5 (LO3)** The Moonspell Company had 150,000 shares of common stock issued and outstanding on December 31, 2010. On July 1, 2011, an additional 25,000 shares of common stock were issued for cash. Moonspell also had unexercised stock options to purchase 20,000 shares of common stock at \$15 per share outstanding at the beginning and end of 2011. The market price of Moonspell's common stock was \$20 throughout 2011. What number of shares should be used in computing diluted earnings per share for the year ended December 31, 2011?

- a. 182,500
- b. 177,500
- c. 172,500
- d. 167,500

**MC18-6 (LO3)** Maynard Enterprises had 200,000 shares of common stock issued and outstanding on December 31, 2010. On July 1, 2011, Maynard issued a 10 percent stock dividend. Unexercised stock options to purchase 40,000 shares of common stock (adjusted for the 2011 stock dividend) at \$20 per share were outstanding at the beginning and end of 2011. The market price of Maynard's common stock (which was not affected by the stock dividend) was \$25 per share during 2011. Net income for the year ended December 31, 2011, was \$1,100,000. What should be Maynard's 2011 diluted earnings per common share, rounded to the nearest cent?

- a. \$4.23
- b. \$4.82
- c. \$5.00
- d. \$5.05

**MC18-7 (LO4)** On January 1, 2011, Benighted Company issued at par \$50,000 of 4 percent bonds convertible, in total, into 5,000 shares of Benighted's common stock. No bonds were converted during 2011. Throughout 2011, Benighted had 5,000 shares of common stock outstanding. Benighted's 2011 net income was \$5,000. Benighted's income tax rate is 40 percent. No potentially dilutive securities other than the convertible bonds were outstanding during 2011. Benighted's diluted earnings per share for 2011 would be

- a. \$0.58.
- b. \$0.62.
- c. \$0.70.
- d. \$1.16.

**MC18-8 (LO4)** During its fiscal year, Drill Doctor had net income of \$100,000 (no extraordinary items), 50,000 shares of common stock, and 10,000 shares of preferred stock outstanding. Drill Doctor declared and paid dividends of \$0.50 per share to common shareholders and \$6.00 per share to preferred shareholders. The preferred stock is convertible into common stock on a share-for-share basis. For the year, Drill Doctor should report diluted earnings (loss) per share of

- a. \$(0.80).
- b. \$0.80.
- c. \$1.00.
- d. \$1.67.

**MC18-9 (LO5)** The Travelers Corporation had 200,000 shares of common stock and 10,000 shares of cumulative, \$6 preferred stock outstanding during 2011. The preferred stock is convertible at the rate of three shares of common per share of preferred. For 2011, the company had a \$60,000 net loss from operations and declared no dividends. Travelers should report which of the following amounts (rounded to the nearest cent) for its 2011 diluted loss per share?

- a. \$(0.26)
- b. \$(0.52)
- c. \$(0.58)
- d. \$(0.60)

**MC18-10 (LO6)** For a company having several different issues of convertible securities and/or stock options and warrants, the FASB requires selection of the combination of securities producing

- a. the lowest possible earnings per share.
- b. the highest possible earnings per share.
- c. the earnings per share figure midway between the lowest possible and the highest possible earnings per share.
- d. any earnings per share figure between the lowest possible and the highest possible earnings per share.

**MC18-11 (LO7)** In the financial statements, basic and complex EPS figures for income from continuing operations should be reported

- a. in the accompanying notes.
- b. in management's discussion and analysis.
- c. on the income statement.
- d. on the statement of cash flows.



## Matching

**Matching 18-1 (LO1, LO3, LO4)** Listed below are the terms and associated definitions from the chapter for LO1 through LO4. Match the correct definition letter with each term number.

- |                                  |  |
|----------------------------------|--|
| ___ 1. dilution of earnings      | a. securities whose assumed exercise or conversion results in a reduction in earnings per share (or increase in loss per share)  |
| ___ 2. antidilution of earnings  | b. dividends per share divided by earnings per share   |
| ___ 3. dilutive securities       | c. securities whose assumed conversion or exercise results in an antidilution of earnings per share  |
| ___ 4. antidilutive securities   | d. a reduction in earnings per share (or increase in loss per share) resulting from the assumption that convertible securities have been converted or that options and warrants have been exercised or other shares have been issued upon the fulfillment of certain conditions  |
| ___ 5. dividend payout ratio     | e. assumed conversion of convertible securities or exercise of stock options that results in an increase in earnings per share (or decrease in loss per share)   |
| ___ 6. basic earnings per share  | f. a corporate structure that includes convertible securities and/or stock options, warrants, or rights that could result in the issuance of additional common stock through exercise or conversion  |
| ___ 7. complex capital structure | g. a method used to adjust the earnings per share computation to consider the impact of the possible conversion of convertible securities; earnings per share computation is made as if the convertible securities were converted at the beginning of the year or the date the convertible security was issued, whichever is later |
| ___ 8. treasury stock method     | h. a corporate structure that includes only common and nonconvertible preferred stock and has no convertible securities, stock options, warrants, or other rights outstanding  |
| ___ 9. if-converted method       | i. a method of recognizing the use of proceeds that would be obtained upon exercise of options and warrants in computing earnings per share; assumes that any proceeds would be used to purchase common stock at current market prices   |
| ___ 10. simple capital structure | j. an earnings per share computation that considers only common stock issued and outstanding; computed as the net income less preferred dividends divided by the weighted-average common shares outstanding for the period   |

## Problems

**Problem 18-1 (LO2)** At the beginning of 2010, Anathema Corporation had 450,000 shares of no-par common stock issued and outstanding. On June 30, 2010, the firm issued an additional 135,000 shares for \$7 per share. The 2010 income was \$319,200. On September 1, 2011, a 15 percent stock dividend was issued to all common shareholders. On October 1, 2011, 60,000 shares were reacquired as treasury shares. Net income in 2011 was \$278,063.

1. Compute the weighted-average number of common shares outstanding for 2010 and 2011 that should be shown on comparative statements at the end of 2011.
2. Compute the basic earnings per share in 2010 and 2011 to be reported on comparative statements at the end of 2011.

**Problem 18-2 (LO5)** The following is a partial balance sheet for Nevermore Corporation for the year ended December 31, 2011:

9 percent convertible Bonds (issued at par)	\$1,800,000
Common stock, 180,000 shares issued and outstanding, \$50 par	9,000,000

- a. Each \$1,000 convertible bond can be converted into 80 shares of common stock.
  - b. On September 1, 2011, one-third of the convertible debt was converted into common stock.
  - c. Nevermore reported net income of \$1,550,000 in 2011. The tax rate was 30 percent.
  - d. No other stock transactions took place during 2011.
1. Compute basic earnings per share for 2011.
  2. Compute diluted earnings per share for 2011.

**Problem 18-3 (LO6, LO8)** At December 31, 2010, Risk Company had 500,000 shares of common stock outstanding. Risk sold 50,000 shares on October 1, 2011. Net income for 2011 was \$2,417,875. The tax rate was 30%. In addition, Risk had the following debt and equity securities on its books on December 31, 2011:

- a. 18,000 shares of \$100 par, 12% cumulative preferred stock
- b. 28,000 shares of \$100 par, 10% cumulative preferred stock, par \$100, sold at 110. Each share of preferred stock is convertible into 2 shares of common stock.
- c. \$2,000,000 face value of 9% bonds sold at par
- d. \$3,000,000 face value of 7% convertible bonds sold to yield 8%. Unamortized bond discount is \$100,000 at December 31, 2011. Each \$1,000 bond is convertible into 20 shares of common stock.

Options to purchase 10,000 shares of common stock were issued on May 1, 2011. Exercise price is \$30 per share. Market value at the date of option was \$29. Average market value from May 1 to December 31, 2011, was \$40.

Compute the earnings per share amounts for the year ended December 31, 2011.

## Solutions, Approaches, and Explanations

### MC18-1

Answer: b

Approach and explanation: Basic EPS includes calculations about what actually happened during a period and may include separate calculations for continuing operations EPS and extraordinary EPS if those items existed. Diluted EPS, on the other hand, assumes that things such as stock options and convertible securities are turned into additional shares of common stock even though they haven't yet been.

### MC18-2

Answer: b

Approach and explanation: Don't be surprised if "primary EPS" doesn't sound familiar to you. It shouldn't. There is no such thing as primary EPS. Therefore, you can cross off choices a and c. The chapter does discuss cash flow per share, but not in a way that makes it seem required. In fact, the chapter specifically states that FASB said that under no circumstances should cash flow per share be presented.

Companies sometimes do indicate other EPS items, however. If you remember back to Chapter 4, restructuring charges are included as an operating expense. Companies with large restructuring charges frequently state an EPS figure without consideration of restructuring (or other one-time charges or losses) to make their EPS figure look better. Of course, they must disclose which items they are leaving out of their unique EPS figures in their announcement, and they must still show their real EPS on the financial statements.

Companies with a simple capital structure do not present diluted earnings per share.

### MC18-3

Answer: c

Approach and explanation: When computing each part of the denominator for any EPS calculation, there are two steps to consider. The first is the number that makes up that piece of the denominator and whether it is positive or negative. The second is the percentage of the year that piece applies to. Don't forget this last step! If you did, you probably came up with choice a, which is incorrect.

For this problem, the calculation is as follows:

$$(600,000 \times 1.1) - (48,000 \times 3/12) = 612,000$$

#### MC18-4

Answer: b

Approach and explanation: Dividends on preferred stock are taken out of the calculation even if it is a basic EPS problem. Dividends on common stock are never a deduction to the numerator. Finally, don't forget that the 30,000 shares didn't exist for the entire year. Therefore, they must be multiplied by 9/12. The full calculation is as follows:

$$\begin{aligned} & \frac{\$517,500 - \$300,000}{150,000 + (30,000 \times 9/12)} \\ &= \frac{\$217,500}{172,500} \\ &= \underline{\$1.26} \end{aligned}$$

#### MC18-5

Answer: d

Approach and explanation: Underline the word "diluted" as you are reading the question. Otherwise, you may incorrectly come up with choice c, which would be the correct choice if the question was asking for the basic EPS denominator.

The calculation for the number of shares to use as the denominator is as follows:

$$[150,000 + (25,000 \times 6/12)] + [20,000 - (20,000 \times 15/20)] = 167,500$$

What would be the correct choice if the \$15 and \$20 amounts in the question were reversed? If the market price is lower than the exercise price, then the exercising of the options would result in an antidilutive effect. Hence, the last portion of the above calculation should be removed and the correct answer would once again become choice c—the same denominator as the basic EPS calculation.

#### MC18-6

Answer: b

Approach and explanation: The problem states that the options were already adjusted for the stock dividend, so the 8,000 shares added to the denominator with respect to the stock options need not be multiplied by any stock dividend factor.

The calculation for the number of shares to use as the denominator is as follows:

$$(200,000 \times 1.10) + [40,000 - (40,000 \times 20/25)] = 228,000$$

Therefore, Maynard's 2011 diluted EPS is:

$$\frac{\$1,100,000}{228,000}$$

$$= \underline{\underline{\$4.82}}$$

**MC18-7**

Answer: b

Approach and explanation: For problems that ask you to compute diluted earnings per share, you should still start with a computation of basic EPS as follows:

$$\frac{\$5,000}{5,000}$$

This yields a basic EPS of \$1. If your calculation for diluted EPS results in a number greater than \$1, then \$1 is both the basic and diluted EPS. So, at this point, you already know that choice *d* cannot be correct and you should cross it off the list.

Here is the calculation for diluted EPS:

$$\frac{\$5,000 + [\$50,000 \times 0.04 \times (1 - 0.40)]}{5,000 + 5,000}$$

$$= \frac{\$6,200}{10,000}$$

$$= \underline{\underline{\$0.62}}$$

**MC18-8**

Answer: b

Approach and explanation: First, compute basic EPS as follows:

$$\frac{\$100,000 - (\$6.00 \times 10,000)}{50,000}$$

$$= \frac{\$40,000}{50,000}$$

$$= \underline{\underline{\$0.80}}$$

Therefore, basic EPS is \$0.80 and choices *c* and *d* can be eliminated since no answer above \$0.80 can be correct.

Using the if-converted method to figure out the diluted EPS results in the following:

$$\begin{aligned} & \frac{\$100,000}{50,000 + 10,000} \\ &= \frac{\$100,000}{60,000} \\ &= \underline{\$1.67} \end{aligned}$$

Although the above calculation results in choice *d*, you can't have diluted EPS that are higher than basic EPS. Hence, choice *d* is incorrect and you should choose *b* as the correct answer.

Notice that preferred shares do not go into the denominator unless they are assumed to be converted to common shares for the dilution calculation. Also, notice that if the preferred shares are assumed to be converted, then the dividends they paid no longer are subtracted from the numerator. Finally, take note that the dividends paid to common shareholders don't affect the calculation for either basic or diluted EPS.

#### MC18-9

Answer: d

Approach and explanation: The first step, as always, is to compute the basic EPS even though the diluted amount is asked for in the question. Doing so yields the following:

$$\begin{aligned} & \frac{\$(60,000) - (\$6.00 \times 10,000)}{200,000} \\ &= \frac{\$(120,000)}{200,000} \\ &= \underline{\$(0.60)} \end{aligned}$$

Since this equates to a basic EPS of \$(0.60), you can stop right there because when you have a loss from continuing operations, basic and diluted EPS will be the same.

Notice that the preferred dividends are included in the numerator even though no dividends were paid. That is because they are cumulative, and cumulative, preferred shares are always included in the numerator even if they aren't declared or paid for basic EPS calculation purposes.

**MC18-10**

Answer: a

Approach and explanation: This is basically a restatement of the **How?** on page 18-4 for LO6. Only the dilutive securities that produce a lower EPS are selected. As soon as one enters the equation that increases EPS, then you stop and don't include any more of the ones that produce antidilutive results.

**MC18-11**

Answer: c

Approach and explanation: Hopefully, we've covered this one enough by now that you got it correct. EPS, including diluted EPS, are not to be buried in disclosure notes. They are to appear on the face of the income statement for all years presented.

**Matching 18-1**

1. d
2. e
3. a
4. c
5. b
6. e
7. a
8. d
9. b
10. c

Complete these terminology matching exercises without looking back at the textbook or on to the glossary. After all, you probably won't have those as a reference at test time. Learning through trial and error causes the item to be learned better and to stick in your memory longer than if you just look at the textbook, glossary, or a dictionary and "cook book" the answers. Sure you may get the answer correct on your first attempt, but missing something is sometimes best for retention. Don't be afraid of failure while studying and practicing.

**Problem 18-1**1. **2010:**

$$\begin{aligned}
 &450,000 \times 12/12 \times 1.15 = 517,200 \\
 &135,000 \times 6/12 \times 1.15 = \underline{77,625} \\
 &\qquad\qquad\qquad 595,125 \text{ shares}
 \end{aligned}$$

**2011:**

$$\begin{aligned}
 &585,000 \times 12/12 \times 1.15 = 672,750 \\
 &(60,000) \times 3/12 = \underline{(15,000)} \\
 &\qquad\qquad\qquad 595,125 \text{ shares}
 \end{aligned}$$

2. **2010:**

$$\begin{aligned}
 &\underline{\$319,200} \\
 &= 595,125
 \end{aligned}$$

$$= \underline{\$0.54}$$

**2011:**

$$\begin{aligned}
 &\underline{\$278,063} \\
 &= 657,750
 \end{aligned}$$

$$= \underline{\$0.42}$$

Note that for comparability, stock splits and dividends that happen in subsequent years are retroactively applied to all years being presented in comparative financial statements.



**Problem 18-2**

1.

$$\frac{\$1,550,000}{180,000 + (4/12 \times 600 \times 80)}$$

$$= \frac{\$1,550,000}{196,000}$$

$$= \underline{\$7.91}$$

2.

$$\frac{\$1,550,000 + (\$144,000^* \times 0.70)}{196,000 + 128,000^{**}}$$

$$= \frac{\$1,650,800}{324,000}$$

$$= \underline{\$5.10}$$

\*Interest avoided:

$$\$1,200,000 \times 0.09 \times 12/12 = \$108,000$$

$$\$600,000 \times 0.09 \times 8/12 = \underline{36,000}$$

$$\$144,000$$

\*\*Equivalent shares:

$$1,200 \times 12/12 \times 80 = 96,000$$

$$600 \times 80 \times 8/12 = \underline{32,000}$$

$$128,000$$

**Problem 18-3**

$$\frac{\$2,417,875 - (18,000 \times \$100.00 \times 0.12) + (28,000 \times \$100.00 \times 0.10)}{(500,000 \times 3/4) + (550,000 \times 1/4)}$$

$$= \frac{\$1,921,875}{512,500}$$

$$= \underline{\underline{\$3.75}}$$

*Test for dilution of convertible securities:*

	<b>Net Income Impact</b>	<b>Number of Shares</b>	<b>Incremental EPS</b>
7% convertible bonds	\$168,000*	60,000	\$2.80
10% convertible preferred stock	280,000	56,000	5.00

\*\$3,000,000 × 0.08 × 0.70 = \$168,000. Effective interest is the amount charged to interest expense, not interest paid.

Since only the convertible bonds are less than the basic earnings per share of \$3.75, only the convertible bonds are potentially dilutive. The calculation for diluted EPS is, therefore, as follows:

$$\frac{\$1,921,875 + \$168,000}{512,500 + [(10,000 - 10,000 \times 30/40) \times 8/12] + 60,000}$$

$$= \frac{\$2,089,875}{574,167}$$

$$= \underline{\underline{\$3.64}}$$

## Glossary

Note that Appendix C in the rear portion of the textbook contains a comprehensive glossary for all of the terms used in the textbook. That is the place to turn to if you need to look up a word but don't know which chapter(s) it appeared in. The glossary below is identical with one major exception: It contains only those terms used in Chapter 18. This abbreviated glossary can prove quite useful when reviewing a chapter, when studying for a quiz for a particular chapter, or when studying for an exam which covers only a few chapters including this one. Use it in those instances instead of wading through the 19 pages of comprehensive glossary in the textbook trying to pick out just those words that were used in this chapter.

**antidilution of earnings** Assumed conversion of convertible securities or exercise of stock options that results in an increase in earnings per share (or decrease in loss per share).

**antidilutive securities** Securities whose assumed conversion or exercise results in an antidilution of earnings per share.

**basic earnings per share** An earnings per share computation that considers only common stock issued and outstanding. It is computed as the net income less preferred dividends divided by the weighted-average common shares outstanding for the period.

**complex capital structure** A corporate structure that includes convertible securities and/or stock options, warrants, or rights that could result in the issuance of additional common stock through exercise or conversion.

**dilution of earnings** A reduction in earnings per share (or increase in loss per share) resulting from the assumption that convertible securities have been converted or that options and warrants have been exercised or other shares have been issued upon the fulfillment of certain conditions.

**dilutive securities** Securities whose assumed exercise or conversion results in a reduction in earnings per share (or increase in loss per share).

**dividend payout ratio** Dividends per share divided by earnings per share.

**if-converted method** A method used to adjust the earnings per share computation to consider the impact of the possible conversion of convertible securities. Under this method, the earnings per share computation is made as if the convertible securities were converted at the beginning of the year or the date the convertible security was issued, whichever is later.

**simple capital structure** A corporate structure that includes only common and nonconvertible preferred stock and has no convertible securities, stock options, warrants, or other rights outstanding.

**treasury stock method** A method of recognizing the use of proceeds that would be obtained upon exercise of options and warrants in computing earnings per share. It assumes that any proceeds would be used to purchase common stock at current market prices.

**two-class method** When different classes of stock don't always have the same claim upon dividends. In such a case, earnings attributable to each share of the different classes of stock are different and EPS is computed using this method.