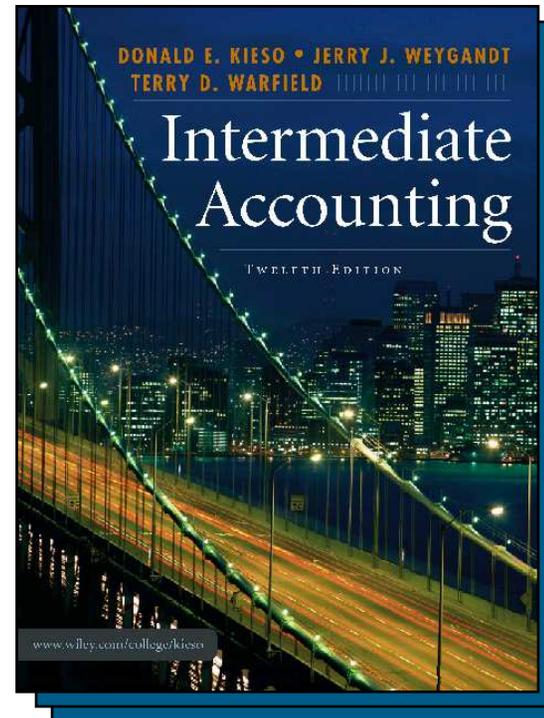


Accounting for Potential Equity Securities and EPS Reporting

Chapter 16

Intermediate Accounting
12th Edition
Kieso, Weygandt, and Warfield



Learning Objectives

1. Describe the accounting for the issuance, conversion, and retirement of convertible securities.
2. Explain the accounting for convertible preferred stock.
3. Contrast the accounting for stock warrants and for stock warrants issued with other securities.
4. Describe the accounting for stock compensation plans under generally accepted accounting principles.
5. Discuss the controversy involving stock compensation plans.
6. Compute earnings per share in a simple capital structure.
7. Compute earnings per share in a complex capital structure.

Dilutive Securities and Earnings Per Share

Dilutive Securities and Compensation Plans

- Debt and equity
- Convertible debt
- Convertible preferred stock
- Stock warrants
- Stock compensation plans

Computing Earnings Per Share

- Simple capital structure
- Complex capital structure

Debt and Equity

Should companies report these instruments as a **liability** or **equity**.

Stock Options

Convertible
Securities

Preferred Stock

Accounting for Convertible Debt

Bonds which can be converted into other corporate securities are called **convertible bonds**.



Benefit of a Bond (guaranteed interest)

+



Privilege of Exchanging it for Stock

(at the holder's option)

Accounting for Convertible Debt

Two main reasons corporations issue convertibles:



Desire to raise equity capital without giving up more ownership control than necessary.



Obtain common stock financing at cheaper rates.

Accounting for Convertible Debt

At Time of Issuance

Convertible bonds recorded as straight debt issue, with any discount or premium amortized over the term of the debt.

Accounting for Convertible Debt

BE16-1: Gall Inc. issued \$5,000,000 par value, 7% convertible bonds at 99 for cash. If the bonds had not included the conversion feature, they would have sold for 95.

Journal entry at date of issuance:

Cash	4,950,000	
Discount on bonds payable	50,000	
Bonds payable		5,000,000
(\$5,000,000 × 99% = \$4,950,000)		

Accounting for Convertible Debt

At Time of Conversion

Companies use the **book value method** when converting bonds.

When the debt holder converts the debt to equity, the issuing company recognizes no gain or loss upon conversion.

Accounting for Convertible Debt

BE16-2: Yuen Corp. has outstanding 1,000, \$1,000 bonds, each convertible into 50 shares of \$10 par value common stock. The bonds are converted on December 31, 2008, when the unamortized discount is \$30,000 and the market price of the stock is \$21 per share.

Journal entry at conversion:

Bonds payable	1,000,000	
Discount on bonds payable		30,000
Common stock (50,000 × \$10)		500,000
Additional paid-in capital		470,000

Accounting for Convertible Debt

Induced Conversion

- Issuer wishes to encourage prompt conversion.
- Issuer offers additional consideration, called a "sweetener."
- Sweetener is an expense of the period.

Accounting for Convertible Debt

BE16-2: Yuen Corp. has outstanding 1,000, \$1,000 bonds, each convertible into 50 shares of \$10 par value common stock. Assume Yuen wanted to reduce its annual interest cost and agreed to pay the bond holders \$70,000 to convert.

Journal entry at conversion:

	Bonds payable	1,000,000	
	Discount on bonds payable		30,000
<i>Same</i>	Common stock (50,000 × \$10)		500,000
	Additional paid-in capital		470,000
	Debt conversion expense	70,000	
	Cash		70,000

Accounting for Convertible Debt

Retirement of Convertible Debt

- Recognized same as retiring debt that is not convertible.
- Difference between the acquisition price and carrying amount should be reported as gain or loss in the income statement.

Convertible Preferred Stock

Convertible preferred stock includes an option for the holder to convert preferred shares into a fixed number of common shares.

- Convertible preferred stock is considered part of stockholders' equity.
- No gain or loss recognized when converted.
- Use book value method.

Convertible Preferred Stock

BE16-3: Gilbert Inc. issued 2,000 shares of \$10 par value common stock upon conversion of 1,000 shares of \$50 par value preferred stock. The preferred stock was originally issued at \$55 per share. The common stock is trading at \$26 per share at the time of conversion.

Journal entry to record conversion:

Preferred stock	50,000	
Paid-in capital - Preferred stock	5,000	
Common stock (2,000 × \$10 par)		20,000
Paid-in capital - Common stock		35,000

Stock Warrants

- Certificates entitling the holder to acquire shares of stock at a certain price within a stated period.
- Normally arise:
 1. To make a security more attractive
 2. As evidence of preemptive right
 3. As compensation to employees

Stock Warrants

Issued with Other Securities

Detachable Stock Warrants:

- Proceeds allocated between the two securities.
- Allocation based on fair market values.
- Two methods of allocation:
 - (1) the proportional method and
 - (2) the incremental method

Stock Warrants

Proportional Method

Determine:

1. value of the bonds without the warrants, and
2. value of the warrants.

The **proportional method** allocates the proceeds using the proportion of the two amounts, based on fair values.

Stock Warrants

BE16-4: Margolf Corp. issued 1,000, \$1,000 bonds at 101. Each bond was issued with one detachable stock warrant. After issuance, the bonds were selling in the market at 98, and the warrants had a market value of \$40. Use the proportional method to record the issuance of the bonds and warrants.

	Number		Amount		Price	=	Total	Percent	
Bonds	1,000	x	\$ 1,000	x	0.98	=	\$ 980,000	96%	
Warrants	1,000	x			\$ 40	=	40,000	4%	
			Total Fair Market Value				=	\$ 1,020,000	100%

Allocation:	Bonds	Warrants		
Issue price	\$ 1,010,000	\$ 1,010,000	Bond face value	\$ 1,000,000
Allocation %	96%	4%	Allocated FMV	969,600
Total	\$ 969,600	\$ 40,400	Discount	\$ 30,400

Stock Warrants

BE16-4: Margolf Corp. issued 1,000, \$1,000 bonds at 101. Each bond was issued with one detachable stock warrant. After issuance, the bonds were selling in the market at 98, and the warrants had a market value of \$40. Use the proportional method to record the issuance of the bonds and warrants.

Cash	1,010,000	
Discount on bonds payable	30,400	
Bonds payable		1,000,000
Paid-in capital - Stock warrants		40,400

Stock Warrants

Incremental Method

Where a company cannot determine the fair value of either the warrants or the bonds.

- Use the security for which fair value can be determined.
- Allocate the remainder of the purchase price to the security for which it does not know fair value.

Stock Warrants

BE16-5: McCarthy Inc. issued 1,000, \$1,000 bonds at 101. Each bond was issued with one detachable stock warrant. After issuance, the bonds were selling in the market at 98. The market price of the warrants, without the bonds, cannot be determined. Use the incremental method to record the issuance of the bonds and warrants.

	Number		Amount		Price		Total	Percent
Bonds	1,000	x	\$ 1,000	x	\$ 0.98	=	\$ 980,000	100%
Warrants	1,000	x				=	-	0%
			Total Fair Market Value				\$ 980,000	100%
 Allocation:								
	Bonds							
Issue price	\$ 1,010,000				Bond face value		\$ 1,000,000	
Bonds	980,000				Allocated FMV		980,000	
Warrants	\$ 30,000				Discount		\$ 20,000	

Stock Warrants

BE16-5: McCarthy Inc. issued 1,000, \$1,000 bonds at 101. Each bond was issued with one detachable stock warrant. After issuance, the bonds were selling in the market at 98. The market price of the warrants, without the bonds, cannot be determined. Use the incremental method to record the issuance of the bonds and warrants.

Cash	1,010,000	
Discount on bonds payable	20,000	
Bonds payable		1,000,000
Paid-in capital - Stock warrants		30,000

Stock Warrants

Conceptual Questions

Detachable warrants involves *two* securities,

- a debt security,
- a warrant to purchase common stock.

Nondetachable warrants

- no allocation of proceeds between the bonds and the warrants,
- companies record the entire proceeds as debt.

Stock Warrants

Rights to Subscribe to Additional Shares

Stock Rights - existing stockholders have the right (**preemptive privilege**) to purchase newly issued shares in proportion to their holdings.

- Price is normally less than current market value.
- Companies make only a memorandum entry.

Stock Compensation Plans

Stock Option - gives key employees option to purchase stock at a given price over extended period of time.

Effective compensation programs are ones that:

1. motivate employees,
2. help retain executives and recruit new talent,
3. base compensation on performance,
4. maximize employee's after-tax benefit, and
5. use performance criteria over which employee has control.

Stock Compensation Plans

The Major Reporting Issue

New FASB standard requires companies to recognize compensation cost using the fair-value method.*

Under **fair-value method**, companies use acceptable option-pricing models to value the options at the date of grant.

*"Accounting for Stock-Based Compensation," *Statement of Financial Accounting Standards No. 123* (Norwalk, Conn: FASB, 1995); and "Share-Based Payment," *Statement of Financial Accounting Standard No. 123(R)* (Norwalk, Conn: FASB, 2004).

Stock Compensation Plans

Accounting for Stock Compensation

Two main accounting issues:

1. How to determine compensation expense.
2. Over what periods to allocate compensation expense.

Stock Compensation Plans

Determining Expense

- Compensation expense based on the fair value of the options expected to vest on the date the options are granted to the employee(s) (i.e., the grant date).

Allocating Compensation Expense

- Over the periods in which employees perform the service—the **service period**.

Stock Compensation Plans

BE16-12 On January 1, 2006, Nichols Corporation granted 10,000 options to key executives. Each option allows the executive to purchase one share of Nichols' \$5 par value common stock at a price of \$20 per share. The options were exercisable within a 2-year period beginning January 1, 2008, if the grantee is still employed by the company at the time of the exercise. On the grant date, Nichols' stock was trading at \$25 per share, and a fair value option-pricing model determines total compensation to be \$400,000. On May 1, 2008, 8,000 options were exercised when the market price of Nichols' stock was \$30 per share. The remaining options lapsed in 2010 because executives decided not to exercise their options.

Stock Compensation Plans

BE16-12: Prepare the necessary journal entries related to the stock option plan for the years 2006 through 2010.

1/1/06 No entry on date of grant.

12/31/06	Compensation expense	200,000	
	Paid-in capital-stock options		200,000
	(\$400,000 × $\frac{1}{2}$)		

12/31/07	Compensation expense	200,000	
	Paid-in capital-stock options		200,000

Stock Compensation Plans

BE16-12: Prepare the necessary journal entries related to the stock option plan for the years 2006 through 2010.

5/1/08	Cash (8,000 × \$20)	160,000	
	Paid-in capital-stock options	320,000	
	Common stock (8,000 × \$5)		40,000
	Paid-in capital in excess of par		440,000
	(\$400,000 × 8,000 / 10,000 = \$320,000)		

1/1/10	Paid-in capital-stock options	80,000	
	Paid-in capital-expired options		80,000
	(\$400,000 - \$320,000)		

Stock Compensation Plans

Employee Stock Purchase Plans

Generally permit all employees to purchase stock at a discounted price for a short period of time.

Compensatory unless it satisfies three conditions:

1. Substantially all full-time employees participate on an equitable basis.
2. The discount from market is small.
3. The plan offers no substantive option feature.

Stock Compensation Plans

Debate over Stock Option Accounting

When first proposed, there was considerable opposition to the fair-value approach because it could result in substantial, previously unrecognized compensation expense.

Offsetting such opposition is the need for greater transparency in financial reporting.

Section 2 - Computing Earnings Per Share

Earnings per share indicates the income earned by each share of common stock.

- Companies report earnings per share only for common stock.
- When income statement contains intermediate components of income, companies should disclose earnings per share for each component.

Illustration 16-7

Earnings per share:	
Income from continuing operations	\$4.00
Loss from discontinued operations, net of tax	0.60
	<hr/>
Income before extraordinary item	3.40
Extraordinary gain, net of tax	1.00
	<hr/>
Net income	<u>\$4.40</u>

Earnings Per Share-Simple Capital Structure

- **Simple Structure**--Only common stock; no potentially dilutive securities.
- **Complex Structure**--Potentially dilutive securities are present.
- **"Dilutive"** means the ability to influence the EPS in a downward direction.

Earnings Per Share-Simple Capital Structure

Preferred Stock Dividends

Subtracts the current year preferred stock dividend from net income to arrive at income available to common stockholders.

Illustration 16-8

$$\text{Earnings per Share} = \frac{\text{Net Income} - \text{Preferred Dividends}}{\text{Weighted-Average Number of Shares Outstanding}}$$

Preferred dividends are subtracted on cumulative preferred stock, whether declared or not.

Earnings Per Share-Simple Capital Structure

Weighted-Average Number of Shares

Companies must weight the shares by the fraction of the period they are outstanding.

Stock dividends or stock splits: companies need to restate the shares outstanding before the stock dividend or split.

Earnings Per Share-Simple Capital Structure

E16-14 On January 1, 2008, Wilke Corp. had 480,000 shares of common stock outstanding. During 2008, it had the following transactions that affected the common stock account.

February 1	Issued 120 Shares
March 1	Issued a 10% stock dividend
May 1	Acquired 100,000 share of treasury stock
June 1	Issued a 3-for-1 stock split
October 1	Reissued 60,000 shares of treasury stock

Instructions Determine the weighted-average number of shares outstanding as of December 31, 2008.

Earnings Per Share-Simple Capital Structure

Weighted-Average Number of Shares

Date	Change in Shares	Shares Outstanding	Fraction of Year	10% Dividend	3/1 Split	Weighted Average Shares
Jan. 1		480,000	x 1/12	x 110%	x 3	132,000
Feb. 1	120,000	600,000	x 1/12	x 110%	x 3	165,000
Mar. 1	60,000	660,000	x 2/12		x 3	330,000
May 1	(100,000)	560,000	x 1/12		x 3	140,000
June 1	3/1 split	1,680,000	x 4/12			560,000
Oct. 1	60,000	1,740,000	x 3/12			435,000
						<u>1,762,000</u>
					Divide	<u>12</u>
						<u>146,833</u>

Earnings Per Share-Complex Capital Structure

Complex Capital Structure exists when a business has

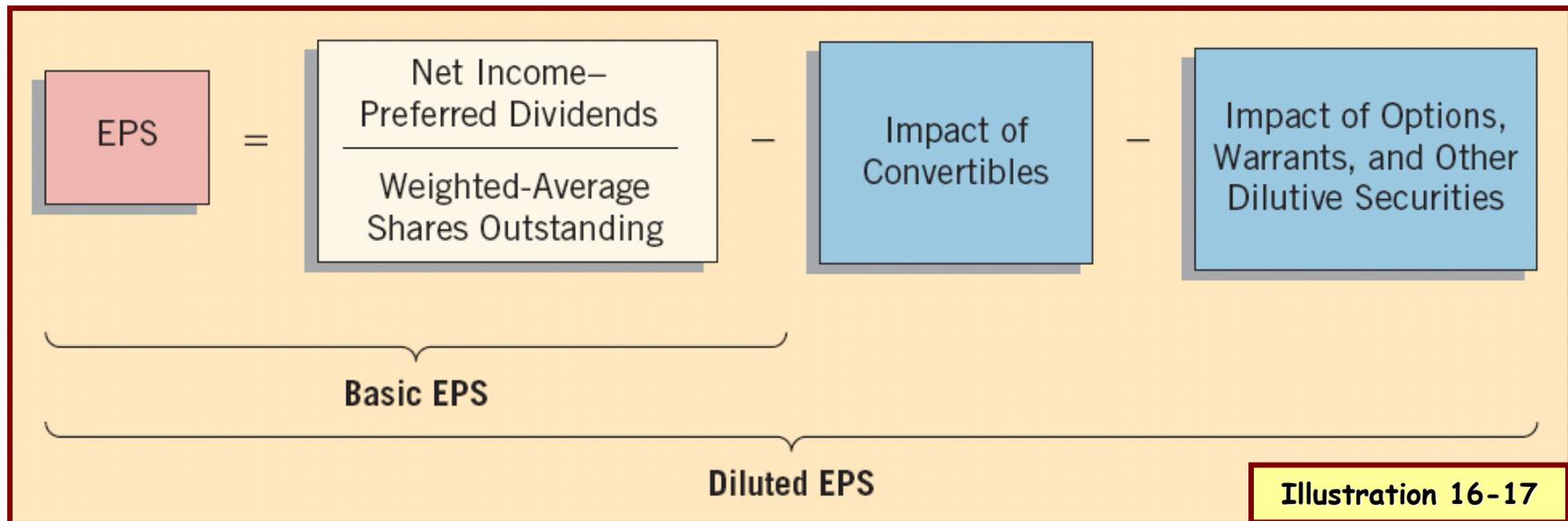
- convertible securities,
- options, warrants, or other rights

that upon conversion or exercise could **dilute** earnings per share.

Company reports both basic and diluted earnings per share.

Earnings Per Share-Complex Capital Structure

Diluted EPS includes the effect of all potential dilutive common shares that were outstanding during the period.



Companies will not report diluted EPS if the securities in their capital structure are **antidilutive**.

Earnings Per Share-Complex Capital Structure

Diluted EPS - Convertible Securities

Measure the dilutive effects of potential conversion on EPS using the **if-converted method**.

This method for a convertible bond assumes:

- (1) the conversion at the beginning of the period (or at the time of issuance of the security, if issued during the period), and
- (2) the elimination of related interest, **net of tax**.

Earnings Per Share-Complex Capital Structure

E16-20 (Convertible Bonds) In 2006 Chirac Enterprises issued, at par, 60, \$1,000, 8% bonds, each convertible into 100 shares of common stock. Chirac had revenues of \$17,500 and expenses other than interest and taxes of \$8,400 for 2007. (Assume that the tax rate is 40%.) Throughout 2007, 2,000 shares of common stock were outstanding; none of the bonds was converted or redeemed.

Instructions

- (a) Compute diluted earnings per share for 2007.
- (b) Assume same facts as those for Part (a), except the 60 bonds were issued on September 1, 2007 (rather than in 2006), and none have been converted or redeemed.

Earnings Per Share-Complex Capital Structure

E16-20 (a) Compute diluted earnings per share for 2007.

Calculation of Net Income

Revenues	\$ 17,500
Expenses	8,400
Bond interest expense (60 × \$1,000 × 8%)	4,800
Income before taxes	<u>4,300</u>
Income taxes (40%)	1,720
Net income	<u><u>\$ 2,580</u></u>

Earnings Per Share-Complex Capital Structure

E16-20 (a) Compute diluted earnings per share for 2007.

When calculating **Diluted** EPS, begin with **Basis** EPS.

Basic EPS

$$\frac{\text{Net income} = \$2,580}{\text{Weighted average shares} = 2,000} = \$1.29$$

Earnings Per Share-Complex Capital Structure

E16-20 (a) Compute diluted earnings per share for 2007.

When calculating **Diluted** EPS, begin with **Basis** EPS.

Diluted EPS

$$\frac{\$2,580}{2,000} + \frac{\$4,800 (1 - .40)}{6,000} = \frac{\$5,460}{8,000} = \mathbf{\$.68}$$



Basic EPS
= 1.29



Effect on EPS = .48

Earnings Per Share-Complex Capital Structure

E16-20 (b) Assume bonds were issued on Sept. 1, 2007 .

Calculation of Net Income

Revenues	\$ 17,500
Expenses	8,400
Bond interest expense ($60 \times \$1,000 \times 8\% \times 4/12$)	<u>1,600</u>
Income before taxes	7,500
Income taxes (40%)	<u>3,000</u>
Net income	<u><u>\$ 4,500</u></u>

Earnings Per Share-Complex Capital Structure

E16-20 (b) Assume bonds were issued on Sept. 1, 2007 .

When calculating **Diluted** EPS, begin with **Basic** EPS.

Diluted EPS

$$\frac{\$4,500}{2,000} + \frac{\$1,600 (1 - .40)}{6,000 \times 4/12 \text{ yr.}} = \frac{\$5,460}{4,000} = \mathbf{\$1.37}$$



Basic EPS
= 2.25



Effect on EPS = .48

Earnings Per Share-Complex Capital Structure

P16-7 (Variation-Convertible Preferred Stock) Prior to 2007, Prancer Company issued 30,000 shares of 6% convertible, cumulative preferred stock, \$100 par value. Each share is convertible into 5 shares of common stock. Net income for 2007 was \$1,200,000. There were 600,000 common shares outstanding during 2007. There were no changes during 2007 in the number of common or preferred shares outstanding.

Instructions

- (a) Compute diluted earnings per share for 2007.

Earnings Per Share-Complex Capital Structure

P16-7 (a) Compute diluted earnings per share for 2007.

When calculating **Diluted** EPS, begin with **Basic** EPS.

Basic EPS

$$\frac{\text{Net income } \$1,200,000 - \text{Pfd. Div. } \$180,000^*}{\text{Weighted average shares} = 600,000} = \$1.70$$

* 30,000 shares x \$100 par x 6% = \$180,000 dividend

Earnings Per Share-Complex Capital Structure

P16-7 (a) Compute diluted earnings per share for 2007.

When calculating **Diluted** EPS, begin with **Basis** EPS.

Diluted EPS

$$\frac{\$1,200,000 - \$180,000}{600,000} + \frac{\$180,000}{150,000^*} = \frac{\$1,200,000}{750,000} = \$1.60$$

Basic EPS = 1.70

Effect on EPS = 1.20

*(30,000 × 5)

Earnings Per Share-Complex Capital Structure

P16-7 (a) Compute diluted earnings per share for 2007 assuming each share of preferred is convertible into 3 shares of common stock.

Diluted EPS

$$\frac{\$1,200,000 - \$180,000}{600,000} + \frac{\$180,000}{90,000^*} = \frac{\$1,200,000}{750,000} = \$1.74$$

Basic EPS = 1.70

Effect on EPS = 2.00

*(30,000 × 3)

Earnings Per Share-Complex Capital Structure

P16-7 (a) Compute diluted earnings per share for 2007 assuming each share of preferred is convertible into 3 shares of common stock.

Diluted EPS

Basic = Diluted EPS

$$\begin{array}{r}
 \frac{\$1,200,000 - \$180,000}{600,000} + \frac{\cancel{\$180,000}}{\cancel{90,000}^*} = \frac{\$1,200,000}{750,000} = \\
 \left. \begin{array}{l} \text{Basic EPS} = 1.70 \end{array} \right\} \quad \left. \begin{array}{l} \text{Antidilutive} \\ \text{Effect on} \\ \text{EPS} = 2.00 \end{array} \right\} \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} \quad \begin{array}{l} \\ \\ \text{\$1.70} \end{array}
 \end{array}$$

*(30,000 × 3)

Earnings Per Share-Complex Capital Structure

Diluted EPS - Options and Warrants

Measure the dilutive effects of potential conversion using the **treasury-stock method**.

This method assumes:

- (1) company exercises the options or warrants at the beginning of the year (or date of issue if later), and
- (2) that it uses those proceeds to purchase common stock for the treasury.

Earnings Per Share-Complex Capital Structure

E16-24 (EPS with Options) Venezuela Company's net income for 2007 is \$50,000. The only potentially dilutive securities outstanding were 1,000 options issued during 2006, each exercisable for one share at \$6. None has been exercised, and 10,000 shares of common were outstanding during 2007. The average market price of the stock during 2007 was \$20.

Instructions

- (a) Compute diluted earnings per share.
- (b) Assume the 1,000 options were issued on October 1, 2007 (rather than in 2006). The average market price during the last 3 months of 2007 was \$20.

Earnings Per Share-Complex Capital Structure

E16-24 (a) Compute diluted earnings per share for 2007.

Treasury-Stock Method

Proceeds if shares issued (1,000 × \$6)		\$	6,000
Purchase price for treasury shares	÷	\$	20
			<hr/>
Shares assumed purchased			300
Shares assumed issued			1,000
			<hr/>
Incremental share increase			700
			<hr/> <hr/>

Earnings Per Share-Complex Capital Structure

E16-24 (a) Compute diluted earnings per share for 2007.

When calculating **Diluted** EPS, begin with **Basis** EPS.

Diluted EPS

$$\frac{\$50,000}{10,000} + \frac{\$50,000}{700} = \frac{\$50,000}{10,700} = \$4.67$$

Basic EPS
= 5.00

Options

Earnings Per Share-Complex Capital Structure

E16-24 (b) Compute diluted earnings per share assuming the 1,000 options were issued on October 1, 2007.

Treasury-Stock Method

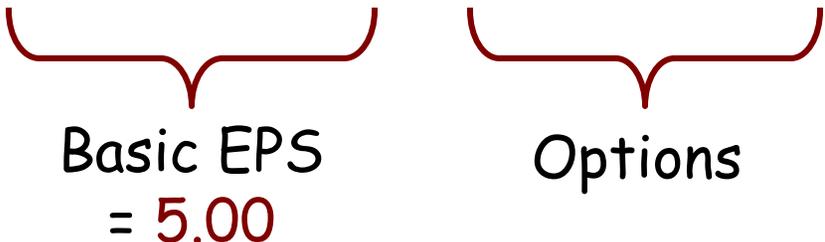
Proceeds if shares issued (1,000 × \$6)		\$	6,000
Purchase price for treasury shares	÷	\$	20
Shares assumed purchased			<hr/> 300
Shares assumed issued			1,000
Incremental share increase			<hr/> 700
Weight for 3 months assumed outstanding	×		3/12
Weighted incremental share increase			<hr/> <hr/> 175

Earnings Per Share-Complex Capital Structure

E16-24 (b) Compute diluted earnings per share assuming the 1,000 options were issued on October 1, 2007.

Diluted EPS

$$\frac{\$50,000}{10,000} + \frac{\$50,000}{175} = \frac{\$50,000}{10,175} = \$4.91$$



Basic EPS
= 5.00

Options

Earnings Per Share-Complex Capital Structure

Contingent Issue Agreement

Contingent shares are issued as a result of the:

1. passage of time or
2. attainment of a certain earnings or market price level.

Antidilution Revisited

Ignore antidilutive securities in all calculations and in computing diluted earnings per share.

Earnings Per Share-Complex Capital Structure

EPS Presentation and Disclosure

A company should show per share amounts for:

- income from continuing operations,
- income before extraordinary items, and
- net income.

Per share amounts for a discontinued operation or an extraordinary item should be presented on the face of the income statement or in the notes.

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